

Hidden Treasure

John Thomas Simpson

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Title: Hidden Treasure

Author: John Thomas Simpson

Release Date: June, 2004 [EBook #5870]
[Yes, we are more than one year ahead of schedule]
[This file was first posted on September 15, 2002]

Edition: 10

Language: English

Character set encoding: ASCII

***** START OF THE PROJECT GUTENBERG EBOOK HIDDEN TREASURE *****

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HIDDEN TREASURE

THE STORY OF A CHORE BOY WHO MADE THE OLD FARM PAY

BY

JOHN THOMAS SIMPSON

COLORED FRONTISPIECE BY E.H. SUYDAM
AND 16 ILLUSTRATIONS

PHILADELPHIA & LONDON

1919

PREFACE

A few years ago the author visited the farm in Western Pennsylvania on which he had lived for a number of years when a boy. Much to his surprise there was not a boy of his acquaintance still on the neighboring farms, many of which had passed into other hands, and in some cases even the names of the original owners had been forgotten.

He bumped over the two short miles of road, still deep with mud, between the town and the farm, and could scarcely recognize in the weedy fields before him, with their broken-down fences partly concealed by undergrowth, the fertile acres of his boyhood.

The orchard, once kept so neatly pruned, was now with trees that were gnarled and broken--while rich bottom land, so productive in years past, was foul with all manner of rank growth. The lane leading up to the house from the main road was in such bad repair that he had to leave his automobile on the main road and complete his journey on foot.

Investigation showed that many of the farms in the neighborhood were in a similar rundown condition; that farm work was generally considered unprofitable or uncongenial; and that the boys and girls born in the country usually took the first opportunity to leave the farms, often for harder and less profitable work in the cities.

In the hope that many boys and girls now living on farms, as well as others, who, if they knew of the advantages of labor-saving machinery and modern farm buildings (to say nothing of the interest of outdoor work), would take up this, the most profitable and independent of all occupations--FARMING--this story of Hidden Treasure is written.

THE AUTHOR
FEBRUARY, 1919

ACKNOWLEDGMENTS

The author begs to acknowledge his indebtedness for valuable information to:

A.A. Drew, Superintendent of Agencies, of the Mutual Benefit Life Insurance Company, Newark, New Jersey, for Constructive Banking and Life Insurance.

Bucyrus Company, South Milwaukee, Wisconsin, for Trenching with Steam Shovels.

Waterloo Cement Machinery Company, Waterloo, Iowa, for Concrete Mixing Machines.

Hercules Powder Company, Hazleton, Pennsylvania, for Progressive Cultivation and Trench Digging by Dynamite.

International Harvester Company of America, Chicago, Illinois, for Tractors and Farm Machinery.

George M. Wright, owner of Indian Hill Farm, Worcester, Massachusetts, for Holstein Cattle, Dairy Methods and Poultry Raising.

John W. Odlin, Publicity Department, Wright Wire Company, Worcester, Massachusetts, Wire Fencing.

C.P. Dadant, Editor American Bee Journal, Hamilton, Illinois, Bee Culture.

The Sharpies Separator Company, West Chester, Pennsylvania, for Milking Machines and Cream Separators.

D. & A. Post Mold Company, Three Rivers, Michigan, for Concrete Fence Posts.

A.A. Simpson, Indiana, Pennsylvania, for much data regarding crop production and market values in that vicinity.

The Domestic Engineering Company, Dayton, Ohio, for Electric Light and Power for Farms.

The Portland Cement Association, Chicago, Illinois, for Concrete Buildings and Road Construction.

United States Department of Agriculture, Washington, D.C., for Farmers' Bulletins covering the great range of subjects referred to throughout the story.

The Country Gentleman, Philadelphia, Pa., for much helpful data on general farming and stock raising.

K.C. Davis, Knapp School of Country Life, Nashville, Tenn., for a final reading of the proof sheets.

CONTENTS

CHAPTER

- I. THE OLD HOMESTEAD
- II. A DAY'S WORK
- III. A RAINY DAY
- IV. DRAINING THE POND
- V. SELLING TURTLES
- VI. SELLING SAND
- VII. THE NEW AUNT
- VIII. THE SALE
- IX. POWER AND BANKING
- X. RUNNING WATER
- XI. TONY
- XII. THE DAIRY HOUSE
- XIII. VISITORS
- XIV. RUTH AND THE STRAW STACK
- XV. NEW METHODS
- XVI. RUTH AND JERRY
- XVII. FILLING THE INCUBATOR
- XVIII. THE NEW IMPLEMENTS
- XIX. THE STORM
- XX. GOOD ROADS
- XXI. FILLING THE SILO
- XXII. THE FAIR
- XXIII. CHRISTMAS AT BROOKSIDE FARM
- XXIV. COST ACCOUNTING

ILLUSTRATIONS

The Afternoon was Spent Examining the Buildings and Looking Over the Plans for the New Barn

The Old Homestead

"Well, Son, Let's Get Down to Business. I See You're Wise
All Right to the Value of that Pit"

Bees are a Profitable Side Line

The Tractor Will do the Work of Five Men and Five Teams

Ditch Digging by Dynamite

One-Half the Herd

The Electric Milker

Comfortable Sanitary Stalls

Small, Self-Loading, Kerosene Driven, Concrete Mixers

Every Boy that Ran Away from the Farm and Many that are
Still There can Tell of the Days Wasted on Repairs to
Wooden Fences and Cleaning Out Fence Rows

Extra Profits are not the Only Things a Farmer Gets from a Herd
of Well Bred Dairy Cows

Good Seed Well Planted Lays the Foundation for a Profitable
Crop

A Well-Managed Flock of Poultry Will Return Good Profits

The Side Delivery Rake Fluffs up the Hay and Lets the Sun
do Its Work Quickly

The Self-Loader Makes Possible the Quick Storage of Properly
Cured Hay and Saves Tons of Man-Lifting Power

The Electric-Driven Laundry

Well-Built Concrete Roads Bring the Markets and Your Neighbors
Nearer

Transferring the Green Corn Crop from Field to Silo

I.

THE OLD HOMESTEAD

The late afternoon sun shone full upon a boy who was perched on the
top of an old rail fence forming the dividing line between the farm
that spread out before him and the one over which he had just passed.

It was early March. The keen wind as it whirled past him, whipping the
branches of the tree together and carrying away clouds of dried leaves

from behind the fence rows, penetrated the thin clothes he wore--but instead of making him shiver, it seemed only to add to his pleasure, for he removed his cap and ran his fingers through his damp hair.

The boy was slender and scarcely looked the eighteen years to which he laid claim. He had curly sandy hair, a freckled face and penetrating blue eyes. His clothes were new, but of rather poor material and ill-fitting, scarcely protecting him from the cutting wind. Because of his short legs and arms, his coat sleeves and trousers, cut for the average boy, were too long for him and were much wrinkled.

He had climbed the last and steepest hill lying between the town and his grandfather's farm--the ancestral home of the Williams family, which was now, for a time at least, to be his home. Since early morning he had bumped over the rough frozen roads between his home in a distant village and the county seat, which was situated some two miles to the west, and from which he had just walked.

He had expected to find his grandfather or his Uncle Joe waiting for him; in this he was disappointed, and as the sun was getting along toward mid-afternoon, he had picked up his worn suitcase and set off through the town by a route that he knew would bring him to a short-cut over the hills.

Despite the wind, he sat for some minutes, cap in hand, while he looked out over the familiar scenes. There was not one foot of ground in the one hundred and sixty acre farm that spread out fan-shape before him which was not familiar. Here he had spent many happy vacations in summers past. The last two years he had attended the State College, taking the course in agriculture, and had worked in a grocery store in the village during the summer vacations, but this work had been distasteful to him--he missed the freedom of outdoor life, especially the birds and animals so plentiful on the farm. So this year, as his father could not afford to have him complete the course, he had asked permission to go on a farm. His two years in the State College had opened his eyes to modern methods of farming and the use of Portland cement for farm buildings, and he wanted a chance to try them out.

His father had hesitated at first in giving his consent, not because he did not wish him to be in the open country, but because he felt, now that he had reached the age of eighteen, he should be able to earn money and direct his attention toward permanent employment, and he could not think of farming as a business with so many other opportunities at hand. A letter from his Uncle Joe, saying that he had purchased the old farm, and would like to have Bob help him with the work on his newly acquired property, had settled the matter, and, as his uncle was anxious to make an early start, he had left home at once.

He could not help noticing, as he gazed at the panorama before him, the dilapidated appearance of the buildings and tumbled-down fences half hidden by rank growths that confronted him on every side, but this, for the moment, was of passing interest.

Across the valley to the east, in the twenty-five acres of woods, he had once found the nest of a great white owl, and there on "Old Round Top," as the steep hill directly opposite him was called, they had overturned a wagon-load of hay one summer with him on top. He even

remembered the thrill he had received as he went flying through the air, and how they had all laughed when he landed unhurt on a hay cock some distance down the hill, just clear of the overturned wagon. Then in the valley, at the foot of the hill, stood the old cider mill where neighbors for miles around would bring their apples in the late summer for cider-making. Here, straw in mouth, he and the neighbors' boys lay prone on their stomachs on the great beams and sucked their fill of the freshly squeezed cider as it flowed down the smooth grooves in the planks to the waiting barrels below.

Beyond the cider mill was the old orchard, with its Rainbow and Sheep-nose apple trees; then the garden in one corner of which grew black currants and yellow raspberry bushes; and near by the low red brick smoke-house, from which many a piece of dried beef had been slyly removed to stay his hunger between meals.

Just beyond was the white farmhouse, nestling among the apple trees, the front to the west and facing on the lane that led up to a farm above. The house had a one-story ell on the end toward him, containing the kitchen and pantry--this ell projected back almost to the smokehouse. On the opposite side, but hidden from his view, there was a wide porch running the full length of house and ell, and in the angle formed by the porch, stood the well with its home-made pump.

The water from this well, he recalled, had a peculiar mineral taste, with a strong flavor of sulphur--a taste he did not like. He had never been so tired that he would not go to the spring up on the side of "Old Round Top" for a pail of water, rather than drink from this well. Back of the house, but within the enclosure formed by the picket fence, was the wood and tool shed--while just beyond stood the old-fashioned bank barn and other farm buildings. There was a short steep hill just beyond the barn, down which the lane wound to a mill pond below. An old sawmill with an undershot water-wheel stood at the extreme south-east corner of the farm, diagonally opposite.

[Illustration with caption: THE OLD HOMESTEAD] Of all the places on which his gaze rested, this mill and pond held the most treasured recollections. It was in this pond ten years ago his father had taught him to swim. Here, too, the neighboring farmers brought their sheep each spring to be washed--always a holiday and frolic for the boys.

Like many other farms in this section of Western Pennsylvania, the buildings were set so that the barn stood between the house and the main road, making the approach to the house past the barn and through the barnyard. For the first time, this awkward arrangement was apparent to him; he wondered why the buildings had been thus located, and facing northwest.

He replaced his cap, swung his suitcase over the fence, jumped down to the frozen ground and set off down the hill. As he trudged along, picking his way over the rough ground, the parting words of his father came to him: "Make yourself useful, Bob, and your Uncle Joe, I'm sure, will pay you all you're worth, and while I'd rather have you become a merchant, still if you find you like the farm, you may stay with your Uncle Joe." It was not so much the prospect of making money as the chance of being in the open air among the things that he loved that caused him to whistle a lively tune as he crossed the fields toward the house.

The one over which he was now passing, he observed, had been planted in winter wheat, and that just beyond, at the edge of the meadow, was the young orchard well grown and badly in need of pruning. The route he had taken soon brought him out into the lane at the foot of the hill, near the cider mill, where he stopped to drink of the cool sap that flowed into a large tin pail, from one of the sugar-maple trees under whose branches the mill stood. How good it tasted to the thirsty boy, as he drank slowly from a long-handled dipper that someone had conveniently left hanging on the tree. When he had quenched his thirst, he picked up his suitcase again, resting it on one shoulder, and continued up the lane to the house.

"Hello, grandma!" he shouted, as he dropped his luggage on the porch and hurried forward to meet her as she emerged from the kitchen door, a steaming kettle of vegetables in her hand.

"Why, Bob, where'd you come from?" she exclaimed, setting the kettle down and kissing him.

"I looked for grandfather and Uncle Joe when I got off the bus in town, but I couldn't see them anywhere, so I walked out," he replied.

"Why, I'm sure they expected to meet you, Bob," she replied, "but the roads are so rough, I suppose they were late. They took some grain to the mill and would have to wait for it to be ground, and they may have been delayed there--but you haven't told me yet how all the folks are."

"Oh, they're all pretty well," he replied; "but tell me, when is Uncle Joe to be married?"

"Some time in April, I believe," she replied. "Do you know you're to be his chore boy this summer?"

"Yes, father told me--it will be lots of fun. Just think--no more working all cooped up in a store like the last two summers," he replied enthusiastically.

"But it won't be all fun, you know, Bob. Your Uncle Joe has bought the farm, although it's not all paid for yet, and I imagine he'll keep you pretty busy--if I know Joe," she added.

"Let me get you some water, grandma," he said a moment later, seeing her pick up the tin water-pail; "I'll start right in now and get my hand in," he laughed.

"You always were a hustler, Bob, even if you don't grow very fast," she said, looking at his over-large clothes, as he left the kitchen.

"I hope your Uncle Joe will remember that you're not grown and can't do a man's work, even if you're willing to try," she said on his return, as she watched him set the pail of water on the kitchen table.

"Why, I'm eighteen now, grandma, and weigh one hundred and ten pounds," he answered stoutly.

"Well, this is a big farm, Bob, and it's gotten pretty well run down in the last few years with your Uncle Joe out West and your grandfather feeling too poorly to do much more than look after the

crops," she said.

"Are there big fortunes to be found in the West, grandma?" he asked a moment later.

"No bigger than right here, Bob," she replied. "It's only a matter of work, and I'm beginning to believe that after all it is as much a matter of managing properly as working hard. Do you know that your grandfather and I are going to move to town as soon as your Uncle Joe gets married?"

"Why, no, I didn't--who'll look after things here when you go away?" asked Bob.

"Oh, your new aunt will see to that," she replied. "I hope you'll like her, Bob."

"Who is she and what does she look like?" he inquired with boyish eagerness.

"She used to be a school teacher and lived with us while she taught our school," she replied; "that's how your Uncle Joe met her. She has plenty of good looks--too many, I sometimes think, for a farmer's wife--and she is a real New England Yankee woman, who doesn't know how to milk cows."

"How could any one be too good-looking to be a farmer's wife, grandma?" laughed Bob. "Why should good looks keep her from being successful?"

"Well, you see, Bob, nice white hands are generally spoiled by rough work," said the old lady.

"But why will she have to do the rough work when she comes here?" persisted Bob.

"Oh, I guess she won't have any to do--at least, that's what your Uncle Joe says," replied his grandmother with a haughty toss of her head. "That's what he's got you down on the farm for."

"Oh," said Bob, dryly, "and so that's why he was so extremely anxious for me to come."

"Yes, that's why, Bob--you might as well know sooner as later, that you're going to be a pretty busy boy this summer. Your Uncle Joe is so big and strong that he never gets tired and doesn't know when to quit, and he expects every one else to work just as hard and as long as he does. Besides," she added, "I don't think he'll want HIS wife to spoil her nice white hands."

"What's her name?" inquired Bob, not in the least worried by his grandmother's gloomy predictions.

"Betsy Atwood--but your uncle calls her Bettie," replied his grandmother.

"Aunt Bettie," repeated Bob. "A pretty name!"

"H'm!" sniffed his grandmother. "I'm certainly glad you like it, and I

hope you'll like her as well--it will help to make the work seem easier to you."

"Why, there's grandfather and Uncle Joe now," said Bob a moment later, as he glanced through the kitchen window toward the barn, and catching up his cap he rushed out to greet them.

Joe Williams was a typical farmer, tall, deep-chested and straight as an arrow. He stood six feet in his stockings and weighed two hundred and ten pounds, and could toss a barrel of salt on the tailboard of a wagon without losing his happy smile. He was twenty-seven years old, and there was not a farmer in the county who could beat him at feats of strength or endurance, and few indeed who could keep pace with him. He had black hair and blue eyes. Books had little attraction for him--he loved to be in the open, for which his great size and strength seemed to fit him. He had received little education beyond the country school, unless could be counted the two years he had spent working on farms in the great West, where he probably would have stayed had it not been for the brown eyes of Bettie Atwood and an offer from his father, now old and failing in health, to sell him the old place at his own terms.

"Hello, Bob!" he called as his nephew came forward, "sorry we missed you. The bus driver said you'd left on foot for the farm when you didn't see us around. How've you been lately?"

"Oh, I'm all right," replied Bob.

"Hello, grandfather!" he called, as he went round to the side of the wagon to greet his grandfather.

"You don't seem to grow much, Bob," he laughed, as he shook hands. "Cooped up too much in that grocery store--you need the open air of the country to stretch you out. Just look at your Uncle Joe there--see what the country has done for him."

"Oh, I'll grow all right, grandfather. I like the country and the open-air life, too, and father says I may take up farming work if I want to."

The team was soon put away, and shortly after supper Bob, too sleepy to keep his eyes open, went to bed.

II

A DAY'S WORK

"Bob! Bob! Time to get up and do your chores."

The sleepy boy rolled over, rubbed his eyes and sat up, trying to remember where he was and who was calling him; then he recognized the voice of his uncle, and jumped quickly out of bed.

"All right, Uncle Joe, I'm coming," he answered, as he felt around in the dark for his clothes, for he had neglected to provide himself with

matches to light the oil lamp that stood near by on the dresser.

His clothes were simple, and getting up before dawn was no new experience for him. A few moments later he hurried down to the kitchen, where his uncle, who had just finished stirring the kitchen fire, was filling the tea-kettle.

"Well!--are you up for all day, Bob?" he inquired cheerily.

"I will be as soon as I get awake," he answered, as he started for the rain barrel for water to wash.

As the water in the well was hard, rain water was used for washing, except in winter, when the barrels were frozen solidly. The early spring rains had filled the barrels again, but as the night had been cold, ice had frozen over the top. His uncle had been to the barrel ahead of him and broken the ice, so he dipped up the basin full of water, and placing it on a bench on the porch, washed his face and hands.

Above the wash bench, summer and winter, hung the roller towel, and near by the mirror and family horn comb. In the dark the mirror was of doubtful use, but with a few well-directed strokes of the comb he managed to get a semblance, at least, of neatness to his hair. He shivered a little as he finished--just as his uncle appeared, milk pails and lantern in hand.

"I want you to do the milking from now on, Bob, for it's not the kind of work a woman should do," said his uncle, and handing him the pails, they started for the barn.

"You're right, Uncle Joe," replied Bob. "I always milked our cow at home so mother wouldn't have to do it; besides, it doesn't take so very long."

Bob had been taught to take good care of the family cow--a well-bred Guernsey, whose stable had a good cement floor and was neatly whitewashed. Once or twice a week he would curry-comb and brush her from nose to tail. Nothing gave him greater pride than to have his father bring some one unexpectedly into the stable to look at his charge and comment on the clean manner in which both stable and cow were kept. His mother sold the milk they did not need for their own use, and had no trouble in getting two cents a quart more than the regular price--partly on account of the cow being so well bred and giving rich milk, but principally on account of the reputation the clean stable had made in the village.

The cow barn that Bob now entered was built under a portion of the main barn, adjacent to the thrashing floor, and was dark, even in the daylight. The earthen floor was foul with neglect. The cows, instead of being secured in separate stalls with stanchions, were chained up in a row to a long, old-fashioned manger.

Upon entering, Bob's uncle hung up the lantern; then, seeing Bob look around and hesitate, asked:

"What are you looking for, Bob?"

"I was looking for a fork to clean the stable. I always clean the

stable and brush off the cow at home before milking," he replied.

"Well, I guess you're a little late to start that here," laughed his uncle. "Never mind the floor; we'll back the wagon in here after breakfast and give it a good cleaning."

"All right, Uncle Joe; but where's the brush?" asked Bob.

"Brush! What brush?" asked his uncle.

"Why, don't you brush off the cows each morning before you milk them?" asked Bob. "Father always insisted that I brush Gurney each morning."

"Well, your father's not a farmer and you've only one cow, while we have eight, and, besides, I've lots of other work to do without curry-combing cows," replied his uncle in a sarcastic tone, angered at Bob's reference to his father's greater knowledge of farm work.

"Better hurry up with your milking, Bob, while I feed the horses," he added, as he left him staring at the cows.

He could not remember ever having seen such dirty cows or so dirty a stable before. Then he suddenly thought that he had always visited the farm in the summer time, when the cattle were kept in the fields and milked in the open barn yard.

He finished the milking as best he could, and was not surprised to find that instead of getting forty quarts from the eight cows, he received only fifteen quarts--about three times as much as he got from Gurney alone. He now remembered the answer he once heard his father give a visitor at Gurney's stable.

"But, Mr. Williams," the visitor had said, "a purebred cow must be considerably more expensive in upkeep than an ordinary one."

"That's where you're mistaken," his father had replied, "for a well-bred cow eats no more than a common one--in fact, Gurney eats less, and the difference in the amount and quality of the milk soon pays for the difference in the first cost. Then, there's the pleasure that Bob gets out of the care he gives to an animal that is worth while, and assuredly that's something not to be lightly lost sight of."

Dawn was breaking when Bob finished. On the way to the house he met his uncle coming out of the yard, a huge pail of swill for the pigs in each hand.

"Thought I'd feed the pigs for you this morning," he said, as Bob set down his milk pails and held the gate open for his uncle to pass through. "It will take you a day or two to get your hand in," he added.

Bob made no reply, but he noticed the swill was full of broken ice, like the rain barrel from which he had taken the water to wash that morning, and he was wondering how much good a cold breakfast like that would do even for a pig.

He carried the milk pails into the kitchen, where he found his grandmother busy preparing breakfast. "Shall I take the milk to the cellar?" he asked, as he set the pails on the floor to rest his arms.

"No, thank you, Bob; I usually strain it here in the kitchen before taking it down," she replied; "but you may feed the calves--that's their warm milk there by the stove. You'll find four of them in the orchard, back of the smokehouse. Divide the milk among them, and hurry back to breakfast."

Bob disappeared with the milk, but was back in a few minutes. The tin wash basin was put into service again--this time hot water from the boiling tea kettle took the chill off, and in a few minutes, he joined his uncle who, having already washed, had that moment seated himself at the breakfast table.

"Will you feed the chickens for me, Bob?" asked his grandmother, as he rose from the table after breakfast. "You'll find some shell corn in a feed box on the thrashing floor. Give them two measures."

"Come around to the wagon shed when you get through with feeding the chickens, Bob," called his uncle, as he started for the barn. "I'll get the team and we'll clean out the cow stable to-day."

Bob filled the small wooden box he found in the feed bin, then stepping out into the barnyard, he called the chickens around him. He could not help observing what a nondescript lot of chickens they were --not a purebred among them; besides, he noticed many were old, and some had frozen feet and combs. No wonder, he thought, as he glanced at the poorly built hen house that faced the east instead of south--a lean-to built against the side of the barn, with only one small window, and that one on the north end, while the cracks between the upright boards, of which the coop was constructed, were not even covered by strips.

With these fowls he contrasted his own prize-winning white leghorns, with their well-built and ventilated pen, with its two large windows to the south. He wondered how long they would have averaged four eggs a day for the eight hens through the entire winter, if he had fed them with only cold grain instead of carefully prepared feed, and had kept them in such a cheerless home. No wonder his grandmother, who got the money from the sale of the eggs, said chickens didn't pay, and that the few eggs the hens did lay in the winter were usually frozen before they could be collected.

He now joined his uncle and they began the annual cleaning of the cow stable and barnyard. The stable was not hard work, although the long corn stalks that were tramped deep into the floor were troublesome and required much labor to pry loose. They finished the cleaning of the cow stable by noon, but when they started on the barnyard in the afternoon they found it was frozen almost solid, so they made slow headway and Bob's arms and back ached from the unaccustomed heavy work.

"When shall I quit to do the milking?" he inquired, as he noticed the sun getting low.

"Oh, we'll be knocking off pretty soon," was his uncle's indefinite answer.

It was nearly six o'clock and getting dark when his uncle finally decided they had done enough work for one day.

"Guess you'd better hustle, Bob," he said. "I didn't notice it was so late. Your grandmother will wait supper for you."

Bob jumped down stiffly from the seat of the wagon and, after cleaning his shoes, went to the house, as his uncle had directed, and washed up.

"Are you tired?" asked his grandmother, as he came into the kitchen where she was busy cooking by lamp light. "Your Uncle Joe's starting right in to have you do all the work on the farm in a day; he should have let you stop an hour ago to do the milking."

Bob made no reply. He took his pails and lantern and started for the barn. His hands were stiff and blistered from using the fork all day, and it was with difficulty that he finished his task in the ill-smelling and badly ventilated barn. His back ached, too, as he carried the pails to the house.

"Why were you so long?" asked his uncle impatiently, as Bob entered. "Your grandmother wouldn't let us eat till you came in, so I fed the calves and pigs for you while we were waiting."

"At home, Uncle Joe," replied Bob, as they seated themselves at the table, "we always milk at five o'clock and don't let anything else interfere with it. Father says a cow should be milked early and regularly."

"Well, Bob, your father's not a farmer, and if he wants you to quit in the middle of the afternoon to milk your cow, you can do so, but we'll milk ours after the day's work's done," was the stern answer.

"Probably that's the reason Gurney gives nearly as much milk as any three of yours," replied Bob quietly, to which remark his uncle made no reply.

III

A RAINY DAY

"Bob," said his uncle one rainy Saturday morning, a week later, "it's such a bad day we can't do anything outdoors, so we'd better sharpen up the tools; there's a lot of them that need grinding."

"All right," said Bob, and he got a can of water for the grindstone--an ancient model, turned by hand.

His uncle gathered up the tools and piled them beside the stone. There were two double-bitted axes and one pole axe, two brush hooks, three mowing scythes, a hatchet, a meat cleaver, half a dozen knives, both long and short--to say nothing of a drawing knife, some chisels and planes, which were added to the pile as an afterthought.

Bob looked dubiously at the tools as his uncle deposited them near at hand.

"Are we going to sharpen them all, Uncle Joe?" he inquired, as he took hold of the handle and set the stone turning.

"Oh, this is only a short job," laughed his uncle, as he picked up a dull axe and pressed the bit so heavily against the stone that it stopped.

"Why, what's the matter, Bob--not tired before you get started, are you?" he laughed.

Bob made no reply. He needed all his strength to turn the stone. After a few minutes' work against his uncle's weight, he was compelled to quit.

"Can't we oil or grease it up or do something to make it turn easier, Uncle Joe?" he asked as he straightened up.

"Bah, who ever heard of oiling a grindstone?" answered his uncle, throwing some water on the bearings, which caused a lot of rust to work out at the ends.

"I guess you'd like to go fishing to-day, instead of working?" he observed.

"No, Uncle Joe, I'm willing to work," replied Bob, "but you don't know how hard this old stone turns."

"Oh, I don't, don't I?" said his uncle. "Well, I turned this stone, Bob, before you were born, and your father turned it before me."

"And you never put any oil or grease on it all that time?" inquired Bob.

"Of course not," said his uncle, "only elbow grease. We boys always had enough of that to keep the stone running in those days," he continued with a sarcastic smile.

"Well, there might have been an excuse in those days, Uncle Joe, for using a hand-power grindstone, but there certainly is none in these days, with water power, electricity and gasoline," he added, between breaths, as he began tugging away again at the handle.

"If you wouldn't waste your energy talking nonsense and turn faster, we would get done sooner," said his uncle bearing down harder than ever.

Bob stopped turning and stood up as straight as his aching back would allow him, and looking his uncle square in the eyes, said:

"Suppose you turn a while, Uncle Joe, and I'll hold the axe."

"No, you just keep on turning--you don't know how to grind an axe," replied his uncle; "besides, that's the boy's job."

"Perhaps you could teach me how it's done, while you're turning," said Bob, not offering to continue.

"That's only fair, Joe," said his grandfather, coming up suddenly

behind them and overhearing what was said. "The old stone does seem to turn harder than ever these days."

"Well, I'll show you how easy it turns," said his uncle, starting the stone spinning, but looked up quickly a moment later as it suddenly slowed down to a dead stop, for his father, instead of Bob, was holding the axe against it.

"Go on, Joe; don't stop; it's only a boy's job," he laughed, as he bore down so hard on the axe that the stone could not be started.

"Where are you going, Bob?" asked his uncle, as Bob started in the direction of the barn.

"I'm going to the wagon shed, Uncle Joe, to get some axle grease and see if we can't make the stone turn easier."

The metal plates covering the bearings were removed, and the caked rust pried out from between the rollers, for the stone had been mounted on small cast-iron wheels or rollers, but the wheels had been allowed to become rusted and finally had ceased to revolve.

When the rust had all been cleaned out and the wheels removed and cleaned, they were well greased and replaced.

"Now try it, Bob," said his grandfather, smiling; "it's a poor rain that doesn't bring some good."

The stone now spun around easily in the hands of the willing boy, and by noon all the tools had been ground, including some additional ones that his grandfather, seeing the work going so fast, had added to the pile. When all were finished, Bob wiped them off with a greasy rag, while his grandfather stood watching him keenly.

"You'll make a good farmer some day, Bob," he said a little later, "for I see you use your head as well as your muscle. All my life I've been grinding farm tools, but I never once greased them to keep them from getting rusty, and they were mostly rusty, too, when I wanted to use them," he added with a dry smile.

"How'd you like to have the afternoon off, Bob, to fish?" asked his uncle after dinner, looking at the rain.

"Fine, Uncle Joe! Perhaps I could catch a mess for supper," the boy replied, and without waiting for any further suggestions started for the woodshed to get his rod and line.

He was soon sitting on the end of the log carriage under the shelter of the saw-mill roof, his line dangling into the water of the forebay, waiting for a bite. He had been seated only a few moments when his attention was attracted by a small automobile bouncing over the deep-rutted road, a few yards to the south of the mill. When it got nearly opposite, one of the rear tires, with a loud report, blew out, and it came to a sudden stop. Two men got out of the car, but after looking up at the sky decided to wait until the shower was over before making the repairs. So, turning up their coat collars, they ran over to the shelter of the mill.

They did not seem to notice Bob as they came up a plank at the

opposite end, but sat down on a log with their back to him. As they seated themselves, one of the men took out his cigar case and passed it to the other.

"We'd better be careful about smoking in a saw mill, John, don't you think?" remarked the other, as he hesitated to take the proffered cigar.

"Oh, that's all right, Al," said his friend. "Just be careful where you throw the match."

"This must be a pretty old mill, John," said the one called "Al," a few moments later, as, his cigar lighted, he gazed around at the structure.

"Well, it's been here for some time, that's sure," his friend replied.

"Don't they ever use it any more? Don't look as though they have cut any lumber here in years," remarked Al.

"No, the timber's pretty well cut down around here, Al, and one doesn't haul it very far in these days of portable steam mills. In the old days, you know, they hauled the tree to the mill; nowadays, they take the mill to the tree. It's the modern idea."

"But I should think they would use the power for other things," his friend persisted. "For one thing, the water would be able to run a small generator and supply the farm with electric lights."

"Electric light! Ha! Ha! Joe Williams using electric lights on his farm--that's a good one, Al."

"Well, why not?" demanded his friend. "Electricity is not a new thing, even in the country, and there certainly are enough uses for power on a farm that would pay for a plant in a very short time."

"Yes, but you don't know Joe Williams, Al," persisted his friend.

"Well, who is he, then, that he never heard of electricity?" demanded Al.

"Oh, he's heard of electricity all right; but you see he's not progressive--he has no 'git up and git,' as they say around here. Of course, he expects to find electric lights and concrete sidewalks in town, but electric lights on his farm and good roads from here to town would never enter his head," was the reply.

"Has he always lived here? Doesn't he ever get far enough away from home to know what the rest of the world is doing, or is he just plain lazy?" asked his friend.

"Neither, Al. In fact, he spent two years on the big farms in the West, and I had hoped he would wake up our farmers with new ideas when he came back and bought the old homestead. But I've been disappointed. He's one of those powerful men, who thinks that farming is a matter of physical strength rather than thoughtful planning. He doesn't seem to see the advantage of headwork. True, it's going to take a lot of hard work to redeem this old place with its dilapidated buildings and broken-down fences, but headwork will help a lot. Why, do you know,

Al, the acreage wasted by rail fences on this farm alone would raise enough corn each year to send a boy to college."

"Yes, and what's more," he continued, "here's an old pond full of the richest soil in the whole county--soil that's been washed down from the fertile fields for years--to say nothing of the drainage from three big barns; and what does it produce?--nothing. Do you know, if I owned this farm, I'd open the gates and let the water out, put in some drain tile and plant this bottom land in corn. Why, when that corn got ripe, you couldn't find a ladder long enough in the county to reach up to the ears, the stalks would grow so high."

"Well, that would be some tall corn, John," laughed his friend, "but I've no doubt it's just as you say--this bottom would raise fine corn. Speaking of that, you ought to see some of the corn I've seen in the bottom lands out in Illinois and Iowa, But what about electricity if you do away with the dam?"

"Do you see those two beech trees down there, near the fence where the brook cuts in between the two steep banks?" asked John pointing.

"Yes, I do," said his friend.

"Well, do you notice how the banks approach each other at that point? A thirty-or forty-foot dam built across there would back up the water over an acre or two of ground in there--that land is unfit for anything else--and it would give them all the water they'd need for cutting ice in the winter and swimming in the summer; and as for electricity, a little direct-connection unit run by gasoline and setting in one corner of the garage, where it would be near at hand, would do the trick nicely. You know, Al," he continued, "the trouble with our farmers is they don't manage right. Now take Joe Williams here for an example. Here's wasted water power; he's still turning the old grind-stone by hand, and probably will all his life, unless someone wakes him up. Then here's this good bottom land wasted. Why, it was only last week he came in to see me at the bank to borrow a thousand dollars--said he was going to get married and needed some money to set himself up in housekeeping, as he's put all his money into buying the farm. Said he's going to marry a woman who's used to a little better than farm life, and, now that he's got his brother's boy helping him, he would like to put on another team."

"Did you loan him the money, John?" asked his friend, keenly interested.

"No, I didn't, Al. I told him I'd think it over. In fact, it was to look things over that I came out here to-day," he replied.

"I don't know whether I mentioned to you, John," remarked his friend, "but the Farmers' Mutual Life Insurance Company, which I represent, is seeking all the farm loans they can find. We consider them the best loans to-day."

"How's that, Al?" asked the banker.

"Well, it's like this. You loan a farmer a thousand dollars and in nearly every case the money goes to improve the land, hence makes the value that much greater. Then a wide-awake farmer generally wakes up his neighbors and the value of all the farms goes up, which naturally

makes our risk less. We don't care how bad a farm may be run down, John, if the farmer is a live one--one who has the 'git up and git,' as you say--we'll advance him any reasonable amount of money to help him. And that, by the way, brings me around to tell you why I dropped off to see you this morning. We want to place some of our surplus funds in farm loans in your section and would like to have your bank handle them for us."

"Why, Al, that's fine. I've a small policy myself in your company, and it's certainly good of you to pick out the First National to place these loans. I'll be a real booster for your company now."

"But referring to wasted opportunities, Al, do you see that sand and gravel pit over there on the other side of the pond? There's enough sand and gravel there, I've no doubt, to supply this entire county with concrete fence posts, silos, barns and all manner of buildings, to say nothing of building fine concrete roads throughout the whole county. And I'll tell you something more: Joe Williams hasn't waked up to the fact that there's a railroad coming through about three miles below his farm that will require thousands of yards of sand and gravel for concrete bridges, and that this is the only sand and gravel pit within a reasonable haul that's worth while. Why, do you know, Al, for years and years they've been letting people drive in here and haul away sand and gravel free of charge."

"You don't say!" exclaimed his friend.

"Yes, but speaking of concrete, Al, just think what a saving in horseflesh a twenty-foot smooth concrete road all the way from here to town would mean to these farmers--recent tests with a three-ton auto truck show that while it could make only 3.6 miles per hour over dirt roads, it could make twelve miles per hour over unsurfaced concrete roads, which would represent in the United States a saving of nearly two and one-half million dollars on auto-truck hauling alone, to say nothing of horse-drawn vehicles--just think of it, Al. But there's that old dirt road, same as it's been for years, hub deep with mud in spring and winter, and so dusty in summer that there is no pleasure in driving over it, and a dead loss in both time and money every time a farmer drives over it."

"It's surely the roughest road I've ever traveled on, John," laughed his friend, "and I've no doubt what you say is right. If farmers would only take to using lead pencils and figure a little they would soon discover where their losses are."

"You know the old way of repairing roads, Al. They dig the dirt out of the gutters in the springtime and fill up the rut holes, and then the next spring do the same thing over again, from 'generation to generation,' as the good Book says. I'm satisfied myself," he continued, "that our county will never go ahead until we begin putting down good roads. I was telling our Commissioners only yesterday that the First National Bank would guarantee the bond issue for any road-building work they would undertake in any part of the county."

The two men sat in silence for a time, looking out at the rain. Then they got up and started to walk to the other end of the mill.

"Why, hello, boy! Fishing?" remarked Al, as he noticed Bob for the first time.

"Yes," replied Bob.

"Catching anything, are you?" asked the banker.

"Well, you never can tell what you can catch on a rainy day," the boy replied slowly. "Uncle Joe greased the grindstone to-day for the first time in its history."

"You don't say!" laughed the banker; "who put him up to that, I'd like to know?"

Bob only grinned and remained silent.

"Well, it looks as though the rain were going to pass over," said the banker a few minutes later, as he looked out at his stranded automobile.

"What's your name, young man?" inquired the insurance man.

"Bob Williams," he replied.

"Oh, then you are Billy Williams' son, who's working here this summer," said the banker. "Well, how does it happen that you're fishing instead of working to-day, I'd like to know? Couldn't your Uncle Joe find anything for you to do?"

"Yes, he did; but we greased the grindstone and got through at noon," Bob replied smiling.

"Well, he was square in letting you have the afternoon off after you showed him how to save it," the banker replied. "Some time, Bob, when you're in town, drop in and see me at the bank, and, by the way, if you ever catch any turtles, bring them to me. I'll be glad to pay you fifty cents each for all you can catch. I'm rather fond of a good snapper."

"What are you going to do now?" inquired the insurance man, seeing Bob winding up his fishing line.

"Guess I'll go up to the barn and look for some lumber to build a long ladder," the boy replied grinning.

"Well, so long, Bob," said the insurance man with a smile. "Good luck to you! I see you've good ears."

IV

DRAINING THE POND

It was quite evident to Bob the next morning that his uncle was worrying about something; he was not only absent-minded, but he was short and crusty and found fault with everything that Bob did.

It was Sunday, and after the chores were finished, Bob walked down

back of the barn and stood looking at the pond for quite a while, pondering over what the banker and insurance man had said. Then he walked over to the west slope which ran along the side of the small hill where the house and barn stood and examined the contour of the ground carefully.

"What are you trying to discover in the hog lot, Bob?" asked his uncle, suddenly coming up behind him.

Bob's face was very serious, and he looked up at his uncle a moment before replying.

"I was just wondering how much it would cost to hire a man to grade a road up the side of this slope and get rid of the steep hill in front of the barn."

"What an idea!" exclaimed his uncle. "Hire a man, indeed! You must be crazy. We don't hire any men to work on this farm."

"Oh, yes, you do--you hired me, Uncle Joe."

"Well, but that's different, Bob," said his uncle, half smiling. "You don't get paid."

"Oh, yes, I do, Uncle Joe. Father said you told him you'd pay me whatever I was worth to you, and I'm willing to wait till you find out, but I certainly expect to be paid money for my work."

"Your father shouldn't have told you I'd give you money. Of course," he added quickly, seeing Bob's face cloud, "I expect to get you some new clothes in the fall."

"But father said I'm old enough now to buy my own clothes and that this year he'd let me do it. You just keep account of how much work and other things I do for you and pay me what I'm worth," Bob answered.

"What do you mean about other things?" asked his uncle quickly.

"Well, for instance," said Bob, looking him squarely in the eyes, "you want to borrow a thousand dollars at the First National Bank and they haven't told you whether they'd give it to you or not."

"Who told you that?" demanded his uncle coloring.

"I don't care to say," replied Bob, "but it wasn't grandmother or grandfather," he added quickly, to clear them of any suspicion of having violated a confidence.

"Of course, they didn't," said his uncle. "They don't know anything about it."

"I can tell you how you can get all the money you want--enough even to build a new house and a new barn, with silos, new fences, and other buildings. Also a concrete road from the house to the main road and put a bathroom and electric lights in the house, too," Bob added.

"Have you gone crazy?" demanded his uncle, scarcely able to believe his ears. "What nonsense are you talking this morning?"

"Well, you want to find out how it can be done, don't you?" he asked.

"Well, it won't do any harm to tell me," replied his uncle, suddenly remembering his approaching marriage and how far his slender purse would go toward fixing up the place and making it presentable to his bride.

"Drain the pond and plant it in corn," said Bob triumphantly.

"What's that?" asked his uncle again, not sure he heard correctly.

"Drain the pond and plant it in corn," repeated Bob. "You won't have to wait till you sell the corn, either, to get the money."

"How's that?" asked his uncle, interested in spite of himself.

"Well, all I can tell you is to do it and the First National Bank will make the loan."

"Whoever heard of such a thing as planting corn in an old mill pond," scoffed his uncle.

"I did," replied Bob smiling.

"Who told you?" demanded his uncle, looking him over from head to foot, for Bob with his ideas was getting to be more and more of a puzzle to him every day as he upset the long-established farm traditions.

"The president of the bank himself," declared Bob. "At least I overheard him tell another man that he would."

"You overheard John White, president of the First National Bank, discussing with someone else that I wanted to borrow a thousand dollars? I don't believe it. John White wouldn't discuss my affairs with anyone, especially when boys are standing around listening," vehemently declared his uncle.

"I wasn't standing around listening," said Bob blushing. "I was fishing in the pond yesterday and I sat in the mill to get out of the rain. I was fishing in the forebay, and they came in the mill to wait until the rain was over and sat down and talked."

"What! They talked about me?" demanded his uncle.

"They talked about you and grandfather and all the other farmers around here. Said you farmers never used your heads and let your farms run down, when all you had to do was to show him you had some 'git up and git' and you could have all the money you wanted."

"Well, if that's so, then why didn't he give it to me when I asked him?" demanded his uncle.

"That was because he was disappointed in you. You've not yet shown any 'git up and git,'" replied Bob.

"What do you mean by 'git up and git'?" asked his uncle.

"Why, things like draining the pond and making it raise corn instead of letting it lie there a waste; building a new road up to the barn that won't be so steep you can't haul a load up or down; building new wire fences with concrete posts and a new barn with silos, and--"

"Stop!" shouted his enraged uncle. "You're only talking to hear yourself, Bob, and I'm not sure but you're talking to make fun of me. I've a good notion to get a buggy whip and whale you for such impertinence," he declared, his anger suddenly getting the better of him. "No 'git up and git! You know yourself I work from before daylight until long after dark as it is. What does he expect me to do?"

"Just work from six o'clock in the morning until six at night, then you can spend the rest of the time planning how to improve the farm."

"Did he say that, Bob?" demanded his uncle, looking down at the ground.

"Well, not just that way," replied Bob, "but that's what he meant. He did say, though, he would make the loan if you could show him you knew how to improve the farm, and he did say that if HE owned the farm the first thing he'd do would be to drain the pond and plant it in corn. It was his friend that suggested the electric lights--and he wasn't joking, either, Uncle Joe," stoutly declared Bob with much earnestness.

"Come over to the barn, Bob," said his uncle after considering the matter a moment, "and tell me just what they said."

They went over and sat on the fence on the south side of the barn from which point of vantage they could see the pond.

Bob now described in detail all that he had overheard, his uncle interrupting from time to time to ask questions. When he had finished they sat in silence for quite a while, then his uncle jumped down from the fence and turning to Bob said:

"Come on, Bob, let's go' down and see how we can drain the old pond. I'll make a bargain with you now. Your father told you I'd be willing to pay you what you could earn. Well, that goes, and if you leave it to me, I'll settle square with you in the fall, but there's one thing I want you to do and that's to promise me you won't tell a soul about this matter, and you and I'll make some of them around here sit up and take notice before we get through."

"I'll promise," said Bob, "if you'll let me make one exception."

"Why, who's that?" asked his uncle, surprised at his answer.

"Aunt Bettie," said Bob.

His uncle was touched by the thought that Bob was not willing to exclude his new aunt-to-be from participating in what would probably be her greatest joy--the success of her husband.

"You don't know her yet, Bob," he said.

"No," replied Bob, "but grandmother described her to me and I know I'm

going to like her."

"I'm glad now I didn't go to church this morning, Bob--you've given me an idea," remarked his uncle, as they walked along the breast of the dam to the mill. "Well, here's the gate. I guess this is just as good a time as any to start and they'll hardly consider it working on Sunday if I open it now--so here goes," and up came the gate, and the water began rushing out, sending the idle wheel spinning.

They sat in the mill until noon, listening to the dull rumble of the wheel and watching the water getting lower and lower, while they debated the best way of planting the bottom.

"I suppose we'd better go up and get our dinner, Bob," said his uncle, suddenly coming out of a day dream into which he had fallen almost an hour before.

"After dinner, Uncle Joe, may I come down and look for some turtles for Mr. White? He said he'd pay me fifty cents apiece for all I could catch."

"Did he?" replied his uncle. "I'll help you, Bob. We'll bring down a barrel or two and a couple of rakes and have a regular turtle hunt," he laughed. "They can't get out of the sluiceway gate, there's a wooden grating there."

As soon as they had finished their dinner, they put on some old clothes, including rubber boots. Then Bob got the water barrels and two rakes and put them on a stone drag, while his uncle harnessed up old Frank. They rode down the hill to the pond and near the spillway they unhitched the horse and tied him to a tree. The water had fallen so much already that there were little shallow pools scattered all over the bottom of the pond, and in some of these they could already see the heads of surprised turtles sticking out. They took their rakes and waded out to one of these pools. The bottom of the pond was so soft they sank nearly up to their boot tops. Bob, who was the first to arrive at the pool, drew his rake across the shallow water and a big struggling snapping turtle was overturned and dragged out.

"There's a big one, Uncle Joe," he exclaimed, as he drew the turtle from the water.

"All right, Bob, I've got him," said his uncle, grasping the turtle by the tail. "Now look for another while I put this one in the barrel."

"Hurry, Uncle Joe; I've a big one here," he called, and his uncle came splashing back through the mud as fast as he could to secure the prize.

Two more were gotten from this pool and then they moved on to another. The second pool contained four, and as soon as they had them out of the water they dropped their rakes and grasping a tail in each hand they waded through the mud to the shore.

"Say, Uncle Joe, there must be a lot of 'em in there. I guess Mr. White will be surprised when he sees them all."

"Why, Bob, you surely won't take them all in at once," said his uncle, starting to pry something out of the mud that proved to be a turtle

still larger than any they had yet found.

"Why not?" said Bob. "He didn't say bring in one or two--he just said he'd pay fifty cents each for all I could catch; so I'm going to take them all at once, before he changes his mind about them. Maybe after he's eaten three or four he won't be willing to buy any more."

"Three or four, Bob," said his uncle, "why, I really believe we'll get a barrel full."

"All the better," said Bob, as he scraped out another big one from behind an old log. "They're in here thick as thieves."

It was nearly sundown when they finished the hunt and by that time most of the boys in the neighborhood had learned that the water was being drained from the pond and that a turtle hunt was on and had come down to see the fun.

They were astonished at the number of turtles they found, for after giving every boy one, they had two barrels full and eight big turtles beside.

"How many have you got, Bob?" asked his uncle, as they hitched up the horse and started for the house.

"Sixty-three, Uncle Joe, counting the big one."

"Why, that'll be over thirty dollars," said his uncle thoughtfully, "but I told you they were yours, Bob; you suggested the idea and I'll stick to it."

"Well, it only goes to show," replied Bob, "that Mr. White was right. We've lots of resources we're neglecting to develop."

When they reached the barnyard they put the turtles in the corn crib until morning, for they didn't have enough empty water barrels for them to swim in. They then went into the house and got rid of their muddy clothes.

"Well, I'm glad I lived long enough to see the old pond drained," remarked Bob's grandmother at supper that night. "I always said it was a great nuisance, as well as a waste of good bottom land--now that there's no more logs to be sawed. But you shouldn't have done it on Sunday, Joe; you should have waited until to-morrow."

V

SELLING TURTLES

A little after nine o'clock the following morning, John White, president of the First National Bank, and his friend, Alfred Dow, superintendent of agencies of the Farmers' Mutual Life Insurance Company, of New York City, walked up Sixth Avenue from the banker's home and turned into Philadelphia Street. They were engaged in earnest conversation and had reached the bank before they noticed a farm wagon

with a boy perched on the driver's seat, standing near the curb.

"Where do you want me to deliver your turtles, Mr. White?" called the boy, and the men turned to look at the speaker.

"Why, hello, Bob!" exclaimed the banker. "Did you get me a turtle already?" Then turning to his friend, he remarked, "I can now give you that promised turtle dinner, Al. How many did you catch, Bob?" he asked, coming over to the wagon.

"Sixty-three," replied Bob, "but I kept one for myself."

"What's that you're saying?" asked the astonished banker. "Sixty-three turtles for me?"

"No, only sixty-two for you, Mr. White; I kept one for myself," replied Bob smiling.

"But, Bob, what would I do with sixty-two turtles? I couldn't eat that many in ten years." "Well, you didn't say you'd eat them," said Bob continuing to smile. "You only said you'd pay fifty cents each for all I could catch and bring to you."

"That's right, Bob; he did say that," interrupted Mr. Dow, enjoying the situation. "I'll back you, Bob. He made a verbal contract with you for all you could catch. I heard him say so myself."

"But, great guns, Al, what will I do with so many turtles?" asked the banker, looking hopelessly from one to the other.

"I'll tell you what," said his friend still laughing; "our company's going to give a dinner in Pittsburgh day after tomorrow to our Western Pennsylvania agents. I've been looking for a novelty for the dinner and this will do fine. We'll go into the bank and call up the Fort Henry Hotel and talk with the manager. We'll sell him the turtles and you come down and have dinner with us and meet our men."

They were gone about twenty minutes, and both were laughing when they returned.

"You win, Bob," said the banker.

"All right," laughed the happy boy. "Where do you want them delivered and who'll count them?"

"Take them over to the express office, and I'll take your word for the count, Bob. Tell them I'll send over the shipping directions later."

"How about the grain sacks?" asked Bob. "The turtles are mine, but the grain sacks belong to Uncle Joe, and I'll have to charge you extra for them unless you guarantee that they'll be returned."

"I'll guarantee to have them returned," said the banker, "but tell me, Bob, how in the world did you catch sixty-three turtles since Saturday afternoon?"

"Uncle Joe drained the pond yesterday," replied Bob, smiling back at them as he started for the express office.

A half hour later he walked into the bank and stepping up to the cashier's window asked for the president.

"He's in a conference in the directors' room," replied the cashier.
"Are you Bob Williams?"

"Yes," he replied.

"Come this way," he said. "The president left word to have you shown in as soon as you returned. Turtles seem to be biting pretty good this weather," he laughed, as he conducted him to a small room in the rear of the bank.

Bob had never had much to do with banks; indeed, he could count on the fingers of one hand all the times he had ever been inside of one, and as to a directors' private room, he did not even know there was such a place, let alone ever having been in one. It was not to be wondered at then that he was embarrassed when he entered the room a moment later and saw the president and his friend seated in comfortable leather chairs before a large mahogany table.

"Back already, Bob?" asked the banker. "I don't suppose you thought to inquire how much the express charges will be on those turtles to Pittsburgh?"

"Yes, I did. They weighed 378 pounds, and the rate is 75 cents per hundred pounds--that makes \$2.63," he replied, drawing a small notebook from his pocket and consulting a memorandum he had made.

"Do you always figure out things?" asked the banker, apparently much interested that Bob had taken the trouble to find out the rate and figure the cost of the expressage to Pittsburgh.

"I do most always," he answered. "I learned to do that selling chickens and keeping account of the milk Gurney gives."

"Don't you keep a record of the milk all your cows give?" asked Mr. Dow.

"Oh, Gurney is our cow at home--not one of Uncle Joe's cows. Gurney's a purebred with a pedigree," he declared proudly.

"When are you going to start keeping a record of the cows on the farm, Bob?" asked the banker.

"I don't know," replied Bob. "Uncle Joe don't believe in it yet. He thinks it's a waste of time, and he always laughs when I tell him that it is the only way to find out if a cow's worth her keep, but," he added smiling, "he drained the pond and he didn't believe in that two days ago."

"I suppose you want the money for the turtles, Bob," said the banker, getting back to the main subject.

"Well, yes," he said, "but who's buying them, Mr. White--you or Mr. Dow?"

"Ha, ha," laughed the banker. "This is where you get stuck, Al."

"Why, how's that?" asked his friend.

"Well," said the banker, "I asked the manager of the Fort Henry how much he'd pay a pound for nice fat turtles. You see, Bob, I reduce everything to figures, too. Look at this and you'll see why it pays."

Bob took the paper and read "378 pounds turtles, at 30 cents per pound--\$75.60, less \$2.63 expressage--\$72.97."

"But you haven't deducted anything for your own trouble, Mr. White," said Bob, scarcely able to believe his eyes. "Don't you intend to charge anything for selling them to the hotel? Father says every business man must make profit on the things he sells, if he wants to keep in business."

"Well, Bob, I'm not going to charge you a commission on this deal. I've had too much fun already sticking my friend Al here a stiff price for the turtles," he added laughing.

"Don't think you've turned such a clever trick, John," replied his friend. "The hotel's only paying about \$40 more than you were willing to pay yourself, and probably won't use half of them for our dinner. Besides, I've gotten a fine idea for my talk at our meeting on Wednesday night."

"What's that?" asked the banker.

"Hidden Treasure," replied his friend. "Why, just look what's happened to Bob here in two days. On Saturday there was a pond occupying fifteen acres of the best ground on the farm and producing nothing. To-day he has \$72.97 and has prepared the way for the finest field of corn that will be raised this year in the county, if not the state, and there's no telling what he may do yet when he gets his Uncle Joe thoroughly waked up," he laughed.

"By the way, Bob, do you want your money in cash?" asked the banker looking at him keenly.

"If it's all the same to you, Mr. White, I'd like to leave it here on deposit," replied Bob.

"Put it in the savings department, Bob," suggested Mr. Dow, "then you'll get interest. Say, Bob," he continued, "tell your Uncle Joe I'm going to have our agent see him and show him how he can protect his family while he's paying for the farm."

"All right, I'll tell him," Bob replied.

When Bob drove into the barnyard just before noon his uncle hurried over and looked into the wagon.

"Why, did he take all the turtles, Bob?" he inquired, surprised to find the wagon empty.

"Yes, he took them," said Bob, "and sold them right away to the Fort Henry Hotel in Pittsburgh. He called them up on the long distance telephone."

"How much did he pay you for them?" was the next inquiry.

"\$72.97," replied Bob proudly.

"What! for those turtles!" exclaimed his uncle. "I don't believe it."

"Well, you don't have to believe me," Bob laughed as he jumped from the wagon. "I've the proof here." And he proudly exhibited his new bank book.

The look of surprise on his uncle's face gave way to one of disappointment.

"Of course, Uncle Joe, I put the money in the bank--I didn't want to carry it around," he added.

His uncle said nothing more, but turned on his heel and walked away. It was very evident to Bob that he had changed his mind and expected him to turn over the proceeds from the sale of the turtles, but he was determined that his uncle should stick to his agreement.

"Uncle Joe," he called, as his uncle reached the gate. "Mr. White told me to tell you that the matter you were discussing with him was all right and that he would be glad to see you any time."

"Oh, he did," said his uncle, turning and coming back to the wagon, where Bob was unhitching the team.

"Yes, he did," said Bob, "said he'd accommodate you any time you were in town."

"Well, I'm glad you drove a good bargain for the sale of the turtles, Bob," remarked his uncle, the look of disappointment gone. "I said they were yours and I want you to know that I still feel the same way about it."

"Thank you, Uncle Joe," replied Bob, as he started for the barn with the team.

VI

SELLING SAND

"Bob," said his uncle after dinner, as they were bringing the horses from the barn, "the old pond looks as though it might take all summer to dry out. Then, too, the brook winds through the center of it in such a way as to really spoil the field for farming."

"Why couldn't we straighten the brook, Uncle Joe," asked Bob, after a moment's thought, "or move it over to the south side against the bank there. That would make it almost a straight line between the lane bridge and the old forebay."

"But that would make a lot of work, Bob," replied his uncle, "and we have more now than we have time for. It would be a good idea though to have the brook on the outside of the field; but what bothers me most

is how we're going to keep the field from being flooded every time it rains."

To this Bob made no reply.

All afternoon, as they were hauling manure to the field, he kept turning over in his mind the question of straightening the brook, for it was now evident that in order to make the field a success the brook would not only have to be straightened but moved over to the south side, so as to have the field all in one piece. He realized now that the easiest part of redeeming the pond had been the letting out of the water, and also that his uncle was right in saying that it might take all summer for the bottom to dry out sufficiently for planting.

Bob had persuaded his uncle to let him stop work in the afternoon at four-thirty in order to have time to do the milking and chores, and he found that by hurrying he could get through before six o'clock. So that night in the early twilight, he paced off the length of the south side of the pond and found it was approximately seven hundred feet from the bridge to the forebay. He remembered that, except on rare occasions, the opening between the abutments of the bridge that carried the lane over the brook had always been sufficient to take care of any water. He now measured this space and found that the abutments were eighteen feet apart and from the under side of the timbers to the bed of the brook it was four feet six inches. He returned to the house and got out his notebook and began making some calculations. He found the area of the space under the bridge to be eighty-one square feet. If they could dig a ditch back a few feet from the south bank of the pond, where the ground rose sharply, and throw the excavated earth on the north side of the cut, they would have a channel with two good banks at the expense of making only one.

By pacing off eighteen feet of the bank, he had found that the slope of the ground would average about two feet for that distance. The depth of the water along the bank on the south side had been about two feet. By digging three feet below the level of the bottom of the pond it would mean an average cut of six feet. Taking out a block of earth approximately eighteen feet by six feet, of one hundred and eight square feet, would raise the banks high enough to allow for heavy freshets, and the bottom of the ditch, being three feet below the bottom of the pond, would allow for drainage.

He now calculated the amount of earth to be removed and found there would be twenty-eight hundred cubic yards to be dug and piled up to form the new north bank of the cut. He had no idea how much time it would require to do this work, or what it might cost if they hired a man to do it for them. After sitting for a few minutes debating the matter, he became so sleepy that he put his notebook in his pocket and went to bed.

"How long will it take you to dig a cubic yard of earth and pile it out on one side of a ditch, Uncle Joe?" asked Bob the next morning at the breakfast table.

"I don't know, Bob. Why do you ask?"

"I wanted to find out how much it would cost to straighten the brook in our new bottom field," he replied.

"Well, I know one thing," said his uncle, "and that is that it will cost more than I can afford to spend; and you know, Bob, we have no time for digging ditches ourselves--in fact, it seems to me it was a great mistake to drain the pond at all--the water at least covered the bad-smelling bottom, and we could shoot an occasional wild duck there."

"I'm not so sure about it being too expensive," replied Bob. "Mr. White said yesterday that it didn't matter so much what an improvement cost, if it could be made to pay the interest on the investment and earn a profit beside. All I need to know now to complete my figures is how much earth a man can dig and then I can tell how much it would cost."

"If you want to know so badly, Bob, why don't you take a pick and shovel and dig out a yard, and find out for yourself," suggested his grandmother.

"Yes," said his uncle, "then you'd know what a real backache feels like."

"All right," said Bob, "when may I do it?" turning to his uncle.

"Well, I suppose you might as well do it this morning as any time," said his uncle. "I know you won't be able to sleep to-night until you find out; besides, I'm going to town and you can have the forenoon off."

"That'll be fine, Uncle Joe," said Bob, "and there's another thing too, I wanted to ask you. I see wagons hauling sand and gravel from our pit. Who collects the money and how much do you charge them?"

"Charge a neighbor for a few loads of sand, Bob? What are you talking about? Of course not."

"But if you went to their farms, Uncle Joe, and asked for the rich soil out of their fields, they'd make you pay for it."

"Why, of course, Bob, but rich soil and sand and gravel are different. There's plenty of sand and gravel."

"Where, Uncle Joe?"

"Oh, everywhere."

"Then if that's so," said Bob, "why did Dan McCormick send his three wagons four miles to our pit last week? He said it was the nearest sand to his farm and what's more he said it's the only clean sand and gravel that don't need washing for fifteen miles around. I think we ought to charge them so much a yard."

"All right, Bob," said his uncle, whose mind was evidently occupied with things more important than selling sand. "You go ahead and make them pay, but remember, if you don't have any friends among your neighbors, don't blame me."

When his uncle returned from town a little after twelve o'clock, he drove down to see what Bob was doing, and found him at work on the ditch. As soon as Bob saw his uncle's face, he knew he had received

his loan from Mr. White, for he was smiling and seemed to be very happy.

"Well, Bob, how are you making out?" he called cheerily, as he approached, looking at the excavated dirt thrown out. Then his eye caught a double line of stakes set at intervals and running the full length of the pond, marking out the two sides of the cut.

"I dug out one cubic yard in forty minutes, Uncle Joe, but we could do much better with a team of horses and a plow and scoop. Allowing thirty cents per hour, the ditch would cost eight hundred and forty dollars."

"Whee," said his uncle, "more than we could ever afford to pay, Bob, I'm afraid, even though Mr. White is in favor of it and agreed to-day to loan me whatever it would cost."

"Oh, then you told him about it?" said Bob. "How did he like the scheme?"

"He said it was a first-rate idea, Bob. He also said we should lay tile field drain through the bottom of the pond to the ditch every fifty feet over the entire field. These would soon drain the bottom and keep the new field dry."

"I've been wondering," said Bob, "what we could do about draining the bottom, but I didn't think of tile, although it sounds like a good idea."

And Bob took out his notebook and figured for a few minutes.

"If we put them fifty feet apart, that would mean twelve rows; each row would be six hundred feet long--that would mean 7200 lineal feet. Did Mr. White say what the tile would be worth a foot, laid, Uncle Joe?"

"No, he didn't, Bob, and I was too busy to ask him."

"What would you say, Uncle Joe," remarked Bob a few minutes later, "if I were to tell you we can get the ditch dug, a new dam built across between the two banks down by the beech trees, and a road cut up the west slope by the barn, so as to get rid of that steep hill, and we won't have to spend one cent."

"What nonsense are you talking?" demanded his uncle. "You just said it would cost eight hundred and forty dollars to dig the ditch alone."

"So it would, Uncle Joe, if we dug it by hand. We could probably do it quicker if we used a team of horses and scoop, but, of course, we'd have to allow for the value of the team while it was doing the work, and, besides, it would take too long."

"Well, then, how'd it be done?" asked his uncle, interested in spite of himself, for after his interview with the president of the First National that morning he began to look upon Bob as something more than a chore boy.

"Come over to the sand pit with me, Uncle Joe," he replied, "and I'll show you."

Together they walked over to the pit and the first thing that caught his uncle's eye was a large sign: Sand and Gravel for Sale Price 50c per cu. yd. Cash or Labor Inquire Robert Williams

"Well, what does it mean?" asked his uncle, reading the sign for the second time.

"It means, Uncle Joe, that while I was still nailing up that sign two men came along in a big gray touring car and stopped, and one of them wanted to know what we'd take for the pit. I told him we sold our eggs by the dozen and not by what a hen might lay in a year. He laughed and said his name was Brady and that he had a contract for building some bridges for the new railroad that's coming in three miles down the creek and needed sand and gravel. The gentleman with him, who I judged from what they said was the engineer for the railroad, seemed to be very much pleased with the kind of sand and gravel we had, and I heard him tell Mr. Brady he'd approve it for the work. After looking the pit over, Mr. Brady asked what was meant by 'Cash or Labor,' so I told him we had some work we wanted done and would be willing to have him give us an estimate on the cost. He asked me what it was and I told him it was a ditch, a dam and a road. So he went up and looked the ditch over, then we went down to the beech trees and I explained to him about the new dam we were going to put in there to generate electric light for the farm. Then we rode up to the west slope in his big touring car and he examined the bank there. I showed him my figures for the ditch, and he made a memorandum of them; then he said if we would let him have the exclusive use of the sand pit for one year, taking out as much sand as he needed, and also let him have the heavy timbers from the old mill, as he needed them for some shoring he had to do, he would be willing to tear down the old mill, dig our ditch, build us a new dam and a new road, using his caterpillar steam shovel for the work."

"What did you say, Bob?" eagerly asked his uncle.

"I told him we couldn't think of it," replied Bob with a grin.

"What! You didn't take him up? What could you have been thinking of, Bob?"

"Well, you see, Uncle Joe, we'll need a lot of sand and gravel ourselves for making concrete fence posts and things like that, and then we may want to build a concrete road from the main road up to the barn, and, of course, we need a new dairy house and big silo."

"Yes, I know, Bob; the old place is pretty well run down," said his uncle. "Mr. White said something to-day about looking ahead and making permanent improvements, but we can't think of doing that now."

"I'm not so sure about that, Uncle Joe," replied Bob. "It seems we've got the only sand and gravel pit within fifteen miles with sand and gravel that the railroad engineer will accept for his work. I overheard him say that to Mr. Brady."

"Well, what did you finally do about the sand, Bob?" inquired his uncle eagerly.

"I told him the price was fifty cents per cubic yard in the pit, but

we would let him pay for it in work, if his prices for the work were not too high, so he's going to make up a figure and come back and see us. I told him I thought you'd be willing to let him have the timber from the mill if he would take off the boards and two by fours and haul them over to the sand pit for us. You know, Uncle Joe, these will come in handy for us to build a shed when we start to make fence posts and other things there."

"But will he need enough sand to pay for all this work, Bob?" asked his uncle, now greatly excited.

"Yes, I'm sure he'll need more, for he seemed to be anxious to buy the pit outright."

"He did!"

"Yes, he did, but I told him we were not willing to sell it, Uncle Joe; that we expected to put up a lot of concrete buildings on the farm besides building some concrete roads and making a lot of concrete fence posts."

"Well, Bob, I guess you did a good half day's work all right," said his uncle, "and to show you that I appreciate the way you've handled this matter, I'll let you make the deal with Brady when he comes back."

They didn't have long to wait, for about three o'clock that afternoon a big gray touring car came snorting up the steep hill back of the barn and stopped near where they were loading manure. The driver of the car got out and came over to them.

"This is the Uncle Joe, I was telling you about, Mr. Brady," said Bob, by way of introduction, as the contractor came up to them.

"Glad to know you, Mr. Williams. I came up to see you about buying your sand pit. What will you take for it in cash? I haven't a great deal of time to lose, so I brought the money with me," and he drew from his pocket the largest roll of bills that Bob had ever seen in his life.

"You'll have to--to--talk it over with Bob," hesitated Bob's uncle, for at the sight of so much ready money he began to waver in his resolutions to let Bob handle the matter.

"We don't want to sell it, Mr. Brady," spoke up Bob quickly. "We want to control the pit ourselves and have sand and gravel for our own use."

"Oh, that's all right. I'll let you have all you want for your own use, free of cost, too," said Mr. Brady quickly.

"No," said Bob. "This is the only sand and gravel pit around here, and, when they start building concrete roads in this county, which they may do any time now, this pit will be valuable."

"Say, son," said the contractor, "you're wasting your time on a farm. You ought to be with me in the contracting business. Who's been telling you about this new county road work?"

"No one's been telling me," said Bob, "but everyone can see it doesn't pay to haul heavy loads over rough roads to market your crops, and as for farming," he added, "it's a good business, too, Mr. Brady, especially if you have a good sand pit on the place," he added laughing.

[Illustration: "WELL, SON, LET'S GET DOWN TO BUSINESS. I SEE YOU'RE WISE ALL RIGHT TO THE VALUE OF THAT PIT"]

"Well, son, let's get down to business. I see you're wise all right to the value of that pit. How much work do you want me to do and how much money will you want me to give you, and who's going to keep account of the sand we get and when do we settle for it?"

"You said you had a steam shovel, Mr. Brady," said Bob. "Is it busy now? We want to get this bottom land ready for corn this year."

"Not doing anything at the present time; can start your work next week for the shovel's on the railroad siding at Indiana now," he replied quickly.

"What do you charge a day for use of shovel with a man to operate it?" asked Bob.

"Hold on there, son; you'll get to be as smart as I am if you keep on at that rate. I don't rent the shovel by the day, but I'll tell you what: I'll do your work on contract."

"All right," said Bob. "How much do you want for digging the ditch?"

"\$700," said Mr. Brady, consulting a memorandum.

"And how much for building the dam?"

"\$200 without a concrete spillway and sluice gate and \$350 more with them."

"And how much for the road up the west slope?"

"Well, that won't cost you much, son; that's an easier job than it looks. I'll charge you only \$100 for doing that. That would make \$1350 total."

"Yes," replied Bob, setting down the amount in his own memorandum book. "How much sand will you need, Mr. Brady?"

The contractor took a memorandum book from his pocket and consulted it for a moment.

"About ten to fifteen thousand yards of sand and gravel together on my first contract, but I expect to have a contract for building roads pretty soon that will require more than double that."

At the mention of these figures, Bob exchanged glances with his uncle, who had with difficulty kept to his agreement to let Bob make the bargain, and he fairly gasped when he began to realize the earning capacity of the old sand pit.

"I think you're charging me too much money, son, for the sand and gravel. You ought to knock off five or ten cents per yard and give me exclusive right to the pit."

"No," said Bob, "we're not willing to do that, but we will make this bargain with you, Mr. Brady: if you will do our work for us right away, we'll agree not to charge you more than fifty cents a cubic yard for as much sand and gravel as you want."

Seeing there was no other way out of the matter, the contractor finally consented to this arrangement.

"I'm not much on verbal contracts," he said, "for I find that people who do not set down in black and white what they agree to do, often forget and then there's trouble, so if you don't mind, Mr. Williams, we'll step into the house and put our agreement in writing."

"How shall we arrange to keep account of the amount of materials I get?" asked Mr. Brady, as they started for the house.

"How do you usually do?" asked Bob.

"I've got some tickets with my name on them," replied the contractor, "and every time a man takes away a load he gives one of those tickets to the man in charge of the pit. By the way, I suppose there'll be some one in charge who can take care of these tickets?"

"Yes," said Bob quickly, before his uncle had a chance to speak. "We're going to start a man making fence posts at the pit next week and you can give the tickets to him."

A few minutes after they had sat down at the table in the sitting room Mr. Brady handed the agreement to Bob's uncle to read. He read it over and then handed it to Bob, who read it over twice, very careful, and then laid it down on the table.

"It reads all right, Mr. Brady, and seems to be just what we agreed to do," said Bob, "but before we sign it I'd like to show it to Mr. White, president of the First National Bank."

"All right, son, just as you like," said the contractor, a look of disappointment on his face as he put his fountain pen in his pocket. "I'll be here on Monday with my men and outfit, for I'm sure Mr. White will find the agreement is all right."

"I think it is myself," said Bob, "but I'd like to have him read it over anyway before it's signed."

As they walked out to the barnyard, where his car was standing, the contractor turned to Joe Williams and asked:

"How do you manage to get up and down that steep hill with your automobile, Mr. Williams?" "Oh, I don't have an automobile," Williams replied.

"What! no car?" exclaimed Mr. Brady. "I don't see how your women folks get along without one. Cars are so low and horses so high nowadays, it don't pay to take a horse out of a busy team to drive to town. I should think you couldn't do without one. Well, good day," he added,

as he climbed into his car and threw on the self-starter. "See you next week."

VII

THE NEW AUNT

The following week was a very busy and eventful one for Bob. Plowing time was rapidly approaching, and his uncle was anxious to have all the manure placed on the fields ready to start work early; besides, they had taken a day off at Bob's urging to prune the young orchard. On Thursday he received a large package of Farm Bulletins from the Department of Agriculture at Washington, in reply to a postcard he had sent. He had only time for a hasty glance through them, before having to lay them away for careful reading later.

On Friday his uncle turned over the team to him, saying he was going to town for the day. Bob noticed that he had dressed up in his best clothes, so was not surprised when he came in from work late that afternoon to find they had company at the house.

"Come here, Bob," called his uncle cheerily, as he entered. "I want you to meet your new Aunt Bettie. She isn't exactly your aunt yet, but she will be soon."

Bob hastened forward to take the out stretched hand of the woman who rose to greet him.

Bob had a quick eye for beauty; he noted the fair, soft complexion which the rich dark hair set off so beautifully, but not this alone made the strong and conscious appeal to him--it was the frank manner with which she took his hand and the friendly light in her lovely brown eyes that won Bob completely.

"So this is 'Bob,' of whom you have been telling me," said Miss Atwood. "I'm certainly glad to make your acquaintance, Bob. Your Uncle Joe has been telling me many things about you, and I know we're going to be fast friends and have lots of fun together on the farm this summer."

"I hope so," said Bob, "for I like farming better than anything I know; there are so many interesting things to see and do."

"I'm glad to hear you say that, Bob," she replied. "In these days, when most boys of your age want to be in the town and cities, it's refreshing to find one who has vision enough to appreciate the golden opportunities of the country. Your Uncle Joe doesn't know it, but I've been doing considerable reading myself about farm life and farm work since we became engaged, and the more I read the more enthusiastic I become, and I'm sure we're going to have lots of pleasant days and evenings, too, together."

"Have you been reading farm bulletins, also, Aunt Bettie?" Bob asked hesitating, as he used her new title for the first time.

"That's right, I want you to call me 'Aunt Bettie'," she replied quickly, seeing his embarrassment. "Yes, I've gotten a great many bulletins from the Department of Agriculture at Washington and have read them over and over very carefully. The opportunities on a farm, if one just keeps his eyes open, are certainly wonderful."

"I'd like to read your bulletins, too," said Bob, his eyes sparkling.

"I thought you were going to give up teaching school, Bettie," interrupted her intended husband, "and here you and Bob are getting ready to start one. First thing you know, you'll be getting another scholar, one six feet tall," and he laughed down at her.

"Well, frankly, Joe," she replied, "you might spend your evenings less profitably than reading bulletins and other interesting papers on making farms pay."

"Guess I'll have to get in line," he replied laughing. "Bob's been preaching to me ever since he came here about modernizing the old farm and digging up our 'Hidden Treasure,' as he calls it."

"You'll have to excuse me now, Aunt Bettie," said Bob, "for it's milking time and I always plan to milk our cows regularly."

His heart was light and he whistled a merry tune as he started for the barn, the milk pails on his arm. He now felt sure that this summer was going to be the happiest one he had ever spent.

After the supper dishes had been cleared away, they sat together and talked of the things to be done to improve the farm and which would be the best crops to plant. As the discussion continued, Joe Williams began to realize that both Bettie and Bob knew many things about farming of which he was ignorant--things which, he reluctantly admitted to himself, were of the utmost importance.

On Saturday they quit work at noon to go to town. Bob asked his uncle if he were going to take Mr. Brady's contract and show it to Mr. White, the banker.

"The bank closes at noon on Saturdays, Bob," replied his uncle, "and we're to be pretty busy, Bettie and I, buying our things, for we're getting new furniture for the house, and I want to bring it back with me."

"Perhaps Mr. White doesn't go out of town on Saturday and I could find him at his home," said Bob. "I think we ought to have the matter settled before Mr. Brady gets here on Monday morning with his tools. It might make some difference if he started work before the agreement is signed."

"All right, Bob, you take the contract and try to find him. I'll be too busy loading the furniture to bother with it."

So as soon as he arrived in town, Bob left the wagon in front of the furniture store where his uncle, who had driven in with Miss Atwood in the buggy, was waiting. He hurried over to the First National Bank. The bank seemed to be closed, but the entrance door was unlocked, and after some time he found the banker in the directors' room going over some papers.

"Back already for your money, Bob?" laughed the banker, as he opened the door to admit him.

"No, Mr. White, I haven't yet found a better investment for the money. I came to see you about our sand pit. A Mr. Brady, who says he has the contract to build some bridges for the new railroad, wants to buy our sand and we have made a bargain with him and he put it in writing. We didn't sign it, for while it seems to be all right, Uncle Joe would like to have you look it over first."

"Oh, indeed," replied the banker, "and whose idea was it that I should read the contract before signing?"

"Well," hesitated Bob, "we thought maybe it would be better to be sure it was all right since you're loaning Uncle Joe money for the farm."

"That's right, Bob; that's only fair. Follow out that principle and you'll always get along."

He took the paper and read it through carefully and laid it down. Then he reflected a moment, picked it up and read it again. Then he whistled softly.

"You're right, Bob, in bringing this to me," he said, tapping the top of the table thoughtfully with the end of his pencil. "That contract is very well written."

"You see, Bob," said the banker, laying the document on the table, "this contract would be all right if you were sure you had enough sand and gravel to supply Mr. Brady's wants, but you will notice that he does not specify how much material he expected to use, nor does he state when he will require it, and if he took a notion to measure all the sand you have in the pit and issue a receipt for it, he could take it and let it lie on your ground for re-sale; he could do that under this agreement. Also, if you didn't have as much material as he wanted, he could compel you to supply him from other sources at the rate of fifty cents a yard."

"Well, what had we better do about it, Mr. White?" inquired Bob. "Mr. Brady's going to go to work on the ditch on Monday morning. He's setting up his caterpillar steam shovel now and getting ready."

"Wait a moment," said the banker, as he pressed the button. "I'll see if my stenographer has gone. She usually leaves at noon, but to-day I had some extra work that she stayed to finish--no, here she comes--we'll have it re-written."

"Will you kindly make two copies of this agreement, Miss Brown?" asked the banker.

"You see, Bob, there should always be two copies of all agreements--one for yourself and one for the other party to the contract. It is always best to have all agreements in duplicate."

"You see, Bob," said the banker, as he finished dictating, "I've added a time limit to the contract. A year from now, when I hope they will begin making concrete county roads, your sand and gravel, if the supply holds out, ought to be worth at least \$1.00 per cubic yard."

"I had no idea sand and gravel were so valuable" said Bob.

"Well, I've been looking the matter up a bit lately," replied the banker, "and I wouldn't be surprised if you could get that price for it a year from now--maybe before that even. There isn't a great deal of good sand and gravel in the entire county--certainly none that is as good as yours. If you've something else you'd like to do, Bob, you may stop around in an hour or so and get these contracts. I'll read them over after Miss Brown has them finished, and put my O. K. on them. I may not be here when you return."

Bob hastened to the store to impart the information he had obtained to his uncle, but found him so busy loading the farm wagon with his new purchases that Bob had to explain the matter to him several times before he seemed to understand.

At four o'clock Bob returned to the bank and received the corrected copies from the president, who was still there.

"How much do we owe you, Mr. White, for doing this for us?" asked Bob.

"Oh, I don't think I'll charge you anything for this, Bob, although it is worth something to know how to do a thing right, but since I've decided to make our bank the headquarters for farmers, we expect to do little things like this for our friends, so you're welcome to whatever the service is worth."

"Well, I'm sure we didn't expect you to do it for nothing," replied Bob, "and I know Uncle Joe will be pleased that you fixed it up for him."

"By the way, Bob," said the banker, "you might tell your uncle that there's going to be a sale of some purebred and grade Holstein cattle next week on a farm in the southern part of the county, and that I'd like to have him bid them in. There are ten young cows and a fine bull--just the kind he should have to start a herd on his farm."

At the mention of the purebreds, Bob's eyes sparkled, but after reflecting a moment he replied:

"Uncle Joe'll not have money enough to buy any now, Mr. White, and besides, he doesn't think there's much advantage in purebred over ordinary cattle."

"You tell your Uncle Joe that the First National Bank is back of him and we'll loan him the necessary money to buy these cattle, and that I think he should replace his present herd of old common cattle with young purebred stock--that it will pay him to do so. He can get back a part of their cost by selling off his present herd. I've about come to the conclusion, Bob, that there's more money in that sand pit of your Uncle Joe's than either you or he have any idea. Tell him the sale will be next Tuesday, and if he'll come in early in the morning, I'll drive him down in my automobile. We can get back easy by noon, so he'll only lose half a day. I know all about these cattle--they're a first-class healthy herd. The man that owned them died, and his widow is selling off all their stock."

"All right, Mr. White, I'll tell him," said Bob. "Thank you for your

advice about the contract."

"I want to see that farm of your uncle's, Bob, improved and well stocked this year--first on account of the benefit he'll get from it and second on account of the influence it will have on the neighboring farms. We've lots of good farms around here, Bob, and I want a model one for the others to pattern after. All our farms need to make them pay well is wide-awake farmers, with a constructive bank back of them to give them the necessary financial help to get started. I've decided that the First National is going to be that bank, and stand back of all farmers in this county who'll make real improvements.

"Your uncle's farm I've picked out to start with, on account of his having that gravel pit, which will make it possible to build his new buildings and pay off the mortgage quickly. Of course, the others must necessarily go slower in their improvements, but when we finish with your uncle this fall, Bob, we'll have the others all so jealous they'll just naturally get into line."

VIII

THE SALE

Bob's heart beat quickly on Monday morning, as he looked out from the barnyard in the direction of the old mill and saw the smoke coming from the steam shovel that Mr. Brady had placed at the lower end of the ditch, ready to start operations. Brady evidently intended to do the work in the shortest possible time, for while Bob was still looking, the operator started the machine, and Bob saw the shovel sink deep into the soft earth and a moment later swing over to the north side, and the first yard of dirt had been removed. He even forgave the contractor for his attempt to drive a sharp bargain in his written contract, though he remembered Brady's embarrassment when his uncle pointed out the defects in his written agreement and hastily signed the corrected one made by John White.

Bob could scarcely realize that it was little more than a week since the eventful Saturday afternoon he had spent fishing in the old pond. He was whistling merrily as he brought out the horses to start the spring plowing.

"I don't like to spoil that merry tune of yours so early Monday morning, Bob, but I've been in a quandary for several days to know how to tell you that it isn't going to be possible for you to go to the wedding," said his uncle. "You see, some one will have to stay on the place while we're away, and your grandmother and grandfather ought to go, and, of course, I'll have to be there myself," he laughed.

"That's all right," replied Bob. "Of course, I'd like to go to the wedding, but I'll have lots of time to get acquainted with Aunt Bettie afterwards, and, besides," he added, glancing at the sun coming over the hill, "we ought to get our spring plowing started as soon as possible. I was just wondering, Uncle Joe," he added, "who we could get to look after the sand pit and start making fence posts. I was reading in one of the 'Concrete on the Farm' bulletins how they're

made. It isn't going to be much of a job to receive the tickets for sand and gravel that Mr. Brady'll take away, and the man in charge can spend practically all of his time making fence posts. He ought to make at least 20 posts each day--that would mean that in a month we would have 520 posts--enough for 520 rods of fence--or in a year 6240 rods."

"But you couldn't make fence posts in cold weather, Bob," corrected his uncle.

"Why, yes, you can, Uncle Joe, if you have an enclosed shed with some heat in it. The bulletin tells all about how to do concrete work in cold weather."

"Well, I'll look around to-day, Bob, and see who I can find. I have to go to town at noon to attend to some business. You have to get a license, you know, so I'll have to attend to that before I forget it. Shall I plow around for the first time or two for you, Bob?" asked his uncle, as they hitched the team to the plow.

"No," said Bob. "I'd like to try it myself," and he guided the horses along the fence for the first furrow.

The field they had selected was the one lying just back of the barn, and Bob had completed three sides and was coming along the fourth, which adjoined the fence between the woodshed and the house. His uncle, who was washing the buggy, looked up and noticed that he was leaving considerable space between this fence and his furrow.

"Why are you leaving such a large space in the corner, Bob?" he called, as the team came abreast of where he was working.

"I was leaving a space for a new hen house, Uncle Joe," he replied.

"What new hen house?" asked his uncle.

"Oh, didn't Aunt Bettie tell you when she was here that we talked about the location for a new hen house, and she thought it ought to be put out here in this field between the house and the barn, so that it would face to the south," answered Bob.

"Why, no, I guess she must have forgotten to mention it to me," said his uncle, "but I don't think we'll be able to afford any new buildings on the farm this year, Bob."

"I'm not so sure about that," replied Bob. "You know, Mr. White said the First National Bank was going to be run as a constructive bank and that he would be willing to loan money on any permanent improvements, and that he wanted to make a model farm of yours this year. Besides, you remember what I told you he said about the value of our sand and gravel pit."

"Yes, Bob, but look at the work we have contracted for already; don't forget how many loads of sand and gravel it will take to pay for that."

"That's so," said Bob, "but Mr. White didn't seem to be so much concerned about the amount we spent for improvements as what we spent it for. He seems to be anxious to have us fix the old farm up and believes it will pay."

"That's all right for you and John White," added his uncle, "to talk of making this a model farm in a year, but it's my name that's going to be on the notes, and some fine morning when we get all these improvements made, he may drive out here and take the model farm away from me for the notes."

"I don't think John White would do such a thing," said Bob stoutly. "Besides, why should he call his bank a 'Constructive Bank,' if he used it to destroy other people's hopes? I should think he would call it a 'Destructive Bank,' instead."

"Well, maybe so," said his uncle. "Anyhow, it won't hurt any one to let that little corner go undeveloped for the present, till I talk it over with your Aunt Bettie. It may please her if we carry out her suggestion."

"Why're you so quiet, Bob?" asked his grandmother at dinner that day. "One would think it was you that was getting married instead of your Uncle Joe, sitting there as solemn as an owl and not saying anything. Has the cat run away with your tongue so soon?"

"Why, no," said Bob. "I was just thinking."

"You weren't feeling badly because you weren't going to the wedding, were you?" asked his uncle, looking up.

"No, Uncle Joe, I wasn't. I was just wondering if they might have some bees at the sale to-morrow."

"Bees!" exclaimed his grandmother. "What in the world do you want with bees? Isn't it bad enough around the farm already with yellow-jackets and bumble-bees, without bringing any more here? I should think you would get stung enough by the wild bees without wanting to bring a lot of honey bees to the farm."

"Yes, grandmother, but you forget that the wild bees don't make any honey, or earn anything for us, and honey bees would be earning money all the time. I've been reading in one of the farmers' bulletins that a good colony of bees would make 30 pounds of honey in a season, which at 20 cents per pound would be worth \$6.00, and the only thing we would have to do would be to look them over carefully and smoke them once in a while when they swarmed," he replied.

"Say, Bob, did John White put these bees in your bonnet?" asked his uncle suddenly.

[Illustration with caption: BEES ARE A PROFITABLE SIDE LINE THAT PAY IN INCREASED CROPS OF FRUIT AS WELL AS HONEY AND REQUIRE LITTLE CARE]

"No, it was an idea I got out of one of the farm bulletins," he replied.

"Well, I think you had better give up reading those bulletins for a while, and keep your mind on your plowing," said his uncle.

"Why, didn't I do lots of work this morning, Uncle Joe?" asked Bob surprised.

"Yes, of course; but I mean you can't work and think both," said his uncle.

"Why not, Uncle Joe? Don't you remember what Mr. Dow, the insurance man, said about the farmers that didn't think?"

"Well, anyhow, I draw the line at buying bees," replied his uncle firmly.

"Yes," added his grandmother. "I don't want any bees around here, spoiling the fruit."

"But, grandmother, you haven't waited to find out what I'm going to do with them," said Bob. "I don't want to put them around the house. I want to put them between the clover meadow and the young orchard, and, besides, they don't spoil the fruit. It's the other insects that do that. A honey bee couldn't do that if it wanted to."

"Bob," asked his uncle, showing an interest for the first time, "why do you want to put them away over there?"

"Because I've been reading in the farm bulletins that the reason orchards have such poor crops of fruit is because they don't have enough bees to pollinate the blossoms. The bulletin said that every orchard should have a number of colonies of bees. Of course, the nearer the bees are to the blossoms the more honey they'll make, because the distance is short; besides, if we put them at the edge of the orchard next to the meadow when the clover is in bloom, they could work on the clover, too, just as easy as the orchard blossoms, and they'd make a lot of honey," he declared.

"Well, Bob, you certainly have been reading those books," said his grandfather, glancing up from his paper. "Between your own work, Joe, your new wife and your chore boy," he said, "you're going to lead a pretty busy life this summer, if I don't miss my guess."

"Well, why not, grandfather?" demanded Bob.

"No reason in the world, my boy, and you've hit the nail square on the head by locating the hives between the orchard and the meadow. A bee can probably make four to five times as much honey in a season there than if we put the hives out back of the barn or in some other place near the house."

"I'd like to please you in this matter, Bob, if I could," said his uncle, "but you know how things are this year. We're doing so much already that I don't feel as though I could spare a dollar to invest in bees."

"But, Uncle Joe, I haven't asked you to invest anything in bees. I was only wondering if there'd be some bees for sale. You know I have \$72.97 myself on deposit at the First National, and I was wondering whether you'd be willing to let me buy the bees and take enough time off to look after them for the benefit the orchard would get. I've a notion that the bees could earn more for me than the money will earn at interest."

"Now, that's what I call real 'git up and git'," said his grandmother, suddenly forgetting her prejudice against bees, in admiration of the

scheme.

"Well, if they've any at the sale, how many do you want me to buy, Bob?" asked his uncle.

"I should think five or six good colonies would do to start with, and they ought not to cost more than ten dollars each, provided they're good and healthy."

"How the dickens am I to know whether they're good and healthy, Bob? You don't want me to knock at their door and say, 'Good morning bees; how do you find yourself this morning?'"

"Of course not," laughed Bob. "I forgot you don't understand bees."

"But, how would you get them here?" asked his uncle, suddenly realizing that hauling hives of bees around the country might not be a pleasant job, and also that the farm to which he was going was some eighteen miles away.

"Well, of course," said Bob, "it would cost something to haul them, but maybe they've an automobile truck and you could pay a little more and have them delivered."

"All right, Bob, I'll look into the matter and let you know when I return," said his uncle.

After supper, when the chores had been done, Bob went over to look at the ditch. He was astonished to find how much work had been accomplished. A clean-cut trench with uniform banks on either side and the new bank leveled on top 125 feet long had been dug. He didn't know how much a caterpillar steam shovel was worth, but at the rate the contractor figured for the ditch, he would have \$610.00 left over, after paying the operator and engineer each \$5.00 per day, for six days' work, which Bob thought ought to be enough to cover their wages, and adding \$5.00 per day for fuel, making \$90.00 in all. Machinery was certainly the thing to handle work quickly and cheaply, for after deducting the cost of bringing the shovel to the job and taking it away again, the contractor would make a handsome profit, and he was more impressed than ever with the conversation he had overheard between Mr. White and Mr. Dow regarding power on the farm.

Bob was at supper with his grandparents when his Uncle Joe returned from the sale the next evening, but instead of taking a half day, as he had thought, he had used up an entire day.

"I thought you were going to get back at noon, Uncle Joe," said Bob. "Did they have any bees to sell?"

"How many colonies did you ask me to buy, Bob?" asked his uncle laughing.

"Five or six," said Bob.

"Well, I got them for you all right, but there's not five or six. They had twenty-two and they wouldn't sell one without selling all. So I bought them all for \$50.00, which you see is less than you said you were willing to pay for six and they're going to deliver them, too, in modern sectional hives. They are three-banded Italian, whatever that

means, with one or two exceptions they say the colonies are in a good healthy condition."

"That's fine," said Bob, so excited he was scarcely able to eat his supper. "What else did you buy?"

"Well, Bob, if I go to the poorhouse, there'll be no one to blame for it but you and John White."

"Why, how's that?" asked Bob's grandfather, looking up quickly.

"Well, it was like this: when he got me down there he not only persuaded me to buy the ten young Holstein cows and a bull, but he induced me to buy five Berkshire brood sows and two four-year-old Belgian mares. He wanted me to take a flock of Southdown Ewes and a ram, but I didn't buy them--there's no money in keeping a few sheep."

"Were they nice-looking sheep, Joe?" asked his father, who was very fond of sheep.

"The finest I ever saw, father, but I didn't want to go so far in debt."

"Then who bid them in, Joe?" asked his father.

"Bob."

"Me!" asked Bob, looking up suddenly.

"Yes, John White bought them for you and said he would be willing to advance the money to pay for them, and you could pay him back later. He said they were too good a bargain to lose."

"But I've no farm for them to run on," said Bob, "and it wouldn't be fair for me to pasture them on your land, Uncle Joe."

"I was thinking of that," said his uncle.

"Well, the only fair way, Uncle Joe, would be for you to take the sheep yourself, for it wouldn't be fair for me to keep them on your farm. Besides, I'll be busy enough with the bees."

"And the chickens," added his uncle.

"Why, did you buy some chickens, Uncle Joe?"

"Yes, that confounded John White made me buy nearly everything on the place. I bought fifty single-comb white Leghorn pullets and three cockerels. Also ten white Plymouth Rock pullets and one cockerel, also an incubator and brooder. The chickens," added his uncle, "are for your Aunt Bettie. Since you're going to build a new hen house I thought we'd better get some good chickens."

Bob was so excited now that he left the table and rushed up to his room to get out the farm bulletins that showed the best types of hen houses. When he returned his uncle and his grandfather were busily talking.

"Joe," remarked his father, "I'm afraid you're getting in pretty deep

with John White putting these notions into your head about modern farming. Don't forget you owe me \$2000.00 on the farm, which, with all the other things you've bought, you must be terribly in debt."

"I was afraid you'd feel that way about it, father, and I told White so," he replied.

"He probably don't care, as long as he was getting you to borrow his money and sign his notes," said his father.

"That's where you do him an injustice, father," replied his son. "He said the first thing I should do would be to pay you off, and as it don't make any difference whether I pay interest to you or the bank, he loaned me enough money to pay you off, so the next time we go to town we'll fix the matter up. I told John White if I went broke he'd be the one to suffer."

"What did he say?" asked his father.

"He only laughed and said, 'I'll take a chance on you, Joe, since I've met the woman you're going to marry and that boy you've got on the farm. If the pair of them don't make you "git up and git," then I'll miss my guess.'"

"H'm," sniffed his mother, "it's little that Betsy Atwood knows about farming, with her high-fangled New England notions and Farm Bulletin Education. H'm!"

"Now, mother," said her son, "people aren't living on farms any more the way they used to. Farms must be made attractive and work must be made easy, if people are to live on them. That's why you're leaving yourself."

"Nobody ever accused me before, Joe Williams, of not doing my share of work. Your father and I toiled all our lives and this is how much you appreciate it."

"But I tell you, mother, farmers aren't satisfied to get along in the same way they used to. The farmer is human and wants comforts and pleasures in life just as well as anybody else, and I'm beginning to believe that John White was right when he made me buy an automobile to-day."

"What!" almost shouted his mother. "Joe Williams, you've gone plumb crazy. John White has bewitched you!"

"No, he hasn't, mother. I knew you'd feel that way when I told you about it, and that's one reason I want to pay you off first, so you won't lose anything if I fail."

"Whatever induced you to buy an automobile, Joe?" asked his father, while Bob sat staring, unable to believe his ears.

"Well, it was like this: On the way back from the sale he said, 'Now, Joe, this ought to give you a pretty good equipment by the time you get your new buildings put up.'"

"What! Is he suggesting new buildings?" demanded his mother. "As if the buildings we used aren't good enough for our children." "It was

like this," Joe continued, ignoring the interruption; "as we were driving back in the car, he said, 'Now, Joe, I want you to remember you're marrying a young woman who has been accustomed to going about a bit, and will have to get away from the farm occasionally in order to be happy, and you've one of the most enthusiastic boys on your farm I've ever met, but his enthusiasm will not keep up if he's to be tied down tight. What you need is an automobile, so you can go to church, and in the evening, when your work is done, you can go for a drive, or run in and see the movies. I don't mind telling you there are two reasons why I'm recommending this car to you. First, I want you to find out for yourself what miserable roads there are in this county and why they should be paved with concrete. Second, I want you to make it so pleasant on the farm for your wife, and later for your children, that they'll always want to stay there--for we must keep our boys and girls on the farm if this country is to prosper. The trouble has been farmers have not realized the old saying, "All work and no play makes Jack a dull boy." That's why the farms are deserted. There's one restriction, though, I'm going to place on you, and that is that the car is never to be run during working hours, except such as your wife might use it to drive to market, and the car must be sheltered in a building and kept clean. I don't want to ever see you drive in to town with a car all covered with mud. Now, if you're willing to do that, I'll advance you enough money so you'll have a complete outfit.'"

"Well, I suppose you signed up for it," said his mother hopelessly.

"Yes," laughed her son. "I thought I might as well take the automobile along with the other things, mother."

"H'm!" sniffed his mother. "Joe Williams, I'll give you six months until the sheriff sells you out. I never thought I'd raise a son who would turn out to be such a fool," and she burst into tears.

"Now, now, mother, you're all wrong in this matter," said her son, going over and taking her in his arms. "I'm not doing this simply because I love Betsy Atwood but because it's good business, and, besides, I want to make her life pleasant. It's the modern idea, mother; it's the right way to do, and I think John White is right. The reason farmers' boys and girls refuse to stay on the old farm is on account of the few amusements they get. Don't you worry about the sheriff selling me out, for if I live I can easily make a go of it, and if I should die suddenly, I've a \$10,000.00 life insurance policy in the Farmers' Mutual that will pay off the mortgage and leave something for Bettie besides. Of course, it cost something to take out a policy of \$10,000.00; everything of value costs, but an insurance policy that pays off the mortgage, if I happen to die, relieves me of all worry. It would have been a risk without insurance, but I feel safe now."

IX

POWER AND BANKING

Everything was hustle and bustle on the farm on Monday morning, March twenty-seventh, for this was to be Joe Williams' wedding day.

Bob was up at daylight, milked his cows and finished his chores before breakfast. At nine o'clock his Uncle Joe and grandparents left for town, where they would take the ten o'clock train to Greensburg, where the wedding was to be solemnized at noon.

As previously arranged, Bob stayed on the farm to look after things and finish plowing the ten-acre field adjoining the barn, which had been started two days before. It was scarcely nine-thirty when he turned and started back along the north side of the field. He glanced in the direction of the barn and beheld an unusual sight. A small automobile had been driven into the barnyard and close behind it came the most unusual looking piece of machinery he had ever seen. He stopped his team and stood leaning on the plow, wondering what it might be. The driver of the automobile, whom he recognized as John White, president of the First National Bank, jumped from the car and opened the gate of the field in which Bob was plowing and a moment later the machine entered. It crossed the ground he had already plowed on the west side of the field and entered the furrow; then swung around with its side toward him. He now recognized the apparatus--it was a tractor gang plow, and as it went along, he saw it was throwing up three furrows at a time. As he watched it go he could not help noticing how much faster it moved than his team of horses was capable of doing. He was so lost in admiration of the speed and ease with which the plow did its work that he did not notice the banker coming toward him until he stood beside him.

"Well, what do you think of that, Bob, for a plow?" asked the banker laughing.

"Some plow, Mr. White," said Bob, taking off his hat and running his fingers through his sandy hair, while he still kept his gaze riveted on the tractor which now turned the southeast corner and started up on the east side of the field.

"Better turn your team out of the furrow, Bob," advised the banker, "and let the tractor get ahead of you. I want you to follow it around the field, so you can see how much faster it travels than your team." Bob had scarcely turned his team out before the tractor came up opposite them, and with a wave of the hand and a cheery good morning, the operator of the machine went by the admiring boy and the smiling banker.

"Now get your team in behind him, Bob, and see if you can catch him," said the banker.

Bob had not gone more than a few rods before it became evident to him that his team would never overtake the fast-moving tractor. In, fact, before he had gone half the distance, the tractor was up behind him again on the second round, so he turned his team out again to let it go by. This time, however, the operator brought the machine to a stop and said:

"Come over and have a look at her, young man."

"This is Mr. Patterson, of the Farmers' Harvester Company, Bob, with their latest model tractor plow. Show him how to operate it, Patterson," said Mr. White, "and then let him take it around the field himself."

"Oh, but I couldn't run a piece of machinery like that," protested Bob.

"Sure you can. That's why we brought it out here," said the banker.

"Oh, no, I'm sure it would be too complicated for me," protested Bob.

"That's where you are mistaken," said the agent, jumping down from the operator's seat. "Come here and I'll explain the mechanism to you in a few minutes."

After he had finished, he turned to Bob and said:

"This thing is so simple, it'll run itself, except at the corners, where you'll have to operate it to turn."

"How do you mean, run itself?" asked the unbelieving boy.

"Well, I'll show you," said the agent, as he adjusted one or two of the levers, and, much to Bob's astonishment, the tractor set off down the field by itself.

"Why, how do you do that?" he asked, staring open-mouthed after the disappearing tractor.

"Come down to the corner and I'll show you," said the agent.

"But I can't leave the team," said Bob.

"Oh, I'll take care of the team," said the banker laughing. "You go down and operate the plow."

Handing the lines over to the banker, Bob hurried after the agent, who was racing down the field so as to catch up to the tractor before it reached the corner. Then he stopped the machine until Bob came up. "Now, this is how it's done, Bob. You see this self-steering device down here in the furrow. Well, I set this lever and clamp it over fast and this self-steering device rubs along the edge of the furrow and keeps the plow following the furrow. In big fields in the West, where there's plenty of room and the ground is comparatively level, we always plow around a circle. There's where we use our big fellers," he said smiling. "Fourteen plows in a gang and one man can operate all of them at once."

"You don't mean it," said Bob. "Three or four plows going at once, and each one plowing fourteen furrows. Why, you would plow a field like this in less than a day."

"Less than a day," said the agent. "How long will it take you to finish this field with your team, Bob?"

[Illustration with caption: THE TRACTOR WILL DO THE WORK OF FIVE MEN AND FIVE TEAMS AND ONLY EATS WHEN IT'S WORKING]

"Well, I expect to get through by noon on Saturday," he replied.

"Well, what do you say if we finish it up by six o'clock tonight?"

"But you couldn't do that, Mr. Patterson!"

"We can't! Well, you just wait till I show you. I want you to get into the seat and run it yourself, Bob; then you can see how it goes."

The boy climbed awkwardly into the machine and adjusted the levers according to instructions.

"I'm sure I won't be able to handle it, Mr. Patterson," he said, as he opened the throttle and the engine started.

"Won't be able to handle it? All you need to do is to sit on the seat and let it go. Now shove this lever and throw in the clutch," suggested the agent, and off the plow started.

"It does run easy," said Bob, as the tractor moved rapidly ahead, the agent walking alongside, talking to Bob as they went.

"Easy!" remarked the agent. "Why, you can run this machine all day, Bob, and it won't make you as tired in a whole day as doing your chores. Now, when you get to the corner put your throttle down and I'll show you how to make the turn."

Bob was a bit awkward, but finally made the adjustment and got the plow to a standstill at the corner.

"You see, Bob," said Mr. Patterson, "when you use a gang plow you don't cut the corners square as you do with a team of horses. You round them off a bit, then you don't need to take the trouble to turn. Now, while you plow around, I'll take your team and plow off the corners."

"You aren't going to let me go around myself, Mr. Patterson?" asked Bob.

"Certainly, you can run it yourself just as well as anybody," replied the agent. "After I finish with the team, Mr. White and I have some business to do. By the way, can we use your telephone, Bob?"

"Sorry, Mr. Patterson, we haven't a telephone yet," stammered Bob. "I think Uncle Joe'll put one in though when he gets back from his wedding. You see, he's getting married to-day."

"I know he is," said the agent grinning. "That's why we brought the tractor out to-day. We wanted to have a good chance when your uncle wasn't home. When he gets back with his bride, we're going to show him what power can do to a farm."

"Well, I'll take the car," said Mr. White, "and drive over to the Wallace farm and use their 'phone. You see, Bob, we're going to have a little party on your farm. We're going to sort of take possession of the place and have invited some of your neighbors to see the tractor work."

"All right," said Bob. "I'll try it out myself, but if I smash this thing, it won't be my fault."

"Don't worry about smashing it, Bob. Just give her kerosene and keep her going," said the agent.

After the first round or two, Bob became confident of his ability to handle the tractor, and began to realize how quickly and easily plowing could be done by power.

He noticed Mr. White drive back to the barnyard, and as soon as Mr. Patterson had finished with the team, he unhitched them and took them over and put them into the barn, then they sat down in the auto and began to talk, leaving Bob to manage the tractor alone.

When dinner time came he brought the machine to a standstill on the west side of the field nearest to the barn, and, shutting down the motor, came quickly over the freshly plowed ground to the barnyard.

"That's certainly a fine way to plow, Mr. White," said Bob, his eyes sparkling as he contemplated the amount of work done in a quarter of a day.

"Sure is, Bob," said the banker. "The greatest thing I've ever seen. Power certainly does beat horse flesh, and you notice, Bob, we only feed the engine when it is working."

"I can't give you very much of a dinner," said Bob, apologetically, "for everybody's away at Uncle Joe's wedding, but if you'll be satisfied with cold victuals, I guess I can fit you out."

"Bread and butter and a glass of milk is good enough for me, Bob," laughed the banker, as they started for the house.

Bob's grandmother had left him well supplied with food--several apple pies, a boiled ham and a weekly baking of bread had been finished the day before. She had also left the fire in the kitchen stove and the tea-kettle on, so it didn't take Bob very long to make a pot of coffee. He brought some butter and milk from the milk cellar and they were soon enjoying the simple food.

"Bob," said the banker, as he helped himself to a large heel off the loaf and spread it thick with butter and apple butter, "we thought we'd give your Uncle Joe a wedding present by doing his spring plowing for him. We want to surprise him when he comes back, so I arranged with Mr. Patterson to give a demonstration of his tractor on your farm. We sent out some invitations last week to a number of farmers around here, asking them to come here this afternoon, but told them to keep it quiet so your uncle wouldn't find out anything about it. We're going to spend the rest of the afternoon giving each fellow a chance to run the tractor, but to-morrow, just to show you what the tractor can do, Mr. Patterson is going to take it and disk and harrow your ten-acre field back of the cider mill, and then the next day we want you to plow your west bottom field, where your Uncle Joe said he was going to plant his spring wheat this year."

"When you take charge of the tractor, Bob," said the agent, "we're going to let you start with the machine in the barnyard, take it to the field, do the plowing and bring it back again yourself, and unless you have some bad luck, I don't think I'll have to lay a hand on it. Of course, I'll be here in case you need me, but I've a notion the machine will do the trick, without my touching it."

"Why," said Bob a moment later, realizing for the first time what it

would mean to have that much plowing done, "our three fields will all be finished before Uncle Joe gets back."

"Not three, Bob," corrected the banker, "four, for we're going to plow your north field, too."

"Isn't that field too hilly for the tractor?" asked Bob.

"No," replied the agent. "I've been looking at it and feel sure we can manage it, although it's a little steeper than we usually recommend for tractors, but we want to demonstrate that our machine will take care of all the fields you have on the farm, with the exception, of course, of 'Round Top,' which ought to be planted in fruit or something instead of trying to raise a grain crop."

"When does your Uncle Joe expect to get back, Bob?" asked the banker a moment later, helping himself to a second piece of pie.

"Thursday afternoon, I think," replied Bob. "They're planning to be back for Sunday."

"Come to think of it, that's right," said the banker. "I overheard him tell Henry Smith, who sold him his automobile, to have the car up at the station to meet the three o'clock train on Thursday. He's evidently going to bring his bride out in style."

"Can Uncle Joe drive the car already?" asked Bob.

"No, I don't think he's going to try to drive out, not on the first trip with his bride," replied the banker, "but I think you can look for them about three-thirty."

"I'd like to be hanging on behind," said Bob, "about the time they come around the bend in the road by the Wallace Farm, and he sees his spring plowing all done."

"That's a joke," laughed the banker, "in which we'd all like to share, Bob, but it won't do him any harm to ride the rest of the distance home wondering how you managed to get it all done."

When they came out from their dinner they found two farmers had already arrived and others kept dropping in by ones and twos, so that before the afternoon was over there were almost two dozen rigs and automobiles standing around in the barnyard.

Much to his delight, Bob was allowed to drive the tractor, while the agent stood among the men and explained its workings.

After a round or two, Bob gave up the seat to a neighboring farmer, who in turn gave way to another, so one by one they tried the tractor.

"Wish he had picked out our farm to demonstrate his plow on," remarked Alex Wallace, as he watched the space in the center of the field rapidly getting smaller. "By the time he's through demonstrating he'll have your field plowed."

"Maybe you could get him to do it for you, Alex," said Bob. "Why don't you ask him?"

"I've already done that," replied Alex, "but he wants to sell us one."

"Well, are you going to buy one?" asked Bob, as they watched the tractor work.

"I don't know what father'll do," replied Alex. "Suppose we'll have to think it over."

When the afternoon sun got low, the banker called the men together in the barnyard and said:

"There's something I want to say to you men. I know that some of you are pretty hard pressed for money just now, and don't feel much like investing in new equipment, but I've recently made a careful survey of the farming conditions in our county and have taken a trip west to look over what they're doing out in Illinois, Iowa, Minnesota and the Dakotas. In fact, I was gone for four weeks last summer, looking over the situation generally, and I've come to the conclusion that we've just as good farms right here in Pennsylvania as they have in any of the western states--only they've gotten ahead of us out there by adopting many modern methods. There isn't a thing they do out there, though, that we can't do right here. Another thing I discovered, and that was that the banks in the West are very much more liberal to the farmers than the banks have been in the East. I don't mind telling you," he said smiling, "that I picked up a number of pointers myself on how to run a bank and when I got back I talked the matter over with our board of directors.

"From now on the First National is going to be run on different principles than we have ever run it before. We're going to do 'Constructive Banking,' which means in plain English that we're going to help you farmers with liberal loans wherever we find a man who's progressive and working intelligently. We're fitting up a special room in the bank that we're going to call our 'Bureau of Farm Information'; we're going to put a capable man in charge of it to answer questions; we're sending down to the Bureau of Agriculture at Washington for a lot of farm bulletins on every subject of interest to you men, also to manufacturers of farm machinery and other appliances that can be used on the farm. The manufacturers of Portland Cement are fitting us up with a complete line of literature on farm buildings and how to build them. In fact, there won't be any information connected with a farm, its equipment or the construction of farm buildings that we won't be able to give you. There's some of you men here who don't do your banking with us--you're just as welcome to the information as the others. We want you to make this your room when you come to town--it will be open every day from eight o'clock in the morning until six o'clock in the evening. There'll be tables there where you can do any writing you want, and a billboard to stick up notices of anything you've got for sale. I hope you'll make good use of the Bureau. Tell your wives we're going to have a special lot of literature for them on canning and evaporation of fruits and vegetables, raising poultry and dairy work and bees. Tell them to come in and use the room as much as they like. We've provided for their comforts."

"Well, it sounds pretty fine, Mr. White," said Billy Waterson, "especially the loans. I'll be in to see you myself on Saturday."

"Yes, come in, Billy, and tell me about your needs," invited the banker. "We'll no doubt be able to help you."

The last of the farmers had scarcely gone when Bob's grandparents came driving up the lane.

"Has any one died, Bob?" asked his grandfather, as soon as he got near enough to be heard.

"Why?" asked Bob smiling.

"Well, I saw many rigs going down the road as we came by the Wallace farm. One or two of them, I thought, came out of our lane."

"No," said Bob, "no one's dead, but," with a wave of his hand toward the newly plowed field, "the old method of plowing with horse flesh passed away this afternoon."

"I noticed, Bob, as soon as I came around the bend in the road that the field was plowed, and I was going to ask you about it. How did you get it done so quickly? Were some of the neighbors over here with their teams helping you?"

"No," said Bob, "come here a minute and I'll show you something," and he took his grandfather, who had alighted from the buggy, over to the wagon shed in which the tractor stood.

"Where'd that come from?" asked his grandfather, looking at it curiously. "Has Joe gone and bought a tractor, too?"

"No, not yet," laughed Bob, "but I guess he will when he gets back and sees how much work it can do."

"They must cost a lot of money, Bob," said his grandfather.

"Not as much as you might think," replied Bob, using the phrase he heard Mr. Patterson use in talking to the farmers that afternoon. "Not when you take into account how much they can do."

"I should like to have seen it work," said his grandfather interested.

"Well, you'll see it, all right," said Bob, "because Mr. Patterson's going to plow the other three fields before he leaves."

"How long does he calculate it'll take him to finish, Bob?" inquired his grandfather.

"He expects to get done by noon on Thursday."

"It can't be done," said his grandfather incredulously.

"Well, he says it can," laughed Bob, "and to-morrow morning you'll see."

X

RUNNING WATER

Bob was up bright and early the next morning and had his chores all done by the time Mr. Patterson came back from town, where he had gone the night before for a supply of kerosene.

As soon as breakfast was over the tractor was driven out to the field back of the cider mill, and, with the agent in the seat, started off on its rounds. In this field corn had been raised the year before, and it would be planted in oats this year, so the plow was omitted and the double disk and spike-toothed harrow used. Bob and his grandfather stood for a half hour watching it work, then Bob went to the barn and got out the team and began plowing the garden, which adjoined the field in which the tractor was working.

When they knocked off at noon, the relative amount of work done by each was very apparent, for the ten-acre field was more than half finished in the same time it had taken Bob to finish less than an acre of garden patch, and by six o'clock the entire field was completed.

The next day Bob took charge of the tractor and succeeded in doing almost as well in plowing their west bottom field as Mr. Patterson had done the day before, although it took him until seven o'clock in the evening to finish the entire ten acres.

Thursday morning everything on the farm was excitement. Bob started to clean up the corners of the west field with the plow and team, while Mr. Patterson started plowing the hilly north field, so that everything would be finished by the time Bob's uncle arrived. It seemed to Bob, as he watched the tractor work, that the hilly field was requiring more time to complete than they had figured, for by noon the field was not much more than half done, so he asked Mr. Patterson at dinner if the plow worked slower on hilly ground.

"Of course, Bob, we can't make the time there that we can on the level, but I've been taking it kind of easy, loafing a little this morning so the tractor would be working when your uncle comes home this afternoon."

In this, however, he was disappointed, for the automobile did not arrive until after five o'clock, an hour after the tractor had been run into the barnyard, where the agent left it and drove to town in his auto.

Bob was in the barnyard waiting to greet his aunt and uncle when Henry Smith drove up. His uncle, however, did not wait until they had alighted to ask Bob the question which was uppermost in his mind, but shouted to him as soon as the car swung up the hill into the yard.

"How in the world did you ever get the plowing all done so soon, Bob?" he called.

Without replying, Bob waved his hand toward the tractor.

"Where'd that come from?" asked his uncle, as he helped his bride from the auto.

"Oh," laughed Bob, as he stepped forward to shake hands with them, "that's another of John White's jokes. He's had nearly everybody in the county out here on the farm while you were away, showing them how

easy it is to plow with power."

"Well, Bob, I don't want your Uncle Joe to get married again soon," laughed his new aunt, "but it does seem to have been lucky for him this time, for you've certainly got more plowing done while he was away getting married than he'd have gotten if he stayed at home," as, much to Bob's embarrassment, she suddenly bent over and kissed him. "Things seem to be moving faster on the farm, Bob, since you and your Uncle Joe started working together," she laughed, as they all started for the house.

Bob could not remember any time in his life when he had been quite so happy as he was that night at supper, sitting in silence opposite his new aunt, listening to the story of the wedding and honeymoon. There was something about the frank open smile that she bestowed upon him from time to time which established her in his confidence, and made him feel that the coming summer was going to be a very pleasant one.

He wondered what shape the first suggestion for improvement by his aunt might take, but he didn't have long to wait, for the very next morning at breakfast she turned to her husband and said:

"Have you figured out yet, Joe, how much pipe it will take to bring the water from the spring into the house? I think we should arrange for running water in the kitchen and put in a bathroom, and I have also been thinking that, instead of using the small room beyond the kitchen as a pantry, we could do away with that and fit up a washroom, with a toilet and shower for the men. A farmer is just as much entitled to a shower after his day's work as a golf player and is even more benefited by its use. We could easily make a cellar under it for the hot-water heater and supply hot water to the kitchen, washroom and the bathroom on the second floor, as well as the laundry. I've been looking up the cost of plumbing and don't think the whole thing would cost more than five or six hundred dollars, exclusive of digging the trench."

When his aunt began to speak, Bob scanned the face of his uncle, and he noticed that while his uncle smiled and said he would have to look into the matter, Bob noticed his brow contract in a way that spoke ill of the project being carried out--at least at the present time.

Now that the plowing had been done, it was decided that they would spend a few days in cleaning out the fence rows and repairing fences, and as they were leaving for this work shortly after breakfast, Bob made a discovery. His aunt came into the woodshed where they were getting out their mattocks and brush hooks and said:

"There are a few things I wanted to get in town to-day, Joe, so I'll take the car and drive in."

"Why, you can't drive yet, Bettie," declared her astonished husband.

"Oh, yes, I can," she laughed. "I have my license, too. I learned last summer. While I'm in town, I'll speak to a plumber about the work, and I think, too, we should also have a telephone put in. It will be quite awkward getting along without one."

"All right, Bettie," said her husband. "It will do no harm to get a price on them, even though we won't get them until fall," and he

kissed her good-by and started for the field.

She certainly doesn't let her ideas get cold, thought Bob, as he walked along with his uncle, and, after all, it would not cost any more to put the water in now than it would in the fall, and besides they'd have the use of it all summer.

That night after the chores were finished and the supper dishes were put away, his uncle and aunt adjourned to the sitting room, where Bob noticed a fine reading lamp, surrounded by magazines and farm bulletins, had been placed in the center of a large oak table.

"Come into the sitting room, Bob," called his aunt, when he returned to the kitchen after doing his chores. "I want to show you the pictures of our new bathroom fixtures I got from the plumber to-day."

It was only natural that Bob should have wondered just how far his aunt and uncle would take him into their confidence in the planning of the work on the farm, and he was not only relieved but very much pleased at her early invitation to their conferences, having to do with improvements and the expenditure of money. He took it as a compliment to his interest in the farm work, and felt nothing would be too hard for him to undertake while his Aunt Bettie followed the results.

"Here's the plumber's estimate, Joe," she said, opening a letter. "He wants \$250 for the bathroom and washroom equipment, including a four-foot white enamel wash sink with soap dishes and tempering faucets. You see, by putting in a sink of this sort, the hot and cold water is mixed as it comes through the faucet, and all the dirty water runs away so that you can always wash in clean water, which is better than filling a bowl. This four-foot sink will allow two people to wash at once. This is the hot-water heater that we will put in the cellar. It will mean the putting in of a new door and steps on the north side of the building for taking out the ashes. That will be some concrete work for you, Bob," she smiled across to him. "The heater will keep the floor of the washroom warm in winter and prevent the pipes from freezing. We ought to take out the wood floor of the washroom and put in a concrete floor, but I think the wood floor will have to answer until we build our new house. The plumber said he could manage this by putting in a galvanized iron tray on the floor under the shower and connecting it to the waste pipes. If you are careful when you use the shower and not splash the water too much over the wood floor, I guess we can get along with this arrangement. This, however, doesn't include the cost of bringing the water down from the spring. I thought, inasmuch as our plowing and harrowing had been done so soon, you could take the time off, Joe, to dig the ditch and put in the pipe yourself. A one-inch galvanized genuine wrought-iron pipe will cost ten cents per running foot and a two-inch pipe twenty-two cents per foot."

"A one-inch pipe ought to be big enough," said Joe, "to supply all the water we want."

"Yes, perhaps it would be for the house alone," she replied, "but then there's the barn and the hen house and the new dairy house to take into account, besides a watering trough in the barnyard and water bowls in the new cow barn for each cow, and I think for all these we really ought to have at least a two-inch pipe, so that the pipe will be in for all time, and, of course, it would not pay to use steel

pipe--that would rust too quickly. The hard job will be the digging of the ditch, for the pipe ought to be at least three and a half feet to four feet underground, so as to be sure it will not freeze up during the winter."

"Don't you think we ought to build new concrete walls and put a cover on the spring, Aunt Bettie?" inquired Bob, "so that nothing can get into the spring to foul the water?"

"That would be a good idea, Bob. Do you suppose you could make a rough sketch and figure out how much concrete it would take to do that?"

"Why, there's a sketch in one of the concrete bulletins that shows how that can be done," replied Bob. "I'll get the book right away," he said.

"Bring your bulletins down to the sitting room and leave them on the table, Bob," called his aunt, "that is, if you don't mind. Perhaps it would be well if they were all here so we could all see them."

"All right," said Bob.

He returned a few minutes later and after looking up the suggestion set to work, and by nine o'clock a rough sketch for enclosing the spring had been made. It would require thirteen hundred and fifty feet of two-inch pipe to bring the water to the house, which would cost \$297 and the probable cost of the ditch would be \$625. When the figures were all put together it was found the improvement would mean an outlay of \$1172, if they paid to have the ditch dug, but, of course, they could save \$625, by doing the digging themselves.

"I'd like you to have the water in the house, Bettie," said her husband, as he rose to retire, much worried at the large amount of money, "but on top of all the expenditures we have made already, I don't think it would be possible to put it in at this time."

"Well, we won't decide to-night, Joe," his wife said, smiling. "I think it is always best to think such matters over carefully before we undertake them."

All during the next day it was quite evident to Bob that his uncle was puzzled and worried. On the impulse of the moment he had been persuaded by John White, president of the First National Bank, to invest in what he considered a very much larger equipment of live stock than he would otherwise have done, and he had also allowed White to persuade him to spend \$1500 for the tractor, plow, disk and harrow. The chances of making the farm earn enough to take care of the interest on his obligations at the bank and perhaps pay off something on the principal, looked all right while John White was explaining it, but now that he had had sufficient time to reflect on the matter, he felt that perhaps he had overstrained his resources in taking on this additional financial burden.

It was not the six per cent interest that worried him so much as the fact that Bettie wanted to spend almost \$1200 to repair the house from which there could be no returns--the cost of which would have to be earned just the same. He was particularly silent and abrupt with Bob as they worked upon the fence rows and scolded him severely when he did not anticipate his wishes in the matter of placing the rails for

the repairs of the fence. He scolded him unmercifully when, through his eagerness to please him, he happened to drop the sharp corner of a rail on his uncle's hand. It was in this state of mind that Joe Williams came in to supper that evening to greet his smiling wife.

Nothing was said during supper about putting in running water and fitting up a new bathroom, but Bob noticed the roller towel and horn comb had disappeared and that each had their own towel, brush and comb. When the supper dishes had been put away, and they had all adjourned to the sitting room, Bob's aunt opened the drawer in the sitting-room table and took out several sheets of carefully compiled figures, which she handed over to her husband.

"What's this, Bettie?" he asked, taking up the papers.

"That, Joe, is an inventory of our assets and liabilities," she answered smiling.

"Well, does it look as bad as it sounds?" laughed her husband, as he took up the statement and glanced at it hurriedly. "What's it all about, Bettie, and why have you been worrying your head with figures to-day?" he said, placing the papers on the table, without seeming to comprehend their meaning.

"I've been thinking for several days, Joe, that we should know where we stand in the matter of the cost of our farm and equipment, so that we can figure out our possible income and profit. I don't think it would be wise to go ahead and buy and sell without knowing in advance the value of everything we own; the amount of money we're obligated for in the way of loans and have estimated the probable cost of carrying on the work through harvest, and what our crops and produce ought to sell for."

ITEM	INVENTORY	APRIL 15,1916
Farm, 160 acres		\$6,000.00
Cows:		
10 head @ \$175		1,750.00
8 head @ \$60		480.00
Bull, 1 head @ \$350		350.00
Calves, 4 head @ \$10		40.00
Horses:		
2 head @ \$350		700.00
2 head @ \$200		400.00
Hogs:		
5 head @ \$40		200.00
6 head @ \$30		180.00
Sheep, 12 head @ \$20		240.00
Chickens		50.00
Machinery and Tools		125.00
Automobile		440.00
Feed and Supplies		300.00
Growing Crops (Labor and Seed)		180.00
Cash		110.00
Bills Receivable		75.00

Total Resources		\$11,620.00
Mortgage and Bills Payable		6,000.00

Net Worth..... \$5,620.00

"I have started with to-day, April 1, 1916, but next year it will be better to take our inventory so that we can start on March 1st, which will be just before the spring work starts. Then we can see what our gain is for the year. We'll have to run separate accounts for all our crops and stock as well as feed and labor in order to see what the gain or loss is on any item. After we get them started, it will take only a few minutes each day to keep them up to date."

"Here, you see," she continued, as she walked around the table and sat on the arm of his chair, "I've listed the farm at its probable value--\$6000."

"But you have listed it at \$2000 more than I paid for it," protested her husband.

"That's because it's worth \$2000 more than when you bought it," she laughed, "for with the new ditch you have added fifteen tillable acres and we still have a pond and a better driveway up to the barn. Then, of course, I've included in the improvements the running water and bathroom equipment."

"We've not decided to put that in yet," said her husband quickly, to which she made no reply.

"Then you see, I've listed our stock and equipment at \$5520. These added together make our assets total \$11,520. You have already obligated yourself at the First National Bank for \$5400, and when we get the loan for the running water, it will make a total of about \$6000."

At the mention of a further loan, Bob noticed his uncle's brow contracting in a way that did not speak well for the installation of the running water.

"But you're missing the best item of all, Joe," said his wife, "the sand pit. I was talking to Mr. White about this when I was in town yesterday, and he feels sure that by the time Mr. Brady gets all the sand he requires for the railroad work, they will be making concrete roads throughout the county and that there'll be a big demand for this pit. While I don't know exactly how big the pit is, I've estimated that it contains thirty thousand yards. If we figure this at 50 cents per yard, the price Mr. Brady is paying, it will bring us \$15,000."

"But I'm afraid those are only day dreams, Bettie," laughed her husband good-naturedly; "it couldn't be possible that so much money could be gotten out of a sand pit."

"Why not?" asked his wife. "In New England there are many large supply companies who make a business of digging, washing and selling sand and gravel and carry on a very large business in this material. You have no idea what a hold concrete is getting on the country these days. It's such an excellent material in the first place, and besides it's so cheap and easily handled that any one can build all manner of structures with it. So you see, Joe," she added, smiling up at him, "if the farm doesn't pay a penny for an entire year, and we don't sell any sand besides what Mr. Brady has agreed to take after paying for the improvements that he is making, we'll still have more than enough

money coming from the sand pit alone to pay the interest on all our obligations and leave us \$2500 to \$5000. I know we're going to have something good from the farm itself, besides. So I'm in favor of not only putting in running water in the bathroom, but building the new dairy house at the same time. The cellar under the kitchen here is a bad place to keep the milk and the work is very much increased on account of having to carry the ice down there. Besides, the floor is damp and the place has a musty odor."

"How much will a dairy house cost as you are planning to build it, Bettie?" asked her husband, looking up hopelessly.

"I don't know exactly, Joe," she replied, glancing across the table at Bob, "but we've been looking over the bulletins and as near as we can estimate, it ought not to cost more than \$500 for a dairy house alone, but when we build the new dairy house, I think we should abandon this old wooden ice house that keeps the yard all mussed up with sawdust--besides, you have to cut from thirty to fifty per cent, more ice than we really use in order to provide for the great waste in such a poorly built house. Now, if we build our ice house in connection with the dairy house, it will be better protected and the waste will be practically eliminated. Besides, we can have a refrigerator built in under the ice to keep butter, meat and poultry, which is something we don't have now, the way the ice house is built. Get the sketches, Bob, that you and I were talking over and show them to your uncle," said his aunt smiling, seeing that she had won her point. As Bob's grandmother passed through the sitting room on her way to bed that evening, she saw three heads close together bending eagerly over the sketches, while Bob and his aunt in turn explained to Joe Williams the design and advantages of a modern dairy and ice house combined.

"H'm!" she sniffed to herself. "Joe's new wife is certainly starting in early to spend his money for him. He'll find out it's easier to spend money than it is to make it, and I'll be glad when I get away from here so that they can't say I helped to put him in the poorhouse."

XI

TONY

"Good morning, son--is your uncle around?" inquired Mr. Brady, the following Monday morning as Bob was getting ready to start work digging the trench for the new water supply.

"He's in the woodshed now," replied Bob, "but he'll be out here in a few minutes."

"How do you like the ditch, son?"

"It's a fine job, Mr. Brady," replied Bob. "When are you going to put in the cement drain tile?"

"They ought to be here to-day and it won't take long to put them in, once they're here. The digging's all done already. I've a lot of men

coming to-morrow, and I'll make a short job of that and the building of the dam. What I wanted to see your uncle about was, when's he going to put a man on at the gravel pit so we can start taking gravel away. We'll have to screen some sand for face work, but in most cases I expect to use the sand and gravel together, just as it comes from the pit."

"Won't you have to measure it out," asked Bob, "to get the right aggregate?"

"In most cases we would, son," answered the contractor, "but your pit is running just about right--twice as much gravel as sand, which makes a very good concrete, so as soon as we get through with the steam shovel at the dam I want to put it up in the pit and start my trucks hauling sand to the railroad bridges. The engineer tells me he'll be ready for me with his lines by the end of the week.

"Oh, good morning, Mr. Williams!" said the contractor, as Bob's uncle approached. "How about the man to take care of the tickets at the sand pit?"

"By George, I forgot all about that!" exclaimed Joe Williams. "You'll have to excuse me, Mr. Brady. I was pretty busy last week with getting married and everything and forgot all about the man. That reminds me, John White was speaking to me about a man the other day for some light work on the farm, but if I can't locate one within, a day or two, I'll let you put one of your men on."

"All right. I want to begin taking sand away by Monday at the latest," said the contractor. "Some activities, Mr. Williams, you're having around here, what with the steam shovel working in the ditch and a tractor plow working in the fields. We've had about everybody in the county stopping here within the last week inquiring what's going on. I've had a lot of fun out of it, too," he laughed.

"How's that?" inquired Joe Williams.

"Well," said the contractor, winking at Bob, "I told everybody who asked that we were digging for 'Hidden Treasure,' and do you know, some of them believed me."

"That's right," said Bob, "we are digging for 'Hidden Treasure,' and what's more, Mr. Brady, we're finding it."

"I think if I were to stay around with you very long, sonny, you'd be after making me believe the moon was made of green cheese, as they say in Ireland, but with you charging me fifty cents a yard for sand, I know you're making money all right. But you're wasting your time here on the farm, me boy--it's a contractor you should be."

"I don't agree with you, Mr. Brady. I think farming is the best of all. Building is interesting, of course, but planting crops and raising cattle and seeing things grow is the most interesting thing in the world to me, and I'm going to be a farmer. I like to hear the birds sing while I'm working."

"Oh, but we've birds singing in the contracting business, too, for what's sweeter music to the ear than the puffing of a hoisting engine, or the rattling of the chains of a steam shovel? Music is music the

world over--it's only a matter of education the kind we enjoy most. Now, to me, the escaping steam is the sweetest music I know, for it means dollars to me; but I must be looking after me work instead of standing here blarneying with you all the morning."

"I wish we had your men to dig our trench for the new water supply, Brady," said Joe Williams.

"How deep do you want it?" asked the contractor.

"About four feet. I guess that's the depth you wanted to make it, Bob?" he asked turning to his nephew.

"Yes, Uncle Joe," he replied.

"Say, Williams, you're wasting time and good muscle digging that trench. Let me dig it for you in two days."

"What--in two days!" exclaimed Joe Williams. "You surely couldn't use your steam shovel for that job, it would be too big and heavy."

"I'll be using no steam shovel, Williams," said the contractor. "I'll use dynamite."

"Why, how could you do that?" asked Bob, interested at once.

"Sure, my boy, there's many easier ways than digging a trench with a pick and shovel. I have some dynamite in town now that would be just the thing to blast out your trench. Of course, it will scatter the dirt around some, for dynamite is usually used to make an open ditch rather than one that is to be re-filled, but it will be less work to gather up the dirt than to dig through the hard shale, and that reminds me," he continued, "when you come to put in your concrete fence posts, don't break your back digging holes if you strike hard shale; just put in a stick of dynamite and loosen her up--you'll find it will save you lots of backaches."

"How much would it cost, Brady?" asked Joe Williams much interested. "Let me see," said the contractor. "You, say it's about 1400 feet long and four feet deep. That will mean putting down 470 holes, three feet six inches deep, and require 360 pounds of dynamite."

He figured for a moment on a memorandum pad and added:

"I'll do the whole job for \$100.00, which is about one-fourth of what it will cost you to open up the ditch, and I'll complete it in two days. You may have to level off the bottom of the trench here and there for the pipe, but at that it will be easier than digging the entire trench."

"All right, Brady," said Joe Williams; "when will you start?"

"To-morrow morning," said the contractor. "I'll get the dynamite to-day."

"But isn't dynamite dangerous, Mr. Brady?" asked Bob.

"No, son, not when it's taken care of properly. You know, you don't set your kerosene oil can on a hot stove, neither do we leave dynamite

around where it is likely to be put off, but it's just as safe as gunpowder, if you handle it right. You ought to have the ground in your young orchard loosened up a bit with a few sticks. You'll be surprised to know how it will improve the production of your trees."

"Does it really improve the land, Mr. Brady?" asked Bob.

"Haven't you read about that, Bob? I thought you were reading everything about farming."

[Illustration with caption: DITCH DIGGING BY DYNAMITE--ONE-HALF THE COST--ONE-TENTH THE TIME, AND NO BACKACHE]

"I've read considerable, Mr. Brady, but never anything about dynamite, but the next time I go to town I'll stop around at the First National and ask them if they have any literature on dynamite. You know they're running a 'Constructive Bank' now and distribute literature to the farmers, and I'm sure John White will have the information."

"That's right, my boy, find out all about it first, and then you'll know the reason for using it, and how to apply it. Well, I must be going. I'll take care of the job to-morrow. Good day, Mr. Williams; good-by, son," he said, as he turned and strode down the hill toward the new drive where the steam shovel was making fast inroads into the remaining bank.

"There's one thing I like about Brady, Uncle Joe," said Bob, as they watched him disappear. "He does things quickly and he does them well. Did you notice how straight and even the slope of the two sides of the ditch were made, and how he leveled off the north bank on top?"

"Well, Bob, you know I always like a straight furrow myself," replied his uncle, "and have always claimed that there isn't a man in the county can plow a straighter one."

"And there won't be a man in the county next year, Uncle Joe, who can plow a faster one than you," laughed Bob, "when you get your new tractor going."

"That certainly was a great piece of work," said his uncle, looking admiringly at the ploughed fields, "but where can we get a man to look after the sand pit, Bob? Why not let Brady put on one of his men and settle it?"

"Don't you think we ought to have a man of our own, Uncle Joe, rather than take one of his? No doubt, Brady's honest, but he's human. Suppose he'd forget once in a while to give us some tickets."

"Oh, well, we wouldn't miss a load or two of sand."

"No," said Bob, "but it might get to be a habit with him, and you know, according to Aunt Bettie's figures, the sand is going to help a lot in getting our loan paid off quickly at the bank."

"Well, the next time I go to town, I'll see who I can find," he replied.

"You know, Uncle Joe, if we had a telephone we could call up this morning and probably have a man out here by noon. Don't you think Aunt

Bettie was right in wanting to have a 'phone?"

"Oh, that's been taken care of," said his uncle. "I told Bettie to go ahead and have it put in. I thought it would be nice to be able to call up our friends in town and talk to them on rainy days and Sundays when we didn't want to drive in. Besides, as you say, it will be useful at times to save trips."

They spent the morning repairing the fences, which, under their persistent work, were beginning to look like real fences again.

There was one thing about Joe Williams--whatever he did, he did thoroughly, and the undergrowth was cut from both sides, heaped into piles and burned.

"Do you know, Uncle Joe, if we had wire fences, on concrete posts, we'd never have any work like this to do each spring. The plows would keep the sides clean. Think of what it would mean, Uncle Joe, to get rid of fence rows and repairing old rail fences. Then there's the wasted land that the fence takes up; that's a dead loss."

"Yes, I can easily see that," replied his uncle. "Bettie was talking about that last night."

They had worked all morning and were on their way to the house to dinner when they saw a man coming across the fields toward them. He came from the direction of the farm above, and as he approached they saw he was a youthful foreign-looking chap--probably an Italian and not more than twenty or twenty-one years old. He carried a bundle at the end of a stout stick thrown across his shoulder, and when he had gotten within speaking distance, he called:

"Good-a morn! Do you need-a da mase or-a da carpendero to do-a da work?"

"Oh, you're one of the plumber's men?" asked Bob, thinking perhaps his aunt might have asked to have some men sent out to work on the new cellar under the washroom where the hot-water heater was to go.

"No, I no-a da plumb. I-a da mase and-a da carpendero."

"Oh, you want a job?" asked Bob, catching his meaning.

"Yes-a, da job, but no-a work-a da field. I no-a da farmer--I-a da mase and-a da carpendero."

Bob exchanged glances with his uncle, who shook his head.

"What's your name?" he asked, suddenly turning to the applicant.

"Tony."

"What do you say, Uncle Joe, if we have Tony go down to the house with us and talk the matter over with Aunt Bettie? He might be the man we could use at the sand pit. Besides," he added suddenly, "he might be the very fellow to help build the dairy house--if he understands both carpentry and mason work, he would be a big help."

"How much will you work for?" asked Joe Williams, who hesitated at

paying any money in wages.

"How much-a da work to do?" asked Tony.

"Oh, we've enough for a week or a month--maybe more--that's if you can do our work."

"I understand-a da work," replied Tony, "and I like-a da live in-a da country, if you no-a make-a me sleep in-a da barn."

"Where do you come from?" asked Bob.

"From Italia. My fader, he-a da contracdisto and I learn-a da mase and-a da carpendero."

"Well, why didn't you stay in Italy?" asked Bob.

"Oh," he said, shrugging his shoulders, "there no-a da mon in-a da Italia and too-a much da hard work."

So asking questions and listening to Tony's answers the three reached the house, where Bob quickly explained the matter to his aunt. She came out and asked Tony to stay and have dinner with them. He was given a basin and towel and after he had made his toilet his appearance was decidedly improved.

"He says he doesn't want a job," remarked Joe Williams to his wife, when they were alone after dinner, "if he has to sleep in the barn."

"Well, I don't blame him," said Bettie. "What's the matter with our south room? Your father and mother are moving to town to-morrow, and you know we won't have use for all the rooms in the house. The south room has a separate stairway leading from the small sitting room on the first floor. We could give him those rooms and make him comfortable. I rather like his appearance," she added. "Of course, Italians are foreigners and they're about as awkward in our country trying to speak our language as we would be if we were in their country trying to speak Italian. How much does he want to work for us?"

"He didn't say, but I'll ask him," and they adjourned to the porch.

"How much money would you want, Tony?" asked Joe Williams, "to work for us, say by the month?"

"Where I-a da sleep?" asked Tony quickly.

"In that room up there on the second floor, at the end of the porch."

"And where I-a da eat?" he asked again.

"Why, with us, of course," said Joe Williams.

"Then I stay-a da mont and do-a da work, and when I get-a da through, we make-a da barg. If you like-a my work and I like-a da place, then I stay, but if you no-a like me and I no-a like you, then I go."

"All right," laughed Joe Williams, "that's a bargain, Tony. Do you want to begin work right away?"

"Yes, I no like-a da loaf," said the man, shrugging his shoulders.

"All right, come around here and I'll show you what we want done," he said and took him around behind the house, showed him where to dig out and build a new entrance to the cellar under the washroom and put in a flue for the heater.

Bob was much interested in the making of the trench for the new water system, and while his uncle went to town for the pipe and some pipe tools for laying it, Bob, at Brady's direction, plowed two deep furrows, six feet apart, outlining the two edges of the trench. He plowed each furrow a foot or more deep, so as to outline the edges of the trench and keep the top as narrow as possible. The contractor's foreman and his gang quickly drove their iron bars into the earth three feet six inches deep and about three feet apart and loaded the holes as they went. When they had fifty charges in place, the foreman connected up the battery, and when the men were out of the way he raised the rack bar of the battery to its full height and shoved it down hard. Up came the earth and a neat open trench four feet deep and one hundred and fifty feet long lay open before them.

By the time his uncle had returned, over half the length of the trench had been made and was ready for the pipe.

Dynamite certainly is a quick means for doing a hard job, thought Bob, and he immediately decided to learn more about its uses.

Bob was surprised and pleased to see how quickly and easily Tony could lay out and execute a piece of work. It was no time at all until the excavation was done, the wall was cut through for a door opening and the forms made for concrete steps to lead down into the new cellar. Fortunately, they found that the foundation went down low enough to give them the five-foot head room they needed for the hot-water heater. The hardest work was to connect the flue opening to a flue in the old chimney, which they found had been built up solid with masonry. This made it necessary to take the plaster off back of the chimney and cut a groove. Either by instinct or accident, Tony located a flue, and before the end of the week they not only had the doorway and flue completed, but had laid a cement floor on the cellar as well. Tony showed Bob how to mix the concrete and put it in place so as to get a smooth surface, and explained why it was necessary, in building steps and other concrete work, that it should all be put in at one time and smoothed off as soon as it became sufficiently hard so it would not crack.

The morning after Tony's arrival, Bob's grandparents said good-by to the old homestead and were taken in the auto to town. Bob's uncle drove the car, and, as it got under way, Bob overheard his grandmother remark:

"Too many new-fangled notions, Joe. You'll surely go to the poorhouse before you're through."

"All right, mother," he laughingly replied. "If we do, we'll go on rubber tires and perhaps over concrete, and the road won't seem so rough."

Thomas Williams and his wife had spent their entire lives in the

country and moving to town did not mean for them a regular town house and lot, they'd be too cramped to end their days that way. They had purchased a comfortable house, surrounded by a four-acre garden and orchard, all in good repair, and here, as compared with the farm, the work would be light indeed.

After making his parents comfortable in their new home, Joe Williams drove out to meet his new purchases, which were being delivered that day. He met the cavalcade two miles out and accompanied them home.

[Illustration: ONE-HALF THE HERD, HE WILL EARN HIS INITIAL COST IN THREE YEARS]

"Looks like a circus parade, Aunt Bettie," declared Bob, as they stood on the hill back of the barn and saw them winding up the lane. First came the team of black Belgian mares, then the ten Holstein cows, with the bull leading his herd, then a wagon with the five Berkshire sows in a pen, on top of which were the incubator and brooder, and on top of these again the coops with the white leghorn and white rock chickens. Then came another wagon with the bee hives, and following this the small flock of Southdown sheep, looked after by a fine collie dog, and last of all came Joe Williams in his new auto, smiling like the king he felt himself to be.

It was an impressive sight to see this procession of fine-blooded stock arrive at the farm, and the eyes of both Bob and his aunt were glistening when they looked at each other as the procession came up the new road into the barnyard.

"Well, what do you think of them, Bettie?" called her husband, jumping from his auto and kissing her. "Almost like a circus procession. Hey, Bob, show them where you want your bees. Better take them right over to the orchard and set them up where you intend to keep them this summer."

"I've got a place already fixed for them," he replied. Then as Tony came near he called, "Do you understand how to talk to Italian bees, Tony?"

"Yes, I know-a da bees and-a da bees know-a me--no-a sting," said Tony.

"All right," said Bob, "come with us," and they climbed up on the wagon and drove across the meadow to the new apiary.

They placed the hives on the cinder foundation Bob had made for them under the trees and when they were all placed they looked very attractive in their white paint.

"I'm sorry I didn't buy them myself," said the driver of the wagon, who had been a farm hand for the former owner. "They're the greatest honey-makers I ever saw. But I didn't have any place to take them, so I had to let them go. You're a lucky boy--you got them for a song, but do you know how to handle them?" he inquired. "You'll have to look out for them now very carefully, or you may lose them. The spring is the time they require watching so they don't starve."

"I've been reading up a lot about them," said Bob. "But what's in that box?" he asked, as the driver unloaded his last piece--a large box

like a tool chest.

"These are your things for handling them, Bob--a smoker, a veil, some tools and a lot of extra parts and things. If you want me to, I'll come out the first nice warm day and help you look them over. I'm not afraid of them. Call up my sister on the 'phone, 770, and tell her when you want me. My name's John Adams."

"Yes, I will," said Bob, "and I'll pay you for your time, too, for while I've read some, I've had no actual experience with bees."

"Well, to-night, after sundown, take the blocks from the entrance and let them fly around in the morning. You may lose a colony or two until you learn how to handle them, but you needn't worry; they're good breeders and will soon make up for that--but be sure and keep the hives cool in hot weather, then they won't swarm so quickly."

When they got back to the house all the new cattle and other stock had been put away, and the men were ready to return home. That night before setting the new chickens at liberty, Bob caught and killed the two remaining Dunghill roosters.

It was a tired but happy family that went to bed at ten o'clock that night, instead of the regular hour of nine.

It seemed to Bob that he had just closed his eyes when bedlam broke loose. His first thought was of the new stock, then of the dynamite, but as he sat up in bed he realized it could not be either of them--so, throwing up his window, he looked out.

In the moonlight he could distinguish many of their neighbors, who were armed with everything from sleigh bells to horse fiddles, and the racket they made in the stillness of the night seemed greater than any noise he had ever heard. As he raised his window, a shout went up, the neighbors thinking it was Bob's uncle, but seeing their mistake they redoubled their efforts and kept the racket going for a half hour or more. Then his aunt and uncle appeared, and invited the party into the house, where the lamps were already lighted.

Congratulations were extended, a hasty lunch was set out, the cider barrel tapped and a general good time enjoyed for an hour or more.

Many of the boys had been former pupils of the bride and they were happy that she had chosen to come and live among them.

Joe Williams disappeared for a moment and when he returned he carried a large bottle of wine with a long blue ribbon tied to it.

"Boys," he said, when the cheering had stopped, "you all know that with the exception of cider, I never drink anything."

"Oh, don't let that worry you, Joe, we're not so modest," they shouted, but he only held up his hand for silence.

"This bottle of wine was given to us by a very good friend for a certain purpose. We had intended to wait until later to use it, but I don't know any better time than just now, when our friends are all here to carry out our plans, so come out into the yard a moment," and they all adjourned to the front yard.

Here Joe Williams and his bride stepped over to a young apple tree and handing her the bottle, he tied the ribbon to a limb.

"Now, boys, Bettie and I've decided to give our farm a name and sell our produce under that name--a sort of a trade-mark or standard of merit, so now while you're all here, we'll perform the ceremony."

Taking the bottle firmly in both hands, the bride stepped back, stretching the ribbon tight, then with a light shining in her eyes that was not a reflection of the moon, she called in a clear voice, "I christen you 'Brookside Farm,'" and sent the bottle crashing against the tree amid the cheers of the crowd.

When silence had been partly restored, a man was seen mounting the steps of the porch, and holding a stout stick in his hand, he placed one end of the stick against his lips and there floated out upon the stillness of the night the old familiar air, "Home, Sweet Home." When he had finished there were many shining eyes in the crowd, but only Bob recognized in the disappearing figure his new friend Tony, whose natural artistic nature had been responsible for such a fitting tribute.

When the boys had all gone home, Bob's aunt called him to the kitchen.

"Take this up to Tony and thank him for me for the very fine touch he added to our ceremony," and she handed him a plate heaped high with cake, alongside of which his uncle set a large goblet of their rare old elder-berry wine--a mark of distinction conferred by his uncle only upon honored guests.

XII

THE DAIRY HOUSE

While his uncle planted the oats Bob and Tony laid the water pipe in the new trench, the plumbers put in the new fixtures and laid a sewer to the new cess pool. A couple of sticks of dynamite prepared the hole for the latter, which was later walled up by Tony with large loose stone and covered over with a concrete slab--later on when they built the new house they would put in a concrete septic tank, but for the present this cess pool would answer. After laying the water pipe, they borrowed a scoop from Brady and gathered up enough dirt to fill the trench.

Tony and Bob now built the concrete enclosure around the spring. An inch pipe connection for a future water trough was put in each field crossed by the trench, and a valve placed on the line well under ground to prevent freezing.

By using a section of two-inch pipe set vertically over the valve, they could open and close the valve with a long-stemmed wrench.

By the end of the week all was completed, and there was running water in the house.

Saturday arrived and they had found no one to look after the pit. They were discussing the matter and wondering whom they could get, when Alex Wallace came over to see Bob about some sand they needed to build a new wall under their barn.

"You don't happen to know of any one we could get to look after our sand pit, do you, Alex?" asked Joe Williams, as Alex came up.

"Would it be heavy work, Joe?" asked Alex.

"No, it would be an easy job--just taking a ticket from the drivers of the trucks for every load they take away, and making concrete fence posts between times.

"Then I've the very man for you," replied Alex; "my father's brother, Duncan Wallace. He's a Scot, like my father, and was a stone-cutter, but the stone dust got into his lungs and he came to the country to see if he couldn't get better. He isn't very strong, but he could do any kind of light work."

"How much would he want to work for us, Alex?" asked Joe Williams.

"I'm sure I don't know," he replied. "I'll bring him over this evening and you can talk to him yourself. I want to get a couple of loads of sand, Bob," he said, addressing the latter. "How much will you charge me?"

"Fifty cents a yard, Alex--cash or work," replied Bob. "If you'd rather work it out than pay the money, we'd be glad to have the work. You can do the work in your spare time."

"What would the work be?" asked Alex.

"The first job," said Bob, looking inquiringly at his uncle, "is digging a row of fence post holes along the main road to fence in our property. We want to put in concrete fence posts and a wire fence along the main road. After that's up we'll have lots of other fencing to be done."

"How much will you want an hour for your time, Alex?" asked Joe Williams.

"Well, about thirty cents," replied Alex.

"All right, we'll put you down for thirty cents an hour, you to work as many hours as will be required to pay for whatever sand and gravel you get. Of course, you can do the work whenever you have the spare time. We'll stake out the post holes and show you the size we want them dug. You must always let us know when you're going to work, though, so we can keep account of your time and give your credit."

"All right," said Alex, "when can I get the sand?"

"Monday morning," said Bob, "and your uncle can keep account of how much you get."

On Monday morning Joe Williams took the new team and went to town for a wagon-load of Portland cement. The few bags they had in the shed

were all used up in the repairs around the spring and cellar. As it had been decided at the conference with John White, the banker, on Saturday, to build a new concrete dairy house and ice house, equipped with running water, it was necessary to lay in a new supply of cement.

Bob looked up the cement bulletins on the handling of concrete, and found that cement should be put in a shed piled on planks raised above the floor, and that the shed should have a tight roof. The only building that would answer these conditions was the wagon shed, and after considering the matter, he decided that by moving the wagons around a bit he could get a space at one end near the door that could be used for this purpose.

He got some old timbers eight inches thick, and six feet long, and laid them on the ground four feet apart, and on top of these he put some two by ten plank, and by the time his uncle returned with the first load he had a platform ready to receive the cement.

"It's very important, Uncle Joe, to keep the cement dry and up from the ground so it won't set before we use it, for the first bag in, you know, will be the last bag out, and cement costs too much to lose any of it."

As soon as dinner was over, Joe Williams went back to town for another load, hauling it up the new road, same as the first load.

"I tell you, Bob, it's a lot easier to bring a load up the new road than it was up the old one. If the main road wasn't so rough, I could haul even more. I can see that John White's argument for concrete roads is a good one. I'm going to talk it up to the farmers around here and see if we can't get them together and build the new road this summer. I was talking to one of the County Commissioners to-day and he says they are in favor of it, but they want the owners of the adjoining farms to ask to have the road built. The Commissioners are politicians, you know, and don't want to do anything that will lose them votes. It's going to take three days to haul out the cement we require for the new dairy house with such rough roads. By the way, Bob," his uncle continued, "John White wants you to come to town with me to-morrow and show him the kind of a dairy house we're planning to build. He says he's anxious that it shall be a model that can be copied by other farmers. I told him you didn't have much of a drawing, but he said that he was sure if you took in the sketches you have, you would be able to explain the construction to him so he could understand it."

The next day as they drove along they talked of the improvement on the farm and the profit they ought to be able to earn with the new equipment. Bob was the optimist and his uncle the pessimist in these discussions, but optimistic Bob was not without his pencil and memorandum book and usually had the better of the argument because of his uncle's disinclination to take the time to figure out the advantages and disadvantages of the schemes.

As soon as they arrived in town, Bob went around to the First National Bank to see the president, while his uncle stopped at the supply yard for another load of cement.

"Hello, Bob," greeted the banker, as he entered. "I hear you've put on some help at the farm to build some of those modern buildings you've

been telling me about. Thought I'd like to know what you're doing. Got your plans with you?"

"They aren't very much of plans, Mr. White," explained Bob. "I'm not much of an architect, but maybe you can understand them."

"Bring them into the directors' room, Bob, where we can look them over without interruption," he said, and Bob for the third time was privileged to occupy this room.

"The first thing I want to know," said the banker, "is how you found the size dairy house you needed. Did you figure it out, Bob, or just look up some catalogs and pick one out that pleased you?"

"No, Mr. White," replied Bob, "Aunt Bettie and I decided first on the size of the dairy herd. We thought that twenty cows would be as many as we would be able to take care of on a farm of the size of ours, if we do general farming. We have used a twenty-cow herd as the basis of our calculations. We found by reading the recommendations in the Government's bulletins, that in order to keep a dairy of good milk cows, it would be necessary to take care of five calves and five yearling heifers, and an old and a young bull in order to keep the herd up to maximum production. We figure that a herd of twenty Holstein cows ought to average two hundred quarts of milk daily. This would mean ten twenty-quart cans to take care of the milk, and, allowing for the ice, would require a trough nine feet by two feet six inches by two feet. If we separate the cream, of course, it wouldn't require such a large trough. But we used this as a basis of the dairy requirements. Then we found by looking up another Government bulletin that it would take about twenty tons of ice to take care of this milk, but we need ice around the farm for other things, too, so we decided to make the icehouse large enough for thirty tons. Aunt Bettie and I read all the bulletins we could get from the Government and then we looked up the different ones sent out by the Portland cement manufacturers, but we found they didn't exactly agree; besides, we felt that if we could build the icehouse inside of the dairy, the ice wouldn't melt so fast, so we've decided to make a combination building like this," he said, as he laid his plans before the banker. "We're going to put this building back of the woodshed where it will join the new cow barn."

"But isn't a twenty-cow herd pretty large for one man to handle, Bob?" asked the banker.

"No, Mr. White, you can get a two-unit milking machine now that will milk twenty to twenty-five cows in one hour and give a ninety-eight per cent. efficiency."

"How much will that cost, Bob?"

"We can get a complete two-unit outfit consisting of pump, air tanks, two milking units, installed in the barn, complete for \$450."

"But you've only ten cows, now, Bob. Wouldn't that be too large for them?"

[Illustration: THE ELECTRIC MILKER SOON PAYS FOR ITSELF]

[Illustration: COMFORTABLE SANITARY STALLS OF CONCRETE WITH WOOD

BLOCKPAVING ON FLOOR. RUNNING WATER AND PLENTY OF SUNSHINE ASSURE A HEALTHY AND CONTENTED HERD]

"No, Mr. White, the outfit is designed for from ten to twenty-five cows, and will do the milking twice as fast as by hand."

"That's right, Bob; put in machinery and cut down help. Let's see, that would save at least two hours a day for one man at, say thirty cents an hour, or \$219 per year. You say the complete outfit costs \$450, which amount at six per cent, interest would mean \$27, or a saving of \$192. Quite a saving, Bob."

"Have you laid out a general scheme for all your buildings?" asked the banker, much interested.

"Yes," replied Bob. "Aunt Bettie and I have figured out the size and location of all the new buildings we'll need for the farm. Here they are on this drawing," and he produced his general layout. "Of course, you know, Mr. White, we won't get them all at once, but we want to build each one as we go, so that it will be part of a definite scheme. Aunt Bettie says we mustn't make any mistakes in the placing of our buildings." "What does your Uncle Joe say about all these plans?" asked the banker.

"Well, Uncle Joe isn't very much interested just now, Mr. White. He thinks we're planning to spend too much money, but Aunt Bettie says it isn't so much the amount of money we spend, as the way in which it is spent that requires the planning."

"That's right," said the banker. "Do your thinking first and your building afterward, and then you won't have a lot of mistakes to work with all your life. I like the way you've laid these buildings out, Bob. You must have read a lot to get this idea. Where did you say the new hen house is to go?"

"Over here behind the cow barn. You see, Mr. White, our present buildings are all built facing the wrong way. We don't get the right exposure. Besides, Aunt Bettie and I think that the new house should set out where the old barn is at the present and the new barn should be out in the orchard back of the smokehouse. The trees in this orchard are old anyway, and it is about time they were cut down. That would make a good layout for all the buildings and have them conveniently connected. You see the new driveway comes up in the yard between the house and the barn, where it ought to be. That will make the general entrance to the house toward the barn and a garden entrance toward the main road."

"That's right, Bob; I'm glad to hear you talk about gardens. I think the finest thing on a farm, outside of making a profit," he added smiling, "are flowers."

"Well, the flowers are Aunt Bettie's idea," said Bob. "She says they've many nice gardens in New England, and that she wants to have one out here, and, of course, you know that'd be the southwest exposure, and just the place for a flower garden."

"What's this dotted line for, Bob?" asked the banker, pointing with his lead pencil.

"Oh, that's the water supply pipe from the spring on 'Old Round Top'," said Bob. "You see, we're planning to carry the water into all the buildings, so it won't be necessary to take the stock out to water in the winter. Of course, when we build the cow barn, we'll put in individual water bowls for each cow. Aunt Bettie and I are reading up on dairy barns now and when we come to build that we don't want any mistakes. We want it just as good and practical as it can be made, yet not too expensive."

"After you get the dairy house up, Bob, what's the next building you're going to build?"

"We want to build the hen house next, Mr. White," said Bob, "but it's a good deal of work for just Tony and I, working by ourselves, even though we do get up early in the morning. Besides, it'll soon be planting time and Uncle Joe will need me in the corn field."

"I was thinking of that, Bob," said the banker thoughtfully, tapping the table with the end of his pencil. "I wonder why it wouldn't pay your Uncle Joe to put on a man to help him and let you look after the buildings."

"Oh, but he couldn't afford that. Besides, I like to work at planting, too," replied Bob hastily. "Yes, that's so," said the banker, "but I think I told you, Bob, I want to see your Uncle Joe's farm a model one, and I don't want him to spend three or four years in fixing it up. Of course, the other farmers won't do theirs quite so quickly; they don't have sand pits on their farms, but there's so much to do to get these old farms on a paying basis that I want to see your uncle's farm finished up completely by the end of this year."

"But I'm sure Uncle Joe couldn't afford to go ahead with all the buildings, Mr. White," replied Bob in alarm, "and while Aunt Bettie and I would like to see them put up and have all the improvements made without waiting so long, it would cost a lot of money."

"Have you any idea, Bob, what these buildings will cost?" asked the banker a moment later.

"Not exactly, Mr. White, although we've made up some figures, using the prices given in the bulletins, and trying to figure out the cost of the concrete work ourselves. We think that the dairy house will cost \$450; the hen house \$1000; the cow barn \$1500, and the main barn \$2000. Then there's the new piggery and the concrete feeding floor that goes with it. The barn, of course, will have one or two silos--we haven't decided yet which will be best--and we want to put in a manure pit with a carrier system. And I want to make some concrete shelters for my bee hives. Then, of course, we'll need some equipment, such as a corn harvester and machine for filling the silos--these will cost about \$500. We ought to have a new machinery shed to keep all the farming implements in, and I've been telling Uncle Joe we also need a shop with a forge for blacksmith work and some iron-working tools for making repairs to the farming implements, also a small carpenter shop. I want Tony to make some new bee hives for me during the winter. Say, you ought to hear Tony play, Mr. White," said Bob suddenly.

"Why, what does he play?" asked the banker.

"A flute," said Bob. "You just ought to hear him. He plays the nicest

music I ever heard."

"Does he sing, too?" inquired the banker, interested.

"Yes, but it's in Italian and I don't understand what it's all about, except it's mostly about a bull fighter--he calls him a Toreador. You ought to hear him when we're out back of the barn some morning. He not only sings, but he acts it, too. He sticks the pitchfork into the straw stack, like as if it's a bull, and makes you believe he's killing it with a sword."

"That's from the opera Carmen," laughed the banker, at Bob's description of the Toreador Song. "Well, I guess he must be a man of some education if he can sing that. You better keep him around the place, Bob, if you can. But, coming back to the question of buildings, I think I'll speak to your Uncle Joe and see if we can't manage some way or other to let you work on the buildings so you can get them pushed along. As I told you, I want to see all your buildings up within a year."

"Oh, you don't mean it, Mr. White. You don't mean the new barns and all."

"Yes, everything, Bob," he replied.

"That would cost a lot of money," said Bob, frightened at the idea of spending so much.

"You seem to forget, Bob, that I told you the First National Bank was back of your Uncle Joe, and as long as we don't worry, he shouldn't. Besides, if your Uncle Joe doesn't make good, I'll charge it off to profit and loss against my 'Constructive Banking' scheme; but I'm not going to worry about that feature, Bob--I know your Uncle Joe is going to succeed. You go ahead with your dairy house and I'll drive out in a few days to see how you're coming along. Give my regards to your Aunt Bettie," he added, as he waved good-bye to the departing boy.

XIII

VISITORS

The building of the dairy was the most interesting thing Bob had ever undertaken, and they had not proceeded very far until he began to realize what a valuable helper he had in Tony. Many times when he was at a loss to know how to proceed, Tony was ready with suggestions and seemed to know just what to do.

They made a careful list of all the material they needed, and a rough sketch of the doors and windows with all sizes marked on them; also the other equipment they would require. These Bob's uncle bought in town at a planning mill and hardware store. The most important of all was a seven cubic foot self-charging gasoline-driven concrete mixer of a type that Bob and Tony had decided would be the best for their use. The machine selected was not the cheapest one they could have bought, but it was the one that required the least amount of labor to operate

and was a substantial, well-built machine, guaranteed for one year.

"Father says it always pays to buy a good tool, even if it costs a little more," Bob had advised his uncle when the latter questioned his selection, but his uncle had finally given in and the mixer had been purchased.

Bob was sure his uncle had had a plain talk with John White, the banker, for now, instead of objecting each time materials and tools were bought, he had readily consented.

"I want you to keep an account of all the material, time and money you spend, Bob, so when we're through we'll know exactly what each building costs," his uncle admonished. "I'm going to give all the bills for materials to you so you can check them up and see if we receive everything we order; then you can make a record of what it costs. John White said that when we're through he wants a detailed cost of the work, to know exactly what each building has cost us, and I think it's a good idea myself."

At the end of three weeks the dairy house was fully completed, including the painting, which Bob and Tony also did. Every day or two John White had driven out to the farm in the late afternoon to see how the work was progressing. A stranger might have thought that the building was being erected for him from the interest he took in everything that was done.

"I want to get posted on farm building construction, Bob," he remarked, one day when the building was nearly completed. "You see, I'm going to preach the gospel of modern buildings among our farmers and loan them money for their improvements, and I want to see how the thing is done. I want them to get rid of the continual cost of upkeep, to say nothing of the loss of time spent in repairing old buildings, time they could use to earn good American dollars. How soon are you going to start the hen house you were talking about?"

[Illustration: SMALL, SELF-LOADING, KEROSENE-DRIVEN, CONCRETE MIXERS MAKE THE WORK EASY--TWO MEN CAN MIX AND PLACE MORE CONCRETE THAN EIGHT WORKING BY HAND AND THE CONCRETE WILL BE BETTER MIXED]

"We could start it this week," said Bob, "but Uncle Joe is talking about planting the corn."

"Don't you bother your head about that, Bob; your Uncle Joe and I've had a talk and have worked that out all right. If the sand pit holds out, your Uncle Joe pays the expenses, and if it doesn't hold out, I guess I'll be stuck," he laughed. "I want to see you devote all your time to getting these buildings up. Next year you can spend all the time you want raising crops."

"But won't that make a lot of work for Aunt Bettie?" said Bob, considering the matter. "She's pretty busy now, Mr. White."

"I was thinking of that, too. It isn't fair that your uncle should have all the help on his end. I only wish we knew where we could get a good woman to help her."

Tony, who was standing near, was listening closely to what was being said:

"Mr. Bob, I have-a no told you that I got-a da wife who live in-a da city, and I know she like-a da come and work for-a your Aunt Bettie. We got-a no-a da kids, and she like-a da country, like-a da me."

"That's a fine idea," said the banker, turning around quickly. "Where is she now, Tony?"

"She in Pittsburgh, wid her brud."

"Send for her right away, Tony," said the banker.

"All right, Mr. White, but I have no-a da mon."

"Oh, that's so, Tony. Well, we'll take care of that."

The banker left and returned a few minutes later and handed Tony \$25.

"This is on account of your work, Tony."

"All right, I send-a da letter to-night," and Bob thought he saw a happy look in Tony's eyes as he thrust the money into his pocket and started to work again.

"Bob," said his aunt one morning, a few minutes after he had brought the mail up from the R. F. D. box on the main road, "I've some good news for you. We're going to have company; my two nieces who live in New England are coming to see us. One is Edith Atwood, my brother's daughter, who lives in Worcester, Massachusetts, and the other is Ruth Thomas, my sister's daughter, who lives near Wallingford, Connecticut. Ruth is eighteen and Edith will be eighteen in September. They finished high school last year and are both anxious to see our farm."

"When will they get here?" asked Bob, not pleased at the news and wondering what the coming of two girls might do to upset their plans for the improvement of the farm.

"They were not supposed to come before June," replied his aunt, seeing that Bob was not pleased, "but Ruth was so anxious to get into the country while we were planting that she persuaded Edith to come now. They'll be here on Saturday."

"That'll be day after to-morrow," exclaimed Bob, "the day I was planning to start work on the new hen house."

"Well, you needn't stop on their account, Bob," replied his aunt. "I'll drive in and get them. I know how anxious you are to get the hen house started, now that you have Tony to help you."

All day Bob kept turning over in his mind the invasion of his domain by two girls. Now, why couldn't the visitors have been boys instead of girls, then he could have enlisted their services in the construction of the new buildings. What could he not do with two willing boys to help him? Why must these visitors be girls instead of boys, he thought. They would probably sit around the house all day, reading magazines, or want him to leave his work to drive them about in the car. He felt sure the best part of the day, the evening hour they all spent together in the sitting room, discussing their plans, would now be spoiled.

The next day he took the tractor with two trailing wagons and began hauling sand and gravel from the pit to the site of the hen house. The operator of the steam shovel loaded the wagons for him and this saved much time for two shovelfuls made a load. By noon they had brought up twenty loads, enough to make a start on the foundations. He again appreciated the convenience of having the water piped to this building, the same as to the dairy house, for a short hose gave them all the water they needed, when and where they needed it, and with the cement stored in the wagon shed near by they had all the materials they required to begin work. Bob took his tape line and with Tony holding the ring against the fence that divided the south field from the barnyard, measured off fifty feet and drove a peg. Then going eighty rods along the fence, measured out fifty feet again and drove another peg. He was careful to keep the tape line as nearly square with the fence as possible. They now stretched a line between the two pegs and coming within a few feet from the first one, set up a batter board three feet long, and at right angles to the line--the same as they had done with the dairy house foundations. Then they measured off two hundred and fifty-two feet along the line and set up another batter board in the same manner. This done, they put in two other batter boards at right angles with the first, but eighteen inches back of the line. They drove two nails in these boards, exactly two hundred and fifty feet apart. They then placed another line parallel to and twenty feet away from the first one with similar batter boards, and located the other end of the cross lines on the boards. With a ten-foot pole and using the six, eight and ten method, they squared the lines, and located the ends of the buildings.

Bob then marked under the line with heavy black pencil the letters "B. L."--meaning building line. This done they drove other nails in each batter board six inches outside of the building line to locate the outside of the footing, and removed the lines to these nails. From these new lines they measured back twenty inches and drove other nails, locating the inner edge of the footings.

Bob placed a large black letter "F" under each nail to designate the edge of footings. They now took their picks and dug a small score in the ground directly under all the lines, thus marking out correctly on the ground the outer and inner edge of the footings. As the elevation of the ground at the northwest corner was the highest, they set a grade stake with the top six inches above the ground at that point and from this stake set other stakes at ten-foot intervals in the center of the footings all around the building, using the twelve-foot level board and mason's level to establish the correct elevation.

They took down their lines, wound them up carefully and laid them aside for further use. Bob decided, in order to keep the frost from getting under the walls, they'd have to place the footings three feet below the finished grade. In order to throw the water away from the buildings, it would also be necessary to make a fall of six inches on the high corner. This would make the trench for the footings two feet, six inches deep at that point, and as there was a drop of eight inches to the southeast corner, the trench there would be one foot, ten inches deep. Between the grade stakes they now dug out a section the full width of the footings and about three feet long, and located the exact bottom of the trench by measuring down three feet from the under side of the level board as it rested on two of the grade stakes.

They threw the excavated earth inside of the building to bring the floor up to grade, and when the depth holes were completed they dug out the sections between them, leveling the intervening space by their eyes.

Bob was so interested in the new building that he and Tony went back and worked until dark, so as to have the excavation ready for footings in the morning.

"I'm going to scold you for breaking the Union rules, Bob," laughed his aunt, when he came into the sitting room a few minutes after eight o'clock. "You know we decided not to work after six o'clock."

"Yes, I know we did, Aunt Bettie," said Bob, "but I was so anxious to get the excavation done, ready for concreting to-morrow."

"Well, I suppose if I could command the sun to stand still, like Joshua of old, you wouldn't be willing to stop until the whole job was done," she laughed. "How long do you think we could remain happy here if we all began working from daylight until dark? Life would soon become a burden, and you'd be the first one to leave for the city, Bob. Besides, if we keep long working hours, we'll miss our pleasant evenings together, and I'm not willing to give them up," she smiled at him across the table. "I guess you're right, Aunt Bettie," he replied, as he sat down in a chair, too tired to read. "I won't do it again."

The next morning Bob had his chores and milking done by six o'clock and by six-thirty he was out at the new hen house, where he was joined by Tony.

"Good-a morn, Mr. Bob," smiled Tony. "This-a the day we make-a da concrete fast."

"That's what we will," replied Bob. "Get some cement, Tony, and we'll start the mixer going right away."

While Tony was getting the cement, Bob filled his six cubic foot measure with sand and gravel, and on top of these he placed one bag of cement, then he started the engine and the elevator emptied the load into the drum, which, as soon as he added the water, he set revolving. When the concrete was thoroughly mixed, he threw the dumping lever over and filled the wheelbarrow that Tony placed under the discharging end of the drum.

By the time Tony had dumped the three barrows of concrete into the trench, Bob had another batch ready for the machine, and while this was being mixed Tony leveled off the concrete in the trench even with the grade stakes, set in the trench six inches above the bottom.

By night the footings were completed. They now located and dug the footings for the piers of the cross partitions and concreted them, so as to give the cement of the main footings a chance to set up before they began putting the forms on top of them. They could have saved the forms below grade by making the excavation the exact width of the foundation wall, but they felt this was poor economy, for the work was uncertain and rough, and the extra labor caused by trying to fit the forms to the sloping ground would more than offset the little saving; besides, it took more cement to fill in irregular trenches than it did ones of exact size. They had taken the forms they used for the dairy

house foundation, together with some new sections, and set them up on the new footing, using wooden spreaders for holding them the right distance apart and placing heavy wires through the hole in the forms, the ends of which encircled a pin and were twisted up tight securing the forms firmly together.

The three-foot form sections brought the top of the forms just under the line, which was now stretched between the nails marked "B.L." and the outside of the wall was correctly located. They drove pegs into the ground on both sides and braced the top of the forms to hold them to the exact line. They had only twenty sections, each ten feet long, enough for one end and four sections down each side, so Bob decided to put in the forms at the north end and concrete them, and then remove them to the south end. When the concrete there was sufficiently hard they could set up the forms between the two ends thus finished. This would provide three expansion joints on each side, which would be just right. They had just completed the erection of the forms for the north end and filled the hopper with a new batch, ready to be hoisted into the drum, when Bob happened to look toward the barn and saw the car come to a stop in the barnyard. By the time he had cranked the engine, the occupants of the car had alighted and his uncle was starting for the house, his arms full of suitcases. Bob noticed that one of the girls who had alighted was of medium height and slender, while the other was short and rather stout.

"Is that your new hen house?" he heard the stout one inquire of his aunt, as he stopped the engine on the mixer, and she looked over in Bob's direction.

Bob had again filled the drum and was watching the mixing of the concrete a few moments later, when he heard someone behind him and turned around.

"We thought we'd come out and see how you're getting along, Bob," said his aunt, smiling at him, while the two girls came forward as she spoke. "I want you to meet my nieces, Bob. This is Ruth Thomas, and this is Edith Atwood--and this young man, girls, is Robert Williams, about whom I spoke."

"What a fib, Aunt Bettie," laughed Ruth. "You know you've been talking about him ever since we got off the train, and besides, you called him 'Bob,' not Robert."

"May I call you 'Bob,' too?" she asked, looking up at him. "I like it better than Robert. It doesn't take so long to say."

"Of course," replied Bob, blushing. "I guess I wouldn't know who you meant if you called me 'Robert,' for I've been called 'Bob' ever since I can remember."

"Is that concrete, Bob?" asked Ruth suddenly, as he stopped the engine and brought the drum to a standstill. "What makes it so gray?"

"The cement," said Bob, pleased to see her interested in his work.

"Is it sticky?" she asked, as she put her fingers into it and stirred around in the mixture.

"Why, it's gritty, just like sand, Aunt Bettie," she said looking up.

"Of course," said Bob. "That's because it's made of sand and gravel and cement."

"May I see you make some?" she asked.

"Yes, in a few minutes," he replied; "just as soon as we empty the drum. You'd better stand back a little so that you won't get splashed when the concrete goes into the wheel-barrow," as Tony came forward.

"And this is Tony, Bob's assistant, girls," said their aunt.

"This is Ruth, Tony, and this is Edith."

"I-a please to meet da young-a ladies," said Tony, more embarrassed even than Bob had been, as he awkwardly placed the wheel-barrow under the drum.

As soon as the drum was empty, Bob measured out a charge of four parts gravel, two parts sand and one part cement, and then started the engine and dumped them into the drum, where he added sufficient water for the mixing.

"How do you tell how much water to put in?" asked Ruth.

"Oh, we learned that by experience," said Bob. You see the mixer has a tank on top that holds the right amount, but this may be varied if you like. The concrete must be wet enough so that it quakes, but not thin enough to run like water."

"Let me put in the water next time, Bob, won't you?" she asked. "Say, Aunt Bettie, may I help Bob mix his concrete?"

"You better come to the house and help me," replied her aunt laughing. "Bob and Tony, I'm afraid, would only find you in the way."

"All right," said Ruth, "but on Monday I'll help you, Bob," and she started for the house with her aunt and cousin, the latter Bob now recalled had not spoken a single word, beyond the introduction.

"I'm going to help Bob mix concrete on Monday, Uncle Joe," said Ruth at supper that night. "I know how it's done. You take four parts of cement, two of sand and one part of gravel, and put them in the, 'What do you call it, Bob?'"

"Drum," said Bob.

"Yes, drum," repeated Ruth. "You see, Uncle Joe, I know how to mix it."

"You use only one part of cement, Ruth," corrected her cousin, "and two of sand and four of gravel."

Bob glanced up quickly at this clear statement of the facts, and for the first time looked directly into the brown eyes of Edith Atwood.

RUTH AND THE STRAW STACK

The Monday morning's mail brought them notice that the cement drain tile had arrived in town. They found it cheaper to buy this from a firm that made a specialty of tile rather than try to make them, and, more important still, a letter had been received by Tony saying his wife would arrive on the ten o'clock train; so it was decided that work should be suspended on the hen house for the morning and that Tony and Bob should take the car and drive in to meet the train, while Joe Williams would take the team and bring out the tile and some new seed corn that he was getting for the spring planting--a new variety that John White had persuaded him to try.

At eight-thirty work on the hen house was suspended, the car gotten out and cleaned, Bob changed his clothes, and Tony, with as much of the dirt removed as possible--smiling and happy--got into the car and drove to the station. They arrived just a few minutes before the train, Bob remaining in the car while Tony went around the station to meet his wife, as she alighted from the train.

[Illustration: EVERY BOY THAT RAN AWAY FROM THE FARM AND MANY THAT ARE STILL THERE CAN TELL OF THE DAYS WASTED ON REPAIRS TO WOODEN FENCES AND CLEANING OUT FENCE ROWS. YOU WILL ALWAYS FIND A PROSPEROUS FARMER BEHIND A NEAT WIRE FENCE ON PERMANENT CONCRETE POSTS.]

A few minutes later Bob's ears were greeted by the sound of animated conversation in a foreign tongue, not a word of which was intelligible to him, but every word of which seemed to please the speakers. A little later Tony came around the corner of the station, a huge suitcase under each arm, followed by a rather good-looking woman of medium height, and, like Tony, a true type of sunny Italy. She was dressed much better than Bob had expected to find her, and when Tony said, "This-a my wife, Mr. Bob," he was surprised to hear her say in very good English: "I'm pleased to meet you, Mr. Williams," letting her gaze fall as she greeted him.

As soon as Bob had recovered from his surprise, he jumped down from the seat, opened the door of the tonneau and helped her into the car, an act of courtesy which the smiling eyes of Tony quickly acknowledged. One of the suitcases was put on the empty front seat of the car and the other was placed on end between Tony and his wife in the tonneau, and then they started for the farm.

While Tony and his wife carried on an animated conversation in Italian, Bob was not without his own thoughts. He was trying to figure out how Tony, who had difficulty in expressing his ideas in English, should happen to have such a good-looking English-speaking Italian wife. He was not aware that many of the American-born Italian boys and girls receive high school educations, and, of course, he didn't know that Tony, who had been born in Italy, should have met in the house of a distant relative, a young woman who had had these advantages, and who should have found in the good-natured Tony, with his foreign manners, the object of her love. He was wondering, too, how she might like farm work and how his Aunt Bettie might like her.

He didn't have long to wait, for now that the roads were getting dry

and better, he made the trip in less than twenty minutes and they were soon speeding up the new driveway to the house. He jumped out of the car, and taking one of the suitcases conducted Tony and his wife to his aunt, who had come out on the porch to greet them, and he noticed that she was as much surprised as he had been when Tony blushinglly said:

"This-a my wife, Mrs. Williams," and she had replied:

"I'm pleased to know you, Mrs. Williams," extending her hand. "My name is Maria Martinelli," she added. "Tony has been telling me what a fine place you have here, and how kind you've been to him. I'm sure I'll be very happy working for you."

"Well, we do like Tony and I believe he likes us, and I hope you'll like us also," Aunt Bettie replied.

Tony now started for his room, the suitcases under his arms.

"We haven't Tony's room very well fixed up yet," Mrs. Williams continued, as Tony's wife followed him up the stairs, "but you and I can take care of that in the next few days."

Bob felt sure that his Aunt Bettie had already established pleasant relations with her new assistant, and whistled merrily as he changed into his working clothes.

When he returned to the hen house he was surprised to see some one in a brand new suit of funny-looking overalls sitting on the gravel pile waiting for him. As he came near, the stranger arose and looked toward him, but it was not until he got within a few feet that he recognized in the figure before him Ruth Thomas.

"Aunt Bettie said she'd let me help you with the concrete, Bob, so I put on these. How do you like my farmerette clothes?" she, asked smiling.

"Well, you surprised me, all right," laughed Bob, as, for the first time in his life, he saw a girl dressed in man's clothes.

"What do you do first, Bob?" she asked, going over to the mixer and pulling on the levers; "put in the water or the cement?"

"Neither," said Bob, still trying to decide whether he approved of her manner of dress or not. "We've all the concrete mixed that we need until we finish setting up the forms at the south end."

"Give me a hammer then, and I'll help drive the nails," she said, coming round to where Bob was leveling up some of the forms. "All right, drive a nail in there," he said, indicating the end of a brace that leaned against the forms.

Ruth took the hammer and tapped the nail gently, succeeding in starting it, then she raised the hammer and struck hard. The hammer descended squarely on the nail, but not the nail in the brace, but the nail on her left thumb. With a cry of pain she dropped the hammer and tried hard to keep back the tears.

"You'll have--to--excuse--me, Bob, until--I go--to the house and tie

this up," she said, hesitatingly, "but as soon as Aunt Bettie puts something on it, I'll be back," and as she disappeared Bob heard her choking back her sobs.

His sympathy struggled for a few moments with his humor, but the latter got the better of him, and as soon as Ruth got well out of hearing, he couldn't refrain any longer from laughing at the funny figure she cut in her new clothes and the abrupt ending to her ambition to help build the hen house.

He found that he couldn't get along very well with the forms by himself, so he decided to knock off until after dinner. He was crossing over to the barn, where he met Ruth still dressed in her overalls, her thumb tied up, coming into the barnyard with her cousin Edith.

"We thought we'd like to look over the barn until my thumb quits hurting," called Ruth.

"All right," said Bob, and he conducted them into the thrashing floor where he explained how a barn was built and where the hay was kept and how they fed the different horses and cattle from the thrashing floor. Most of the mows were now almost empty and the barn had the appearance of great size.

"I'm going to climb up into the hay mow," said Ruth, as she started for the ladder.

"Why do you want to go up there, Ruth?" asked Edith.

"Oh, I want to see what the place looks like," replied Ruth, as she nimbly climbed the ladder and stepped off into the mow.

"Come on up, it's fine up here," she called.

Bob quickly followed her and a moment later Edith joined them.

Pausing there for a few minutes, they climbed over into another mow and looked out through a window on the side of the barn.

"Why, we can get on the roof from here," said Ruth.

"Yes," said Bob, "we can."

"Let's go out then," she said.

"But you might slide off," warned Bob.

"No danger of that," replied Ruth; "we've got our sneakers on."

So he crawled through the window and standing on the roof first helped Ruth and then Edith through.

"It isn't as steep as it looks from the ground, and I'm going on up to the top," said Ruth.

Bob helped Edith up and they sat on the ridge for several minutes looking out over the farm, Bob pointing out to them the places of interest, and telling them the story of how the new dam and ditch came

to be built. As they sat there, they noticed their uncle coming up the lane and that he had already reached the foot of the hill.

"Why, there comes Uncle Joe," shouted Ruth, as she started running down the side of the barn toward him, on which side a lean-to was built, and beyond which stood last year's straw stack, the top about even with the roof of the lean-to.

"Come on, Edith, I'm going to jump off the roof on to the straw stack," she shouted, and before Bob could stop her she had jumped and landed on the stack.

"It didn't seem so difficult, Bob," said Edith, and she also started running down the side. "I guess I can make it, too," she called, and leaped on to the stack, where Bob joined them a moment later.

The three stood waving their hands and shouting to their uncle. Suddenly Ruth exclaimed: "I'm going to slide down the side of the stack," and moved over to the side nearest to her uncle, who, seeing her intention, stood up in the wagon and shook the whip at her, warning her not to do so. Ruth only took his warning as a dare, and throwing her arms high over her head with a loud shout started to slide down the side of the stack. Now the stack had furnished feed for the cattle all winter and they had eaten under the edges, so that it was like a huge toadstool. From his position in the lane, her uncle saw what Ruth could not see from the top--that there were cattle under the edge. As Ruth came noisily down the side her shouting caused a cow standing under the edge of the stack to come running out. The two met just at the edge of the stack, Ruth landing squarely on the cow's back, her back to her head.

With a snort and a plunge, the cow started to race across the barnyard, and it was hard to tell which was the more surprised--Ruth or the cow. In her eagerness to get rid of her unexpected burden, the cow threw her hindquarters from side to side, as she ran--a motion that seemed to be exactly timed with Ruth's endeavor to fall off on that particular side, as each sudden change threw her into a vertical position again.

So with her hands on the cow's back and rolling from side to side she managed to maintain her seat, until the cow, seeing she was unable to get rid of her burden, ran for a black walnut tree, which stood near the old pump. She ran close against this tree and Ruth came shooting from the cow's back, much like a big frog jumping into a pond, landing unhurt on all fours on the soft litter of the barnyard.

Edith and Bob were still standing on top of the straw stack rocking with laughter at the ridiculous figure cut by Ruth, while their uncle stopped the team and hurried up the bank as fast as he could go. He was the first to get to Ruth as she picked herself up and began brushing off the dust.

Then Bob slid over the side of the stack to make sure there were no more cattle in the way, and a few minutes later was joined by Edith. They hurried forward together to where Ruth was standing and found, with the exception of a bruise on her chin and a rent in one sleeve, where it had rubbed along the ground, she was unhurt and laughing as merrily as the rest.

"Say, Ruth," said her uncle, seeing she was uninjured, "next time you want to ride one of the cows, let me know and I'll get you a saddle, or maybe you'd rather try one of the horses."

"Oh, I didn't get hurt a bit, Uncle Joe," she laughed, "and it really was lots of fun."

XV

NEW METHODS

The next week was a busy one on Brookside Farm. All were deeply engaged with their several occupations. Saturday brought the first interruption to the work when John White, the banker, paid them a visit. He appeared in his large touring car, instead of his usual runabout. Mrs. White, their daughter, a girl of fourteen, whom Bob had seen in the bank talking to her father; and two young boys, about Bob's own age, and whom Bob did not know, were with him.

They arrived shortly after three o'clock in the afternoon. Bob and Tony were setting up the pre-cast concrete sections, forming the walls and partitions of the hen house. The party alighted, and, led by Mr. White, came over to the hen house to inspect the work. This was the banker's custom on his visits to Brookside Farm.

"Hello, Bob!" he called. "Come over and meet Mrs. White," and Bob stepped forward and was introduced.

"This is my daughter Alice, and this is my sister's son, Edward Brown, and his friend, Herbert Potter--and this is Bob Williams, the boy I've been telling you about."

Again Bob extended his hand in greeting, but it was accepted rather indifferently, he thought, by the other two boys, which did not aid in establishing friendly relations. In fact, Bob felt that they rather held themselves above him.

Mrs. White was a large motherly woman. She had light hair and blue eyes and had not talked long before Bob discovered that she had a deep interest in her husband's business, for the questions she asked were such that he knew the banker must have been explaining to her about the work being done on Brookside Farm.

The banker now left them to go around the other side of the building to speak to Tony, while Bob explained to Mrs. White and the boys how they made the pre-cast slabs and set them in place on the wall and braced them, to hold them in line, until the concrete studs were cast to form the permanent supports for the roof.

"You know, Bob," said Mrs. White, "this is the most interesting thing I've ever seen in my life. Just think of being able to dig your buildings out of the side of the hill. I think it's all perfectly wonderful the way you're making use of your 'Hidden Treasure,' as Mr. White tells me you call the undeveloped resources of your farm."

Bob now got his drawing and explained to her the manner in which the hen house was planned to get the southern exposure; also the arrangements for feeding the chickens, gathering the eggs, the system of ventilation adopted which would prevent draughts and keep the hen house well ventilated in both winter and summer. Also the feed and incubator house and how each could be extended from time to time by simply building on to the ends.

Mrs. White asked a great many questions and Bob felt sure she was not talking just to be polite, but was really interested in the work they were doing. It gave him much pleasure to know that the time he had spent in reading up on farm work was producing results.

Bob's Aunt Bettie and the two girls now came out to greet their guests. Introductions followed, and a few minutes later the party adjourned to the house, all except Bob, Tony and the banker. No amount of urging on the part of Bob's aunt could persuade the banker to leave the hen house, the construction of which interested him so much.

"I like your idea, Bob," he said, "in making your buildings of pre-cast standardized sections. I can see where this type of construction would have great advantages in the winter, and, at odd times, when a farmer isn't busy he can make up some sections and let them harden, and, whenever he gets enough for a building, he can put them together quickly. Where did you get the idea for this kind of work?"

"Well, partly from the bulletins and partly from Tony, and the rest I just thought out myself. You see, Mr. White, the bulletins say a wall of a building is always dryer, warmer in winter and cooler in summer, if it's hollow, and besides it only takes about half the material. Then, you see, there's an advantage when you want to put in ventilation to use the hollow wall for that purpose. While Tony and I have been working on the hen house, I've been turning over in my mind the design for the cow barn. These hollow walls are going to be of great service for ventilating that building?"

"Can you construct your cow barn with the same size units that you made for the hen house?"

"Yes, Mr. White, we figured that all out before we started our dairy building, and we expect to use the same construction on all our buildings, even on the silo. Of course, in that case, we'll have to make the sections curved, but Tony says that won't be a difficult thing to do. You know, Mr. White, Tony understands drawings, and has been able to give me some good suggestions--particularly on how to handle and make forms. He says he started to learn the carpenter trade when he was only ten years old, and he can file a saw or sharpen a plane so they'll cut fine."

"Well, I'm very much interested, Bob, in the way you're getting along with this work. As soon as you get this building up to the roof, I'm going to ask your Uncle Joe to let me give a party at Brookside Farm some Saturday, and have all the farmers around this section come and see what you're doing. We'll probably have to wait until they get their plowing done and their corn in. You know," he added, "they didn't have a tractor to do their work for them like you did, but I've a notion that I've made some of them jealous, and there'll be a number of tractors running in the county next spring, if I don't miss my

guess. How'd you like to have a little help, Bob, when you go to put up the cow barn?"

"What do you mean, Mr. White?"

"Well, I've been thinking for some time that the way to get the other farmers around here interested in concrete work and get them buying sand from your pit, Bob, would be to have them send some of their boys over here to learn how cement work is done, for while anyone can easily learn how to use cement, still it must be understood to use it correctly. Of course, they'll have a good deal of work to do, but after planting their oats and corn, they might be able to take a few days off and come to help you."

"We won't be ready to start the cow barn that soon," said Bob.

"But couldn't they be making up these pre-cast sections, as you call them, or dig out for the foundations and put in the concrete footings."

"Oh, yes, we could do that, but Aunt Bettie and I haven't decided definitely on our plans yet."

"Couldn't you hurry them up a little so we could get the cow barn under way? It seems to me if we could get the farmers' sons here to Brookside, and get them interested in concrete buildings, they could then show their fathers how the work is done, for," he added laughing, "it's easier to teach a young dog a new trick than an old one. Besides, Bob, don't lose sight of the fact that it will be profitable for you."

"How's that?" asked Bob.

"You agree to pay them for their labor in sand and gravel, and once you get them using concrete, they'll come back for more. Since you were in to see me last, I've been thinking the matter over and I believe you can manage it so you can get what help you need in this way, except, perhaps, one or two carpenters when you come to the heavy work of the cow barn. It will be to their advantage to learn how to do the work. I was talking to the two boys we brought out with us to-day to see if I couldn't get them to help you, but they said they didn't want to be musing around with farm work. I told Edward, my nephew, that he didn't understand enough about farms to know what was good for him, or he'd be glad to help you. Well, I must go and see your Uncle Joe. Think over what I've been telling you about having the farmers' boys help you and I'll think it over too and see how it can be managed. Of course, you wouldn't want them all here at one time. I think if they came two or three at a time, it would be better. We could work out a schedule of dates, and know when each boy would come so there would be no break in the working force. You'd better see if you'll have tools and forms enough to keep them all working, Bob, and if you don't, your Uncle Joe ought to get you a few more."

Left to himself, Bob began to turn over in his mind the possibilities and advantages of having more assistance, and getting the cow barn started earlier than he had anticipated. Now that it would only require a little more than another week to complete the hen house, he decided that with double the number of forms they were now using, and keeping Duncan Wallace casting sections, instead of fence posts, as

they had originally planned, they could probably get enough made for a good start on the cow barn by the time the excavations and footings were in place.

At four-thirty Bob quit work as usual and went to the house and cleaned up to do his milking. Just as he was finishing his last cow, his Aunt Bettie and the girls, accompanied by their visitors, came into the yard to see him milk. Bob explained that as soon as the new cow barn was finished, the milking would no longer be done in the barnyard, but in the barn, and instead of milking by hand, they would install automatic milking machines. He could then take care of twenty cows easier than he could now take care of ten milked by hand.

"How do you like the new Holsteins?" asked the banker, as he watched Bob finish off the last cow.

"They're fine, Mr. White. This one's name is Spot. She's my favorite; she's a three-year-old and gives twenty quarts of milk each day. That's better than any of the others, although two of them come pretty close to her. When we get the new barn and can, regulate their feeding, they'll all do much better."

"Why, do you know how much milk each cow gives?" inquired Mrs. White, surprised.

"Certainly," said Bob, "we not only know, but we set down every day how much we get, so we can keep a record. If you'll come down to the dairy house, I'll show you how it's done. Of course, we don't measure each cow's milk separately every day, or weigh their cream every day, but every time I milk, I keep the milk of one cow in a separate pail, so it may be weighed. For instance, I'm taking note of Spot's yield to-day."

"This is very interesting, Bob," said Mrs. White. "I didn't think you went into farming so scientifically."

"They don't on some farms," replied Bob, "but Aunt Bettie and I keep books here on Brookside Farm. We want to find out what pays the best."

"That's right," said the banker, "working and figuring go hand in hand, and if you keep that up Brookside Farm will soon be paying a good profit."

"Will you let me see your books after supper, Bob?" he asked. "Your Aunt Bettie has invited us all to stay and have supper with you."

"Yes," said Bob. "I'll be glad to."

"Did that one cow give that much milk?" asked the banker's wife in astonishment, as she saw the huge pail Bob had gotten from Spot.

"Yes," said Bob proudly.

"Why, I had no idea one cow could give so much milk," she replied.

[Illustration: EXTRA PROFITS ARE NOT THE ONLY THINGS A FARMER GETS FROM A HERD OF WELL-BRED DAIRY COWS. THERE IS A SATISFACTION IN HAVING SPENT HIS TIME CARING FOR ANIMALS THAT ARE WORTH WHILE]

"That's why," said Bob, "it doesn't pay to keep common cows. They eat as much as a purebred and don't give nearly as much milk. Besides, their milk isn't as rich as Holsteins. If you come along to the dairy house, I'll show you how we separate the milk and get the cream."

"May I carry one of the pails, Bob?" asked Ruth.

"You'll have to be careful, Ruth, if you carry it," admonished her aunt. "If you and Edith don't go racing, you may carry it between you," she continued, as the two girls picked up one of the largest pails and started off for the dairy house.

When they arrived, Bob weighed the milk given by Spot and made a note of it in his record book, setting down the date and name of the cow; then he weighed the balance of the milk, and under the heading of "Herd of Ten Cows," he set down the total amount given by all. "You see," said Bob, "in this way we have an individual record of milk taken every ten days from each cow, and a daily record of the ten taken together. It doesn't make so much bookkeeping and is close enough for all practical purposes. When we get our electric lights in, Mrs. White," he continued, as he started the separator, "we're going to put an electric motor on the separator. Then I can be doing something else while the milk's going through."

"Listen to that, Ida," said the banker, addressing his wife. "Everything on Brookside is going to be run by power and every person on the farm will be multiplied by two or five before Bob and his Aunt Bettie get through, and besides it won't be such hard work."

"No," laughed Bob, "when the power does the work, you don't notice it so much."

"That's so," said the banker's wife; "you must be tired, Bob, at the end of a day, with all the activities you have around here."

"Oh, one gets used to it, Mrs. White. I've gained ten pounds since I came here."

He put the cream he had gotten in a cream can and placed it in the trough. He opened the icehouse door and put some more ice around the cans.

"How'd you happen to get the old ice in the new dairy, Bob?" asked the banker.

"Well, we figured if we left it in the old icehouse, over half of it would melt during the summer and we wouldn't lose anything like that much by transferring it, so we put it on the wagon and hauled it over. Of course, when this ice was cut, the cakes were made all kinds of sizes, which gave us some trouble in piling it up. Next year we're going to cut the ice in twenty-two by twenty-two-inch sizes. I don't know whether I told you or not, Mr. White, but the floor of the icehouse slopes toward the center, so each cake helps to support the other as we take them out."

"Just listen to that, Ida. See how Bob has figured out all these things. Who would have thought of that?"

"I didn't," confessed Bob. "That was in one of the farm bulletins on

icehouse construction."

"Somebody else worked it out, but you used the idea," said the banker. "Often a man who can utilize another's idea can develop it to greater profit than the one who first created it. It's my opinion, Bob, that it's the little things in life that are carefully managed that make a success of the big things."

"What do you do with your skim milk, Bob?" asked Mrs. White. "We feed that to the calves, and what's left over to the pigs, and some of it occasionally to the chickens."

"Do you make butter, Bob?" asked Mr. White.

"We used to," said Bob, "but now we sell all our cream to the creamery and buy our butter." "What, buy your own butter?"

"Yes, Aunt Bettie says it pays better to buy butter from those who make it in a big way than try to make it ourselves. We get the butter when we deliver the cream and in that way we don't have the extra work to do. Of course, we could make our own butter, and would do so if there was no creamery, but the money that goes for a pound of butter is less than we get for a pound of butter fat, and we save the time Aunt Betty would have to devote to it."

Bob now opened the refrigerator and showed them how they kept their eggs, butter and fresh meat.

"My, what a nice-looking lot of things to eat," said Mrs. White admiringly, as she looked into the white-enameled refrigerator. "See the crates of nice white eggs and freshly-killed poultry."

"Of course, we aren't killing much poultry now," said Bob. "We won't get started on that until the hen house is finished, but we're killing off a lot of the common chickens to get rid of them. They're bringing thirty cents per pound now."

"We'll wait supper till you get your shower and change your clothes, Bob," whispered his aunt, as the party came to the house and Bob disappeared. The favorable comments made by the banker and his wife on his work raised his thoughts above the level of mere clothes. He cared not that his ready-made suit compared rather poorly with the tailor-made clothes of their boy visitors. He decided that as he was going to be a farmer, he would wear the kind of clothes that belonged to farmers, and wouldn't try to ape others in the matter of dress.

After supper was over, Bob and his uncle, with the banker, adjourned to the sitting room, where they spent a half hour in going over their system of cost-keeping.

"This is a fine system, Joe," said the banker. "I'm glad to know you're taking such an intelligent interest in your farm."

"Well, it was pretty hard, John, for me at first to understand keeping accounts and all that, but Bettie and Bob were so insistent that I finally made up my mind that I was going to learn what it was all about. I think now I've a pretty fair idea how to tell whether a thing's paying or not; besides, since we got it started it don't take over five minutes a day. Before the summer is over, we'll have our

work pretty well systematized. I'm beginning already to find out that a lot of things we've been doing on this farm all our lives have been unprofitable and also that many things we've neglected entirely can be made to pay a good profit."

"Nothing like figures, Joe, to tell you where you're at," laughed the banker. "Next thing for us to do, Joe, is to see that we get our farmers all awake and in line for a new concrete road to town. We must build that road this summer. I want you to be able to haul your produce easily."

When Bob returned to the porch, he found that the boys and girls had gone for a walk, from which they did not return until the banker and his wife were ready to leave. It did not add to his pleasure to see the easy manner in which they walked along, arm in arm, on their return to the house, or the rather overlong hand-shaking when they finally parted. He decided he didn't like those boys--especially "Eddie" Brown.

XVI

RUTH AND JERRY

"I'm goin' to start planting the corn this morning, Bob," said his uncle at breakfast on Monday morning. "I ought to get the ten-acre field finished by Wednesday evening. As soon as that is planted, I guess I had better take the tractor and haul out some more cement. John White and I made arrangements on Saturday, when he was here, to go ahead with the rest of the buildings. There'll be a considerable amount of cement required for these, and I don't want to stop planting corn to bring it out, and after that you know we'll be pretty busy. I wish you would figure up how many barrels of cement it will take approximately for each of the buildings, Bob; also the rolls of galvanized wire and steel bars for reinforcing so that I can get these ordered at the same time. You'll want some window frames and ventilators, gratings and other things for the cow barn, too. I think you'd better make some sketches and a list of just what you want. Then we can get bids, and see where we can buy the cheapest. You'd better get some catalogs, too, Bob, on cow stable fittings, such as stanchions, sanitary water bowls and manure carriers. Of course, we'll want to build the silo, too, at the same time, and you better make a list of the materials required for that. You and your Aunt Bettie can talk over the details and arrange the matter between you."

[Illustration: GOOD SEED WELL PLANTED LAYS THE FOUNDATION FOR A PROFITABLE CROP]

"All right, Uncle Joe; we'll take care of it," said Bob, "and have the list ready for you in a few days. Of course, we don't want to knock off during working hours to make up this list, unless we have to, but when it comes to putting on the roof of the hen house, Tony can carry on the work by himself, if necessary, while I complete the drawings of the cow barn and silo and figure out the quantities."

"Don't forget that I'm here," said Ruth, "and I'm going to help build

the rest of the buildings, even though I did hurt my thumb the first time I tried. I've been practicing out in the woodshed and I can hit a nail on the head nearly every time now."

At the mention of her nail-driving ability, Bob could not refrain from smiling.

It was probably nine-thirty that morning when Bob, busy at work on the hen house, looked up and saw Ruth dressed in her farmerette clothes, talking with their uncle at the far side of the field where he was planting oats. It was fully an hour later when he looked up again and saw Edith standing near him. At first glance she seemed abashed, but he noticed that the corners of her mouth were tucked up in a roguish laugh.

"Anything happened, Edith?" he asked.

"Not yet, Bob, but," she replied laughing, "there'll be something happen to Ruth in a few minutes, if you don't come and rescue her."

"Why, where is she?"

"Come, and I'll show you," said Edith, and Bob turned the concrete mixer over to Tony and they went over to the old orchard, back of the smokehouse.

In almost the exact center of this three-acre plot, a tree had decayed and fallen several years before, and a young apple tree had been planted to take its place. This tree was now about five inches in diameter, and forked about five to six feet from the ground. In the crotch of this small tree, a foot dangling on either side, sat Ruth, balancing herself as best she could while Jerry, the new Southdown buck, was prancing back and forth, jumping alternately at one foot, then at the other, as she let them hang down within his reach.

"How did she get up there?" asked Bob, as he took in the situation.

"I don't know," said Edith, "but she must have been up there a long time, because I've been hearing her shouting for at least a half hour, but I thought she was with you and Tony working on the hen house."

"Oh, Bob, come over here and drive Jerry away," cried Ruth, hearing them. "I've been sitting in this apple tree holding up my feet until they're ready to drop off."

"How did you happen to get up there, Ruth?" called Edith laughing, while she and Bob stood outside the fence enjoying the situation and watching Jerry jump time and again for a dangling foot.

"I went up to see Uncle Joe--say, aren't you going to help me, Bob?--and was taking a short cut through the orchard and forgot all about Jerry--confound that sheep," drawing a foot up just in time--"when I saw him I started to run, and he ran after me. This was the only tree small enough for me to climb, so I got up here and Jerry has been keeping guard ever since. Whenever I let a foot dangle down he strikes at it. Come on, and drive him away, Bob. I'm so tired I can scarcely keep from falling."

"All right," laughed Bob, "I'll get him away," and vaulting the fence

he ran over to where Jerry was standing, took him by the wool on the back of his neck and held him with one hand.

"Now, slide down, Ruth--he won't hurt you. All he wanted was someone to pet him."

"I tell you he's cross, Bob. He would have butted me if I hadn't got up into the tree."

"He was only trying to play with you, Ruth. Now, come down and I'll prove you're wrong."

But no sooner had Ruth placed her cramped feet on the ground than Jerry broke loose, and with head down, went charging after her, as, letting out a scream, she dashed for the house as fast as she could go. The gate, opening into the yard by the smokehouse, was too far away, so she changed her course and headed for the fence between the orchard and hen house, near the spot where Edith was standing. She had placed her right foot on the second board of the fence just ready to jump, when Jerry arrived just in time to take advantage of the opportunity presented. With one strong butt he hoisted her clear of the fence, landing her on all fours on the soft, plowed ground on the other side. She jumped up quickly, spitting out a mouthful of the soft earth she had scooped up. Bob and Edith were doubled up with laughter.

"Oh, you two probably think it's very funny," snapped Ruth, "sitting up in an apple tree for a half hour, with Jerry trying to knock your feet off every time you let them hang down, to say nothing of his butting me over the fence. Well, laugh if you want to, but it's not so funny if you're IT."

"Perhaps you'd better come into the house, Ruth, and get rested," suggested Edith, "or maybe you'd like to help Aunt Bettie plant the garden."

"You help her yourself, if you want to; I'm going to help Bob and Tony build the hen house," she declared suddenly. "I was coming over to help you, Bob, when Jerry treed me in the orchard, and if it hadn't been for him, I would have been there an hour ago."

"All right," laughed Bob; "I'll be glad to have you help me now, Ruth," and he helped brush the dirt from her clothes. Edith caught a merry twinkle in his eye, as they left her to go back to the concrete mixer.

"What can I do to help, Bob?" asked Ruth, when they arrived at the work.

"I think I'll let you be the engineer, Ruth, and run the mixer. That's an important job," he added, winking at Tony. He instructed her how to start and stop the engine, and which levers to use in filling and emptying the drum. She was still busy with the mixer when the dinner bell rang.

"I'd like to get a turtle, Uncle Joe," said Ruth at dinner. "How can I catch one?"

"Get Bob to shoot a ground squirrel for you and bait a couple of hooks; then set some lines in the new pond. Perhaps you can catch one

that way."

"Is that what you bait turtle hooks with?" asked Ruth.

"Ground squirrels make the best kind of bait," said her uncle. "If there are turtles in the pond, you'll get one of them with that."

"Let me shoot the squirrel myself, Uncle Joe," said Ruth.

"I won't have time to go hunting squirrels this afternoon, but perhaps you and Bob might be able to find one on the fence down back of the barn. You can take my shotgun, Ruth, but be careful that you don't shoot yourself instead of the squirrel."

"Oh, I know how to shoot, Uncle Joe; don't worry," she declared.

"Let's go as soon as we get our dinner, Bob," she said enthusiastically.

When they had finished, Bob got two turtle lines and hooks from the woodshed and the double-barrel gun and four shells. They went down along the fence back of the barn toward the pond. When they were almost at the foot of the hill, near a chestnut tree, they saw a ground squirrel sitting on the top of a fence post.

Bob handed the gun to Ruth and explained to her how to operate it, and much to his surprise and admiration, she quickly raised the gun to her shoulder and fired-the squirrel tumbling off the fence.

"How did you happen to do that?" he asked, lost in admiration, for it was a neat shot.

"Throw your hat up in the air and I'll show you," she said.

As he hesitated, she asked.

"You're not afraid I'll hit it, are you, Bob?"

"No, I'm not," said Bob, and with that he threw his straw hat high into the air and it came down with a nick in the brim and two holes in the crown.

"Where did you learn to shoot, Ruth?" he demanded, looking at his damaged hat.

"Oh, I learned that long ago," she replied, pleased that at last she had won his genuine admiration. "I've two medals for shooting. My brothers are both crack shots and they taught me. I usually shoot with a rifle, however."

"That's fine shooting," said Bob. "I couldn't do nearly as well as that myself," he admitted grudgingly.

"Now, show me how to bait the hook," she said, picking up the squirrel. Bob took it and showed her how to prepare and put it on the hook.

They then went along the pond until they came to some small thorn

bushes that grew on the bank. Bob showed her how to cast the bait by whirling it round and round and then let it fly out into the water. She tried several times until she got the knack of doing it, then threw in both lines and tied them fast to the thorn bushes.

"How long'll I have to wait before I catch a turtle, Bob?" she asked, as they started for the house.

"Maybe an hour and maybe not till to-morrow morning, and maybe as long as a day or two--it just depends," he replied.

About three o'clock in the afternoon, he noticed that Ruth, who had gotten tired running the mixer, had gone to the house. A little later he saw her with Edith passing through the barnyard in the direction of the pond.

It was perhaps a half hour later when he heard shouts in the direction of the pond and someone calling his name. He dropped his tools and rushed across the plowed field, when he saw Edith hurrying toward him as fast as she could walk over the newly-plowed ground. She was waving her hand to him, motioning him to hurry.

"What's happened to Ruth now?" he asked breathlessly, catching up to her.

"It isn't Ruth this time," she replied. "It's Duncan Wallace."

"Why, what's the matter with him?" he asked eagerly, surprised that the staid old Scotchman should have gotten into trouble.

"Well, it was this way," said Edith, between breaths, as they started in the direction of the sand pit, "when Ruth and I went down to the pond the first line we pulled out had a turtle on it, and while I held it by the tail, Ruth took a forked stick and pried the hook out of its mouth; then she thought it'd be good sport to take it down and show it to Duncan Wallace, and when she got near she held it up by the tail and showed it to him.

"What's that you have there Mister--Miss--?"

"A turtle, Mr. Wallace," said Ruth, laughing over the fact that he did not know whether she was a boy or a girl.

"Oh, a turtle, is it? Well, let me see it." Then he took the turtle from her, Bob, and laid it on the shovel he was using to screen sand. He held the shovel so that the turtle's head was not very far from and on a level with his face. Then, much to my disgust, he began spitting tobacco juice in the turtle's eyes, forcing it to draw its head into the shell. It didn't seem to like it very much, for all of a sudden it reached out its head and grabbed Duncan Wallace by the nose, and, oh, Bob, you should have seen him dance and heard him swear; he swore something terrible," she said laughing heartily. "It was the funniest thing, Bob, I ever saw in my life--neither Ruth's ride on the cow the other day nor her experience with Jerry this morning could compare with the way that old Scotchman hopped around, waving his shovel in one hand, the turtle dangling from his nose, and swearing like a pirate."

"Well, how did you get the turtle off?" asked Bob, laughing in spite

of his fears for the Scotchman's safety.

"We didn't get it off," said Edith; "that's why we got you here. Ruth tried to shake it off, but his nose bled terribly. He was sitting on a pile of sand holding on to the turtle when I left," she replied.

When they reached the pit they found that the desperate Scotchman, in his struggling to free himself from the turtle, had pulled a large piece out of the end of his nose. Ruth, after first putting her turtle in a water barrel, was doing her best to stop the flow of blood and comfort the still swearing Scotchman, whose feelings were becoming more aggravated each minute by Ruth's uproarious laughter.

"If a girl comes around here again dressed up in boy's clothes, carrying a turtle, I'll throw them both into the pond and drown them," he declared savagely, as he got up from the sand pile and started for his home. When he had disappeared, Bob and the two girls sat down on the sand pile and laughed until they cried.

XVII

FILLING THE INCUBATOR

Shortly after the new stock had been delivered at Brookside Farm, Bob and his aunt put the new Leghorn chickens in the old sheep shed back of the barn, and the white Plymouth Rocks in a small pen near the cider mill, so as to keep the two flocks apart. They saved all the eggs from each flock and as fast as the common hens on the farm showed a disposition to set, the eggs were supplied to them, until the incubator house was finished.

The incubator was a modern machine of five hundred egg capacity. After a conference, they decided to send to two well-known poultry farms specializing in white Leghorns and white Plymouth Rocks for additional settings of eggs, in order to have new blood for the next year. They got fifty eggs of each breed from the two breeders, making two hundred eggs in all, and took three hundred eggs from their own stock. A careful record of the different eggs was made, so they could keep the chicks separate after they were hatched.

Before the eggs arrived, the incubator was cleaned and tested.

"Won't you let me help you with the eggs, Bob?" asked Edith, as he was getting ready to place the eggs in the incubator. "I've been reading a lot in the bulletins about chickens, and I would like to help you look after them."

"I don't think it would be such a hard job, Edith," he replied, "if you understand how to regulate the heat and keep the eggs turned. Of course, it will be necessary to look after them carefully."

"I already know how to regulate the temperature, and turn and cool the eggs."

"Do you know how to test them?" asked Bob, "to tell which eggs are

fertile?"

"Yes," replied Edith, "that's easily done. You can use a candle and an old shoe box by removing one end and cutting a hole a little larger than the size of a quarter in the bottom of the box, located so that when it sets over the kerosene lamp, the hole in the bottom will be opposite the flame. Of course, you'll have to cut another hole in the box, so that the heat will escape, and the eggs are tested with the large ends up. This is done so the size of the air cell may be seen, as well as the condition of the embryo."

"How do you tell when an egg is fertile?" asked Bob.

"That's easy," said Edith. "The infertile eggs, when held before the small hole when the lamp is lighted inside the box, will look perfectly clear, same as a fresh one, while the fertile ones will show a small dark spot, which is known as the embryo. Of course, you have to learn to tell whether the embryo is living or dead, but that's easy to learn."

"I think I could take care of an incubator all right," she continued. "The first thing you do is to see if it is running steadily at the desired temperature before filling it with eggs; then you must fill the whole tray at one time and not add fresh eggs to a tray after it's once started. The eggs must be turned twice daily after the second and until the nineteenth day. The eggs must also be cooled once daily from the seventh to the nineteenth day, depending on the weather."

"Do you fix the lamps first, Edith, or turn the eggs?" asked Bob.

"Oh, you must turn the eggs before you fix the lamps," she replied, "and, of course, the machine must be cared for at regular hours, just the same as your dairy cows, and the lamp and the wick must be kept clean at all times--otherwise you would not get a uniform heat."

"When do you test the eggs?" asked Bob.

"On the seventh and fourteenth days; after the eighteenth day you must not open the machine until the chicks are hatched."

"If you'll look after the incubator for us, Edith, it'll save me a lot of time--particularly now when we want to start work on the new cow barn."

"Will you let me run it all myself, Bob?" she asked, her eyes sparkling in anticipation.

"I don't see why you can't do it all yourself. You understand it just as well as I do; besides, I've had no actual experience myself."

They carefully filled the incubator with the eggs, making a record in a special book of the different breeds and the different breeders.

"How are you going to mark them, Bob, to tell them apart?" asked Edith.

"Oh, that's easy," said Bob. "You punch small holes between their toes and make a code of the marks, so you can tell which is which."

"You can make ever so many combinations."

"Doesn't that hurt them?" asked Edith.

"No, not if it's done when they are very young--though the hole is a very small one, it never closes up, and you can always tell, by referring to your code, the age and breed of each chick. Later, of course, when they grow up, we'll put numbered aluminum bands on their legs, but when they're small the holes are better.

"Just think, Bob, five hundred little chicks for me to look after. Won't it be perfectly splendid?"

"You won't get five hundred, Edith. If we get sixty to seventy per cent, hatched, it will be as much as we can expect. Unless, of course, we have especially good luck and you might get as high as eighty or ninety per cent."

"What will we do with the eggs that are not fertile?" she asked.

"Oh, we'll boil those and feed them to the young chicks after they're hatched; they make good chicken feed."

"How many of the chicks do you suppose we can raise in the brooder?"

"If we hatch 300 to 400 out of the 500 eggs, we'll be doing fine, and if we can raise sixty per cent of the full hatch, it's considered very good. Of course, considerable will depend on the way they're fed and cared for, but with good care, you ought to average that many. We'll have to raise these in one of the new pens we've just built for the laying hens, because our brooder house will be one of the last buildings we'll put up, and we may not get it ready until late fall. When the chicks are large enough, you can put them in colony houses out in the orchard."

"I hope we can raise more than sixty per cent, Bob. Won't it be fine to have so many chicks? When we get these hatched, are we going to hatch more?"

"Yes," replied Bob, "Aunt Bettie thinks we should hatch at least 1000 to 1500 eggs in order to have a good pen of layers this fall. Of course, you know half the chicks will be roosters, and these we will dispose of. The white Plymouth Rocks we can caponize and easily sell, and the white Leghorns we will either have to kill and sell as broilers, or it may be we can sell them to the farmers around here to improve their flocks. So you see, if we have 1000 chicks, we can't count on over 500 hens."

"What would you do, Bob, if you had 1000 hens?" asked Edith.

[Illustration: A WELL MANAGED FLOCK OF POULTRY WILL RETURN GOOD PROFITS AND CAN EASILY BE CARED FOR BY THE WOMEN AND CHILDREN]

"Don't you remember the hen house is made so it may be extended? Of course, by the end of the summer, when the chicks have grown up, Mr. Brady will have taken so much sand from the pit that Uncle Joe will be willing that we should go ahead and complete our buildings, and one person can care for 1000 hens almost as easy as 500. A 1000 hen flock

is about the right size. Aunt Bettie and I didn't exactly deceive Uncle Joe, but we thought we'd educate him a little at a time."

"I heard him tell Aunt Bettie the other day he was going to let her have all the money that they made from the dairy and poultry," said Edith.

"Well, if he does," said Bob, "Aunt Bettie will make a lot of money--almost as much as Uncle Joe, outside of the sand pit."

"How would that be, Bob?"

"Because it is possible to make very big profits in these if they're properly looked after," said Bob; "but of course, the chickens will have to pay rent for the houses, based on their cost and use of the land they occupy--the same as cows do for their stable and pasture, and all the labor and feed Uncle Joe supplies will be charged up against them. I've been reading the story of a successful poultry and dairy farm in one of the bulletins. They kept twenty cows, the same as Aunt Bettie is planning to do, and it stated that in addition to the milk, cream and butter used by the family, they sold almost \$2400 worth of butter, and they got almost as much more from their poultry. The bulletin didn't say, of course, how much it cost to produce it, but with our system of cost-keeping where we charge up labor, feed and rent and credit them for whatever they produce, we'll be able to tell almost to a cent just what they earn."

"Won't you let me keep the cost-accounting system for the chickens, Bob?" asked Edith. "I'm sure I'd like very much to look after them all myself. I think that farming, if done intelligently, is the most interesting business that one can engage in."

They were standing on opposite sides of the incubator, and Edith was handing Bob an egg as she made this remark. Bob's hand closed over the egg and fingers that encircled it. He held it for a moment, while he looked into her eyes; then, as she blushing withdrew her hand, he stammered:

"I'm glad, Edith, you like farming the same as I do."

"Well, it is interesting, Bob, and I do like it," she said, looking at him shyly.

"What are you two doing in here with all those eggs?" asked Ruth, bursting suddenly in upon them. "One would think you were in church, you're so quiet."

"Why, we're going to raise chickens by machinery," explained Bob.

"Do you have a motor to run it?" she asked. "How do you make it go, Bob? It must be terribly hot in here," she added, looking at them questioningly.

"Why?" asked her cousin, without looking up from the tray of eggs she was filling. "Why, Bob's so red in the face. I never saw his face so red before, except the time he ran down to the pond to take the turtle off Duncan Wallace's nose."

"You must have the room warm where you keep the incubator," said Edith

evasively.

"Let me put the eggs in, Edith," said Ruth, "I know how to do things like this," as she began mixing the Leghorns and Plymouth Rocks together.

"Oh, don't do that, Ruth; we must keep them all separate. We write the names and dates on them and make all kinds of records, so we'll know the chicks when they're hatched."

"How can you tell from an old egg what kind of a chick you'll get. How do you know you won't get black chickens out of white eggs."

"Maybe we will," laughed Bob. "Anything is liable to happen on a farm where you get girls off apple trees and turtles off Scotchmen's noses."

"Pretty near ready for dinner?" called her aunt, looking in for a moment as they completed the work of filling the incubator.

"We've just finished," said Edith. "Bob said I might take care of the incubator and keep the record of the chicks, if you were willing, Aunt Bettie."

"Yes, Edith, I'd be only too glad to have you do it," replied her aunt.

"Thank you, Aunt Bettie. I like farming better every day," and she gave Bob a shy glance, as he closed the door of the new incubator house.

XVIII

THE NEW IMPLEMENTS

When Joe Williams purchased Brookside Farm from his father, the equipment of farm implements which his father turned over to him was meager; indeed, the few that answered the name of implements were so old and had been so badly neglected, by being exposed to all kinds of weather, they were practically useless.

After a conference with John White, the banker, Joe Williams sent for Mr. Patterson, the representative of the Farmers' Harvester Company. The three spent a half day together going carefully over their full line of farm implements, selecting from the list such new machines as they felt were best suited to their requirements.

A tractor, disk and harrow had already been delivered to the farm, and left there after the spring plowing, but no arrangements for the purchase of them had yet been made. After having seen the advantage of these implements, and heard them favorably commented upon by his neighbors, Joe Williams decided they must remain at Brookside.

He now selected a new riding corn planter, one not only capable of planting corn in rows, but also in hills, and as a companion to this

machine, he selected a horse-drawn cultivator. After considerable discussion, he decided to purchase a side delivery hay rake and a windrow loader, chiefly on account of the speed with which hay could be gotten in with this combination. He could then leave his hay out until it was just right and get it in quickly ahead of storms. With these two machines, he also bought the latest improved mowing machine. Then he picked out a substantial reaper and binder. The erection of the new silo made it necessary to select machinery for filling it, and a corn binder, with a bundle elevator, was finally selected on account of the saving in labor. A blower type ensilage cutter with the necessary pipe for filling the silo and leather belt for driving it by the tractor, were selected. Then a new grain drill with fertilizer and grass-seed attachments was added.

"I guess that's about as many implements as I can afford to buy at one time," remarked Joe Williams.

"Now, look here, Joe," said John White; "why do a thing half? You know you'll be short a number of things if you stop here; besides, you've left out a lot of low-cost tools that you ought to have to make a complete equipment."

"Why, what more do I need?" asked Joe, surprised at the banker's statement.

"Well, for one thing, you ought to have a first-class manure spreader; it will do the work much quicker, and save you many backaches--now that you've decided to fertilize heavily. Then you should have a good power-driven corn sheller and a small mill for grinding corn meal and buckwheat flour. You also ought to have a one and a half horsepower kerosene engine, mounted on a portable hand truck."

"What would that be for?" asked Joe Williams, looking up.

"Well, you'll have a lot of places to use it--such as running the washing machine, turning the grindstone, corn sheller, or the cream separator, if the electric system breaks down, and other small jobs around the farm, where a portable engine will be very handy to save work and increase speed."

"We'll have the engines on the tractor that we can use," protested Williams.

"That's all right, Joe," said the banker, "but it's too heavy for many of the light jobs, and it would not pay to consume the amount of kerosene and oil necessary to operate it, so I think you had better include the engine."

"All right," said Joe. "Let's have it then along with the others."

"What about your electric lighting plant, Joe, with the new buildings coming along? You ought to look out for that."

"Bettie and Bob have been looking up a lot of data on that subject and they've decided on putting in a water-driving unit. It requires more wire to bring the power up from the dam, but in the end will be cheaper as it costs nothing to operate."

"How many electric lights do you want to use?" asked Mr. Patterson.

"We've figured that we ought to have about one hundred sixty-watt lamp capacity for the complete farm; that would take care of the small motor of the vacuum cleaner and sewing machine."

"We don't make the outfit, Mr. Williams," said the agent, "but I'll arrange to get a good one for you and will not charge you any commission on it--taking such a large order as you are giving me, I'll be very glad to arrange this for you."

"Well, here's a catalog of the make they have picked out and if you'll take it up with the manufacturers, I'll appreciate it," said Williams. "We'll want a detail drawing showing how to make a foundation for the wheel and generator. Bob's worked out an automatic starting and stopping device. The wiring, of course, we'll do ourselves."

"How about an auto truck, Joe; don't you think you ought to have a good auto truck on the farm?"

"Not with a team of horses and a good live tractor. Of course, an auto truck would be an advantage in some respects, and I'll probably want one next year, but I think we can get along without that for the present. Speaking of making a complete outfit, Mr. White, Bettie gave me a list of some other things she wanted."

"What are they?" asked the banker.

"Well, for one thing, she thinks we ought to tear down the old cider mill because it's too slow to operate. In former years, when labor was cheap, it answered very well, but the modern machines are much quicker and better."

"I think you ought to have that, Joe," said the banker. "Have you thought of a power saw for the wood lot and cutting up the rails of your old fences? That's a 'Hidden Treasure' that you and Bob have probably overlooked."

"There's where you're wrong, John," laughed Williams. "I've overlooked it entirely, I'll confess, but not Bob. He's figured out already how many cords of wood we'll get out of those old rails."

"I tell you, Patterson," said the banker smiling, "there's a boy who's going to make things pay. I've plans for him myself that I'm not saying anything about. I don't want to take him away from you, Joe, but he's growing up and some day he's going to have a farm of his own. If you get two years' work out of him at the rate he's going, I don't think you'll have any complaint to make though. By the way, how about a power washing-machine and mangle for the laundry? Don't you think your wife will need those?"

"She was speaking about them the other day," admitted Joe. "I guess I'd better include them. Then, of course, we'll need some first-class scales. Bob has been after me ever since he's been here to get a new platform scale and a good steelyard, for weighing bulky stuff, and we ought to have a new scale for the dairy also."

"Those ought to be bought, Joe; you can't get far on a farm without good scales," remarked the banker. "Now, let's see what all this is going to cost. What do you make it, Joe?"

"Well, I figure the items that Patterson's company is going to furnish will come to \$3000, and the other items that we have decided to get will make a total of \$5000."

"This ought to give you a splendid outfit, Joe, and make it possible for you to do the work of two or three men, and with less fatigue to yourself."

"Get these tools here, Patterson, as soon as you can," said Williams. "We want the corn planter and cultivator first and the others just as soon as possible."

"I've a planter and cultivator in the Pittsburgh warehouse now, and can have them here in three or four days."

"That'll be fine," said Williams, as he signed the order for the implements.

"What discount will there be for cash on an order of this size, Patterson?" he asked suddenly. "We'll allow you seven per cent for cash on delivery, which is a little better than we ordinarily give, but we'll throw off a little in your case for advertising, Joe. We'll probably be troubling you some this summer sending your neighbors around to see the tools working."

"That'll be all right," said Joe smiling. "Let as many come as want to. I think lots of them are getting jealous already, for I keep mentioning to them whenever I see them how Brookside is prospering."

"Well, thanks for the order, Joe," said Patterson, as he shook him by the hand. "I don't mind saying this is the most complete order I've ever taken for a single farm in your section of the country. Our company ought to be proud to know they're going to have a farm so fully equipped with their implements."

"There's another thing I've had on my mind all day, Joe," remarked the banker, "and that is what you're going to do when you get all these new tools and your neighbors come over and want to borrow them. You can't be unneighborly and yet you can't supply the county with tools."

"That's where I'm one ahead of you, John," laughed Williams. "We figured that all out last night. We decided that five years would be the average book life of all our new tools and implements, which would mean a depreciation of twenty per cent each year. Now, all we have to do is to divide twenty per cent, of the cost by the number of acres on which we use the implement, and we have the depreciation per acre. We can work that all out and make a schedule of rates. What we propose to do is to loan any tool we have, when we don't need it ourselves, at the established rate plus breakage and repairs."

"Ha! Ha! Joe, that's a fine idea," laughed the banker, "but I'll bet you the price of the power-driven ice-cream freezer you forgot to order, it was not your own idea."

"No, it wasn't," confessed Williams.

"Well, who's was it then?" eagerly asked the banker.

"Bob's," said Joe Williams.

"It sounds like King Solomon, Joe," said the banker, "for it's certainly the best solution of that troublesome problem I ever heard. No one can rightfully refuse to pay for the actual use of a tool, even though he can't afford to own one, and five years ought to be a fair book value average. So Bob thought that out," he chuckled. "Joe, I'm getting prouder of that red-head, freckled face nephew of yours every time I see him, and you don't want to forget when you come to settle with him that his ideas are worth something to you as well as his labor. Let's go out and see what he's doing on the new cow barn," continued the banker, and they walked over to the new building.

"Hello, Bob! How are things moving this morning?"

"Pretty good, Mr. White. This cow barn's going to be some building compared with the hen house. Tony and I staked it out and started the foundations. Where are those boys you were going to send me?"

"That's why I came out to see you to-day," replied the banker. "There'll be six here to-morrow. I couldn't get them two at a time, so I thought you had better take them when you could get them. Each boy is to stay a week, Bob."

"I don't think Aunt Bettie can take care of six boys at once, if they all stay overnight."

"Only two will stay at night, Bob. I told them the working hours would be from seven to six; that will give them time to get home. You had better arrange your work so you can take full advantage of their help."

"We've plenty of work, Mr. White. I could use a dozen boys right now," replied Bob. "We ought to have the timbers for the roof brought out, Uncle Joe. Couldn't you take the big tractor and the wagon and bring out a load this afternoon, while you are waiting for the corn planter to come?"

"It wouldn't pay to run the tractor for just one wagon, Bob," said his uncle, "when it can haul two wagons at once."

"There's something we forgot," said the banker; "you should have a good substantial truck around this place, one that will haul a real load, and I know where you can get a good one at about half price. Henry Smith, the man from whom you bought the auto, Joe, took it in trade for a motor truck recently. Call him up on the 'phone and tell him you want it--tell him you would like to have him put in a short tongue for a motor hitch. The truck has been used for hauling lumber and is just right for your work." As they were speaking, they saw Edith rushing across the barnyard waving her hat and shouting. She was more excited than Bob had ever seen her and had evidently been running for quite a distance, for she was so out of breath she could scarcely make herself understood. As she neared them, she exclaimed:

"The bees, Bob--they're swarming!"

"There, Bob, now you've a real job on your hands," laughed the banker. "If I weren't so afraid of them myself, I'd like to see you put them

into the hive."

"Well, I've never done it before, Mr. White," he replied, "but I think I can manage it."

"Perhaps you better take Tony along to help you," suggested his uncle.

"No, I'll take care of them myself, Uncle Joe," he replied, and started for the house to get his veil and smoker.

When he arrived at the apiary, much to his surprise, not one but three of the colonies had swarmed. One had left the hive and alighted on an apple tree nearby, the second was just getting ready to leave, and the third was hanging outside in a way that showed they would soon be on the wing.

Bob was so intent on his work that he was not aware that anyone was near him, until he heard a voice say:

"Won't you let me help you, Bob; I'm not afraid of being stung."

He looked up quickly, and there was Edith--her head concealed in a quickly constructed veil. She was wearing a white cotton blouse and she also had on a pair of kid gloves with the fingers cut off.

"Aren't you afraid you'll get stung, Edith," said Bob.

"I'm like yourself, Bob; I've never handled bees before, but I think they're the most interesting thing we have on the farm. I've been reading many books about them recently. Won't you let me help you?"

"Yes, if you're not afraid, I'd be glad to have you," he replied, "for there's going to be two more swarms soon."

They brushed off the swarm into a small box and carried it over to a new hive. As soon as the queen had entered, they left it there and went back to watch the second one.

They were just in time, for the swarm that filled the air was starting to settle and they, too, were soon gathered and put into a new hive. By this time the third one was out and they saw it was getting ready for a long flight, for it kept getting higher and higher, despite the racket they made, and started off. It flew for quite a distance before it settled on the limb of a shell-bark hickory tree in a field on the adjoining farm.

"Of all the places for them to pick out," said Bob, as he and Edith came up and saw where they had finally settled, "but nevertheless I'm not going to lose that swarm, if I can help it; though it's going to be pretty hard climbing that tree. Every time I climb a hickory tree, I think of Jim Black."

"Why, who was he?" asked Edith.

"Oh, he was the meanest man in the country. They say he'd wear out a pair of new overalls climbing a sell-bark hickory tree to get the wool out of a robin's nest," laughed Bob.

"He must have been pretty mean if he'd do that," said Edith.

After considerable work, Bob managed to get up over the rough jagged trunk and finally succeeded in cutting off the limb on which the bees were hanging. With the end of the limb in one hand, he worked his way back to the trunk and then gradually on down to the ground, where Edith took the limb from him. After putting the bees into a box they carried them back and put them into a new hive.

Shortly after the bees had arrived at the farm, Bob had purchased ten new sectional hives and a supply of ready-made combs to aid them in rapid honey-making. Much to his surprise he found two of these hives had been set up and had colonies working in them.

"I wonder when those hives got bees in them, Edith?" he inquired, surprised to see he had two more colonies than he knew about.

"That's a secret," she laughed.

"What do you mean--a secret?" he asked.

"Well, yesterday when you were in town two colonies swarmed and Aunt Bettie and I didn't know what to do with them, but Tony overheard us talking about it, and what do you suppose he did?"

"It looks as though he hived them," replied Bob.

"That's just what he did. He wouldn't put on a veil or gloves, either, but just went over to the limb, scraped them into a box, carried them over and put them in the hive. He even picked up the queen and held it up and showed it to me. I was afraid to get too close for fear I'd get stung, for I didn't have a veil on. He said he understands bees and that they never sting him."

"That's fine," said Bob. "I'd lost them if it hadn't been for Tony."

"Yes, I think they would probably have gotten away," said Edith, "so you'll have to thank Tony for saving them for you. I think your hives are too hot, Bob. The trees don't shade them from the afternoon sun. Why don't you design a concrete apiary, a sort of an umbrella, and keep them cooler, then they're not so apt to swarm. You could make it so it could be closed up in the winter, too, then you wouldn't need a cellar."

"I'll do that to-night," said Bob, "because we can't afford to lose any bees, they're too valuable this time of the year, just when the honey-making season's opening."

"I think, Bob," said Edith, on the way back to the house, "that the bees and the chickens are the most interesting things you have on the farm. I really believe I could manage both myself after a little while," she continued, smiling at him, as they walked along.

"I think myself you could, Edith," he added, looking full into her eyes in an understanding way, and then they both became suddenly silent and didn't speak again until they reached the house.

THE STORM

Joe Williams found that they had enough fence posts made to erect a section along his property fronting on the main road. That there might be no dispute about the line, he had a surveyor come out from the town to set stakes giving the dividing lines. In order that his neighbors would all be satisfied, he invited them over and showed them just where the stakes would come, referring to the original survey of the property in order to establish the monuments. When they were all satisfied that the lines were right, he had the monuments re-established by iron pipe put deep into the ground until such times as he could put in monuments of concrete.

The farm fronted on the main road for a distance of twelve hundred feet. There were now two entrances--the old main entrance at the lane on the west side of the farm, and the new road to the sand pit over the breast of the old dam, near the eastern border. There was a small corner of about an acre and a half between the new pond and the road--sort of triangular shape piece.

As soon as the holes were all dug, Bob got his sketch, showing the placing of the fence posts and the location of the two gates at the entrance to the property; also sketches for two extra large posts, one on each side of the driveway. These posts were ornamental and made specially strong by steel rods, not only to support the gates, but with two bolts placed near the top for attaching a sign, for it had been decided that there should be a sign, cast in concrete for permanency, and painted white with deep blue letters and border. The sign was to be fifteen inches high and twenty inches long and contain the words: "Brookside Farm, Joseph Williams, Proprietor."

Tony had made a set of forms for these posts, which were to be cast in place, though the other posts had all been pre-cast at the sand pit and were set up in the holes as they were dug. The old rail fence had been moved back and the fence row thoroughly grubbed out before the wire fence was strung. When the wire was finally put in place and the old rails hauled away, it gave a very neat appearance to the entrance of the farm.

Between this fence and the new ditch, and lying between the two entrances to the farm, was a field of about seven acres which they decided to plant in potatoes, as this field was the most fertile of all on the farm.

"What will we do with the little corner down by the pond, Bob?" asked his uncle that evening as they sat around the table for their daily conference.

"I've a suggestion to make for that," said his wife.

"Well, what is it, now?" asked her husband smiling.

"Build a little cottage there for Tony and Maria. When we get through with our concrete work, Tony can then make fence posts, apiaries and other standard concrete sections at the pit and we can sell them; besides, he can keep account of all the sand and gravel that is taken

away, and, of course, if he lives there, he'll always be on hand when we need him. You remember what John White said about other farmers putting up concrete buildings, and that each time they erected one we could sell them the materials. It will make Tony and Maria happy, and keep them where their services will be most available."

"That's a good idea, Bettie," said her husband. "How much would such a house cost?"

"I don't know, but I think we ought to make them comfortable in a house that would cost not much over \$1000 to \$1500. It should be of the bungalow type and will help to give our farm a very artistic look."

"What were you and Maria doing down around the pond the other day?" asked her husband, suddenly remembering that he saw them there.

"Oh, we were planting slips for willow trees. When they grow up, if we trim them, it will enhance the appearance very much."

"Oh, that was it?" added her husband, winking at Bob. "I saw the young willow trees, but didn't know who planted them."

"Now, you're only joking," said his wife. "You knew all the time what we were doing."

"Fine idea, although I must confess I didn't quite understand at first what it was, but I see now: we're not only going to have prosperity at Brookside, but beauty as well," and coming over to the side of the table where she was sitting, he kissed her.

"What are you and Ruth so busy at, Edith?" asked her uncle, looking across at them.

"We've so many bulletins, Uncle Joe, that I am indexing and filing them on a shelf, so we can get them just when we want them," said Edith. "You see, information, unless it's used, is of no value, and if we don't arrange our information so it's easily available when we need it, it will be of little service to us."

"I'm glad the old job's done," said Ruth, "for Edith has been making me write all the names and numbers in a book and it's been a terrible job, Uncle Joe--a good deal worse than running the concrete mixer."

At nine o'clock the family retired and had been in bed but a short time when a severe thunderstorm broke over Brookside Farm. Bob had seen many storms in his eighteen years, but never one so violent as the one which now burst in fury upon them. Peal after peal of thunder followed the bright flashes of lightning, as they struck all around them. The house fairly rocked on its foundations and the storm was so severe they all got up and dressed. Bob had never been frightened by a storm before, but as the heavy claps of thunder followed each other almost as fast as he could wink, he shivered a little at the thought of what would happen if the lightning should strike the house. The whole family assembled in the sitting room wondering what might happen. Bob walked over and stood beside Edith, who was looking out of a window. Involuntarily she leaned against him for protection, and he caught and held her trembling hand. They were standing thus looking out at the storm, when suddenly a brighter flash than any of the

others, followed immediately by a loud clap of thunder, almost stunned them. Edith swayed and would have fallen to the floor had Bob not caught her in his arms. Though stunned himself, he managed to keep her from falling, and had scarcely recovered from the shock, when as he looked out through the window he saw the barn was in flames.

"Our barn's been struck," he shouted, and they rushed to the window to look, and sure enough the barn was in flames.

Joe Williams reached for his hat to start out in the storm, but felt a detaining hand on his arm.

"Joe," said his wife quickly, "there's not an animal in the barn, and besides there's scarcely any hay or grain left, and what other things are there, certainly are not worth your risking your life. About the only thing you'll lose will be the harness and some small tools," and catching him firmly by the arms, as she felt him pull away, she continued:

"I'm not going to let you risk your life for those things. There are no other buildings near by that the fire can damage. The rain is coming down in torrents, and it will prevent the flames setting anything else on fire. Let's all go out on the porch and watch it burn," she added, and while the storm continued unabated, they huddled together at the end of the porch watching while the barn slowly burned to its foundations.

"For how much did you have it insured, Joe?" asked his wife, as the fire died down.

"Five hundred dollars," said her husband.

"Well, it's a loss, I know," she said, "but it's lucky it burned now instead of later in the season, when it would have been full of grain and implements. I'm glad we've been keeping the live stock in the fields lately."

"Well," said her husband, "there's no use of crying over spilled milk or burned barns, so I say we all go back to bed, for the fire's nearly out and this rain would soon put out any new place it might start up."

"I think it's perfectly splendid, Uncle Joe," said Ruth, now that the lightning had ceased flashing; "this will give Bob and me a chance to build you and Aunt Bettie a new barn."

"All right," said her uncle; "you'll probably have a chance now, Ruth, to show us what you can do with a real building."

Hay making soon arrived and now that the barn had been burned, it was necessary that the hay should be cut and stacked in the field to be brought to the new barn later. It was fortunate, indeed, that the implements did not arrive until the week following the destruction of the barn and that the ones already delivered had been in the wagon shed out of danger--consequently they were all saved.

[Illustration: THE SIDE DELIVERY RAKE FLUFFS UP THE HAY AND LETS THE SUN DO ITS WORK QUICKLY]

[Illustration: THE SELF-LOADER MAKES POSSIBLE THE QUICK STORAGE OF

PROPERLY CURED HAY AND SAVES TONS OF MAN-LIFTING POWER]

While Joe Williams was sorry to lose his barn, yet in a way he was glad, now that it was gone, for it had always been an eyesore, standing there between the house and the main road. While his wife, too, felt sorry for the loss, she was secretly happy that she could now carry out her plans and build a new house where the old barn had stood, giving it the prominence it should have. Her husband was sure this had been in her mind when they located the dairy house, for he saw it was in the right place to be a part of the group of buildings.

Ruth was in the hay field every day now, helping her uncle with the work. This work seemed to delight her more than anything she had found on the farm. She was very busy driving the hay rake one day when John White's runabout drove up into the barnyard. The banker, however, was not in the car. His nephew, Eddie Brown, and his chum, Herbert Potter, were the occupants. Bob, with Tony and four of the neighbors' boys, were putting the finishing touches on the cow barn and saw them coming. He was not particularly interested in them; they did not like farm work any more than he liked them, and their coming always annoyed him. He was evidently not to be bothered with their society, however, for they went into the house, and a few minutes later he saw them going over to the hay field, where Ruth and her uncle were working.

Bob was so busy with his work that he had practically forgotten them until he looked over and saw Edith at the apiary examining the bees. With her was Eddie Brown, and Bob smiled as he noticed that Eddie was standing at a safe distance from the hives.

It was perhaps a quarter of an hour later when Bob again looked over into the hay field and saw the two boys with pitchforks turning hay, in a portion of the field that was swampy and full of elderberry bushes. He was still watching them when he saw Eddie use his fork to strike at something in the air and a moment later his friend Herbert did the same thing. Then as he and his helpers watched, the boys seemed to be striking all around them with their pitchforks. Suddenly Eddie and Herbert fell to the ground and began to roll, and Bob saw his uncle stop the team, jump from the mower and rush over in their direction.

There was no further doubt in Bob's mind what was going on. As soon as his uncle had gotten near them, he took a bundle of hay and struck in all directions as he rushed in and got one of the boys by his legs and started to drag him out.

Ruth, not to be outdone by her uncle, stopped her horse and rushed back and grabbed Eddie Brown's legs and started to pull him away. She no sooner had hold of his legs than she snatched off her straw hat and began waving it frantically around in the air, then turned and rushed for the house as fast as she could go.

Bob looked to see what had become of Edith, and noticed her leaning against a tree near the apiary. Even at the distance he was from her, he could tell she was enjoying the situation as much as himself.

There was no question of what had happened. The boys had stirred up a nest of swamp bumble bees, and instead of running away from them had stopped to fight them. It suddenly occurred to Bob that his uncle liked these two boys about as much as he liked them himself, and he

figured it was perhaps for this reason his uncle had forgotten the existence of the bumble bees, that he doubtless located when he ran the mower over them. Perhaps it was also for this reason he would not let Ruth rake there, but instead set the boys at work with forks.

As he watched, Bob saw them all go down to the brook where his uncle dabbed wet clay on the stings and where a few minutes later Edith joined them and escorted them back to the house.

Ruth was so badly stung that she was ill and her aunt put her to bed at once. The boys sat on the porch for a while, the picture of distress, listening to Edith narrate the story of the fight. Both of Herbert's eyes were swollen tight shut and Eddie was able to see out of only one of his. After sitting restlessly on the porch for a half hour, they got into their car and started for home.

"What are you laughing at, Tony?" asked Bob, as they watched the car disappear down the lane.

"The boys no-a like-a da work, and-a the bees they no-a like-a da boys."

"I guess that's about right," said Bob; "we probably won't see them again for some time."

XX

GOOD ROADS

As the Fourth of July approached, John White, the banker, and Joe Williams, proprietor of Brookside Farm, held a number of conferences. It was finally decided to celebrate the Fourth with a picnic on the farm.

"I don't think we'll make it exactly a day of rest though," said the banker, "for I notice your wheat is just about ready for cutting, Joe. Why not use the tractor to draw your new binder instead of the team."

"I'll have to do that anyway, whether I want to or not," smiled Joe.

"How's that?" asked the banker.

"Well, we have two of the finest little Belgian colts you've ever seen," he replied.

"Indeed!" exclaimed the banker. "They will be worth money to you."

"Yes," said Joe Williams, "those colts will easily bring from \$150 to \$250 by next spring."

"Now, you can see why it pays to keep good stock, Joe," said the banker. "No farmer should waste feed on horses that weigh less than 1600 pounds--from that on up to 2000 pounds is the coming horse in this country. Look what a difference there is in their capacity for work and a large horse really eats little more than a small scrub."

After some discussion it was decided that the County Commissioners should be invited to the picnic, also a representative of the Portland Cement Association, to tell them about the making of concrete roads, and that Mr. Patterson, too, should be included in the invitation.

Shortly after moving to town, Bob's grandparents had gone for an extended visit to their relatives and had just returned to their new home a few days before the picnic, so on the morning of the Fourth, the first to arrive at Brookside were his grandparents. Bob was not only delighted to see them, but fully enjoyed their surprise at the changed appearance of the farm. Of course, the loss of the barn was one of the things that made the farm look different, but the neat wire fence, with its self-opening gates at the main road, the new buildings which were fast taking shape, and the replacing of the old pond with a field of fine growing corn, all helped to give the farm a changed look.

Bob's grandmother had evidently changed her mind regarding the son's trip to the poorhouse. Her rest from farm labor and the long visit among old friends had rekindled her interest in all things. She was as eager as a child and listened keenly as Bob took them from building to building and showed what had been done and explained the details and new devices; also the other buildings that were contemplated. His grandmother was delighted, most of all with the dairy and hen house.

"I tell you, Bob," she said, "you've certainly made the work light for a woman on this farm, and I'm glad now that Joe has been able to put in a modern farm equipment. I suppose the next thing you'll be doing will be to put up a new house and barn."

"Oh, yes, we've arranged that already, grandmother," said Bob. "You see, when the lightning struck the old barn we didn't have our plans made or anything, so after John White and Uncle Joe talked it over they decided to get Mr. Brady, the contractor, to help them out with the buildings. It would have been a pretty big job for Tony and me to get them all up this summer."

"You've really accomplished wonders already, Bob, with the dairy house, hen house and cow barn," said his grandmother.

"These are the contractor's tools and materials over here, grandma," said Bob; "he says he's going to have all the buildings finished by September first."

"Not the new house, Bob?"

"Well, it may take longer for that building, as the house will have to be plastered and painted, but he has agreed to have the barn up by the first of September and the house not later than the first of November. They're all going to be of concrete and fireproof, too, like our smaller buildings," he said proudly.

"They must be costing a good deal, Bob."

"Not so much, grandma; the contract price for the barn is \$2000 and the house \$4500."

[Illustration: THE ELECTRIC-DRIVEN LAUNDRY PERMITS THE WIFE TO KEEP

PACE WITH HER TRACTOR-DRIVING HUSBAND AND BANISHES BLUE MONDAYS]

"My, Bob, that's a terrible amount of money to spend for two buildings."

"Yes, but wait till you see all we're getting out of the farm this year, grandma. Now, come over and see the laundry we've fitted up in the old wash house. Of course, we'll have a real laundry in the new house, but this will give you some idea of what it will be like," he said, as he opened the door and showed her in. "This is the washing machine and wringer, and this is the mangle."

"Why, what's the mangle for?" she asked.

"Oh, that's the machine for ironing the clothes," answered Bob. "They all run by electricity, too. The waste water from the pond runs a turbine water wheel and that's connected by a belt to an electric generator, a machine for changing mechanical energy to electrical energy, you know; and all we need to do is to throw this switch over and the wheel starts turning down at the pond and we have current. Of course, at night we take the current from the storage batteries for lights, after we shut down the wheel, but these motors require too much current to use the batteries for them, economically."

"Why, do you have electric lights in the house, Bob?" she asked.

"Not in the house, grandma--only in the new buildings, and the laundry. We didn't think it would pay to put the lights in the house for only a few weeks in the summer, when we'll soon have our new house finished, but, of course, there'll be electric lights in the new house."

"Well, Bob, it's certainly wonderful the way things have changed in such a short time. I was admiring your bees as we came up the new drive. The white hives certainly look nice sitting over there under the green trees, and such a lot of white chickens, Bob. I never saw so many in one place in my life before. How many have you now?"

"Almost 1000, grandma," he replied proudly. "Edith mostly looks after them and the bees."

"What will you do with so many, Bob?"

"Oh, we'll sell a lot and keep some for laying. Just wait till you see our books next spring--you'll see how it pays."

At eleven o'clock the neighbors began to arrive in automobiles, buggies and wagons; each brought a full basket with them. Bob's aunt, Maria and the two girls were as busy as bees in the kitchen preparing coffee and lemonade, and Bob's nose detected the odor of fried chicken.

Joe Williams had taken the tractor and binder and gone to the wheat field and was busy cutting his wheat. As fast as the farmers arrived, they adjourned to the field to see the tractor work. As the wheat field was not far from the meadows, they all had a chance to see Bob's apiary, where Tony was busy hiving a colony of bees that had swarmed that morning.

At twelve o'clock Joe Williams stopped the tractor and came over to join his guests. Lunch was served under the trees surrounding the house. As soon as they were all assembled, the baskets were opened and Bob's aunt and the girls served the hot coffee, lemonade and fried chicken. When the dinner was finished, John White, who was accompanied by his wife, Mr. Patterson and a strange gentleman, arose and said:

"We have gathered here at Brookside Farm to renew old acquaintances and make new ones, and I know no better day on which to strike a blow for liberty from hard work than the day on which we celebrate our National Liberty.

"Before going into the details of how you may gain that liberty, we are going to sing 'America'; then after that we're going to sing a new song composed by one of the young ladies living here at Brookside Farm--Miss Edith Atwood. She has made copies of the words so you can all help sing it; you'll find the tune easy and perhaps familiar to some of you. Let's stand while we sing 'America'," and as they arose Tony stepped forward with his flute and led off with the tune.

"Wait! wait!" exclaimed the banker; "you're all free men, singing your National Hymn. Don't be afraid to sing out--there isn't a third of you singing. Now let's get together and ALL sing--sing like the free men we are and intend to remain. All ready!" and he led off with a fine baritone voice.

There was not a person there who did not sing his best and it was surprising how many good voices there were among them. When they had finished and seated themselves, Ruth passed around the copies of the new song. Much against her protest, she was wearing a dress to-day.

"Now we'll try the new song," said the banker, "but first we'll have Tony play the air through so that you may learn the tune. All ready--now let's have the song," and as Tony started the air again they sang:

OH, HAPPY, HAPPY FARMER (Tune, "Oh, Mother Dear Jerusalem") Oh, do you know the joy that comes from living on a farm, When you have power to do your work, and steam to keep you warm?

Oh, happy, happy farmer, his life is free from care--An auto in his garage, and good roads everywhere.

They sang it with a will--not once but three times.

"That's a good song," said the banker; "one with a sermon, and that's the kind that lasts. I hope you'll all remember it. I want to congratulate Miss Atwood on the happy thought so ably expressed by the song.

"Now I want to talk to you men for a few minutes. Some of you were here last spring when we made Joe Williams doubly happy while he was away getting married, by doing his spring plowing by power. You have seen his tractor working this morning in the wheat field, and you can all judge of the advantage of the use of power by the acreage he cut since morning. Most of you have also looked at the new concrete buildings that Joe Williams has erected here at Brookside, and you must all admit that they are well designed and well-built, permanent buildings. Of course, the cow barn is not quite finished, and the main barn and the house will not be finished until fall, but the work has

proceeded far enough so you can get a good idea of what it's going to mean to Joe Williams and his goodwife to have these conveniences to work with. Just look out into the barnyard there at that array of machinery; it looks almost like machinery hall at the State Fair, and I want to tell you men that there's not a piece of machinery in that whole lot that you should not have on your own farms, and you can get them just the same as Joe Williams got his, if you want them. It doesn't pay to work with poor tools, any more than it pays to get a half crop where you could get a full crop if you managed rightly. Good tools reduce labor and increase speed so that you can accomplish a great deal more with less work than with a poor outfit. Not one of you could drive by that new fence, with concrete posts, on the main road this morning, without realizing the permanent nature of it, and without wishing you had your own farm fenced in the same way.

"I don't suppose you men appreciate the fact that the wire fence on concrete posts costs only \$2 per rod, which is \$1 a rod less than a five-board-high fence with chestnut posts would cost. Did you ever stop to figure up how many actual hours you spend each year cleaning out your fence rows? Compare that time with the labor spent on producing potatoes and figure out how many more bushels you could have raised this year if you had spent that time looking after them rather than looking after your fences. Speaking of that, did you ever see a finer field of corn in your life than the old pond bottom is producing this year? Do you know that the corn there is already forty per cent. higher than the corn in the adjoining field, and that they are raising four stalks to the hill in that field instead of three in the other field--and that's a thirty-three per cent. increase right there.

"Here's a hen house that will easily accommodate five hundred laying hens. Do you ladies appreciate what that will mean to 'Aunt' Bettie Williams this winter, selling eggs when all your hens have quit laying? I want you ladies while you're here to talk with her; she'll be glad to tell you about her plans. If any of you ever saw a better dairy in your life, I'd like to have the address of it. You can see what it would mean to you to have such a dairy house of your own, and the whole thing, including the icehouse, cream separator, etc., only cost \$450. If you would like to get a similar equipment and didn't have a penny and had to borrow the cost from the First National Bank, and pay interest at the rate of six per cent, it would mean only \$27 a year, or the wool from four sheep. I want you all to see the herd of Holstein cows before you go away to-night. One cow alone is averaging twenty quarts per day from pasture land, which will mean nearly thirty quarts per day when they are stabled and the feeding can be regulated."

[Illustration: WELL-BUILT CONCRETE ROADS BRING THE MARKETS AND YOUR NEIGHBORS NEARER, INCREASE THE VALUE OF THE FARMS AND START AN EPIDEMIC OF NEW FENCES WITH CLEAN FENCE ROWS]

At the mention of this amount of milk, all the farmers looked at each other.

"How many cows does it take to give that much milk?" asked one of them.

"Just one," replied the banker, "and, besides this one, there are several others that give almost as much.

"While I wanted you to inspect the new buildings and see the cattle and machinery--that is not the main reason I asked you to come to Brookside to-day. We are fortunate to have with us Mr. Barth, of the Portland Cement Association, whom I have asked to speak to you briefly on the advantages of good roads."

"It has been a great pleasure for me to be permitted to be a part of this gathering here at Brookside Farm," said Mr. Barth, "particularly as the subject I have to discuss bears directly on the possibility of such gatherings."

"Good roads, my friends, like good manners, commend themselves wherever used. It is very noticeable along improved roads the tendency of the farmers to improve the appearance of their homes and other buildings. In fact, the presence of good roads seems many times to stimulate latent self-respect into practical expression. Social institutions, such as schools, churches and public amusements, are more or less dependent in the country upon road conditions. Think what it would mean to you to have a consolidated school where the more advanced grades and even high school subjects could be taught, a building containing an auditorium, where you could meet any season of the year. I have attended many concerts and even listened to grand opera singers, but I want to say right here I've never had my heart stirred by music before as it has been stirred here this afternoon. Think of the advantages to a community of being able to develop the talent displayed here--what it would mean to you people yourselves to be able to get together, especially in the winter, and sing. What a great benefit and uplift it would be in any community."

"Now, good roads make consolidated schools possible and give you these advantages."

"Take the benefits you now derive from rural free delivery of mail--the happiness and home comforts it has brought; nothing contributes so much to its efficiency and regularity as good roads."

"It is a matter of common observation that when any community has passed from a condition dominated by bad roads to a condition which is characterized by good roads, land values in that community advance. The cost of hauling farm produce to market is probably not so much increased by the grades as by the bad condition of the road surface. The trouble with unimproved earth roads is that they are muddy for many months in the year."

"Do you know that you can haul six times as much over a good concrete road surface as you can through average mud? Or putting it another way, for the same load hauled one mile in mud, you can go six miles over concrete."

"The Bureau of Statistics of the Department of Agriculture has collected much data that shows the waste of time and money by farmers using dirt roads."

"Why has Joe Williams put power all over Brookside Farm? I'll tell you: for the same reason that you men are going to put it on your farms next year--not because the work is made easier, but because it saves time--lets one man do easily the work of three or four. That's why. Do you want to spend six hours hauling a load from town to your farm, or from your farm to town, when you can do it in one hour?"

That's what they mean when they tell you about conserving man power. Good roads and only good roads will do that for you.

"Now, just a moment more and I am through. There are a number of different materials for the construction of road beds, but in the speaker's opinion none that will give the universal satisfaction of well-placed concrete. In your community, roads should not cost over \$1.75 to \$2 per square yard. One thing I would advise you not to do: don't make your roads too narrow. Remember the sides should have well-built shoulders, well graded away from the sides of the road bed. Don't use less than a width of twenty feet--you'll always be glad you had the foresight to make them wide enough. I thank you."

"The next three speakers," said the banker, "you all know; they are your County Commissioners. They are modest men, every one of them, and don't like to make speeches, so I have promised to let them off with just a short announcement. I believe Mr. Wilson has something to say to you."

"This has been the most pleasant day I have ever spent in our county, barring none," said the speaker, by way of introduction. "If any one had told me six months ago that we would have a farm within two miles of our county seat, fenced with wire and permanent concrete posts, with modern permanent fireproof buildings, all equipped with modern power-driven machines and owned by one of the happiest farmers I have ever had the pleasure of meeting, I should have been afraid that someone would have awakened me, for I would have been sure it was a dream. But right here on Brookside Farm are all these things, and I'm told that when Joe Williams gets through with his improvements, there will be even more than I have described. What's more, his books already show that he is making a handsome profit from his farm this year, and that, my friends, doesn't include the returns from his sand and gravel pit. It has been fortunate for him that he had this sand pit on his farm, but aside from that, the farm itself shows that it's going to pay a big return on the investment. Of course, the sand and gravel pit has helped him in getting his equipment quickly, and in that he has been fortunate. But the thing I want to say to you men is that the Commissioners are in hearty accord with the statements just made by Mr. Earth, regarding concrete roads. We feel that you are entitled to better roads, that the county will be greatly benefited by the building of these roads. Of course, the state will pay half the cost of these roads, the county one-fourth, but the balance of the cost will have to be borne by you. I know there is no one here who wants to spend six or even three hours in hauling a load the distance he ought to be able to haul it in one hour if the roads were in good shape. We're going to advertise for a bond issue for ten miles of new concrete roads, six miles of the road will be from the new railroad to town, going by this farm, and as soon as this is built we will extend this road and others leading out of the town. One of our principal reasons for selecting this particular road to start with is the fact that we need sand and gravel for the construction of all these roads, and, as a considerable portion of this sand and gravel will have to come from the Williams pit, it will save a great deal of cost in hauling by having good roads for the distribution of the material. I'd like to know if there's a man present who is not in favor of building these concrete roads. If there is, I'd like to have him stand up and tell us why he is against it."

After a moment's pause, during which he looked from one to the other,

Mr. Wilson continued:

"I'm glad to see it's unanimous, and that the Commissioners have your hearty support. There's just one other thing I'd like to say and that is that the First National Bank has agreed to subscribe for the bond issue and loan the county all the money we need to build these roads, and you'll have to thank John White and his 'Constructive Banking' idea for that. I'm sure you'll all be greatly benefited, as it will bring your farms much nearer the market."

"Three cheers for concrete roads," shouted Alex Wallace.

The cheers were given with great applause.

"That's fine," said John White as he arose, "but the improvement of the roads is only the beginning of the work we should do. Each man should plan to improve his own farm, and what's more each acre should be made to produce the maximum amount. First put on plenty of manure, second put on plenty of manure, and third put on plenty of manure--that's what makes the crops.

"Now, I have an announcement I want to make. I have made arrangements with the State Fair Commissioners to establish four prizes to be awarded each year at the Fair. The first prize is a grain prize of \$25, and goes to the farmer whose grain produces the largest yield per acre of ground planted. The second, a prize of \$25 to the farm that earns the biggest revenue during the year on the capital invested, the third is a prize of \$25 for you ladies and goes to the farm whose dairy earns the most money per cow, and the fourth is a prize of \$25 to the farm whose poultry earns the greatest amount per hen. There will be a set of rules governing all these prizes. No farm will be eligible to compete for any of them that has not a regular system of cost accounting and whose books cannot be examined and audited by a public auditor. All book accounts must run from March first of one year to March first of the succeeding year. I believe Mr. Barth has something further to say to you."

Mr. Barth arose and said:

"Gentlemen, I represent, as you know, the manufacturers of Portland cement, and I am authorized to say that the Association has also added a prize of \$25 to be awarded each year in this county to the farmer who uses the most concrete on his farm during the year--the County Commissioners to be the judges in each case."

Whereupon John White arose and continued:

"Now, before making a visit around the farm, I wish to call your attention to a couple of things I'd like you to be sure and see. First, take a look at the running water, especially the shower bath. You men have no idea how it freshens one up at the end of the day to take a shower. Why let the golfer alone enjoy all the good things when you need them more? You should all have running water and a shower. I also want to call to your attention that when the ditch was dug to put in this water system, the ground was so hard that it was blasted out with dynamite. If you will walk out to the orchard back of the smokehouse, and take a look at the field of oats, you will see a strip o>f oats more than a foot higher than the surrounding oats and eight feet wide running across the field--that will show you what dynamite

does to the land. I would like you to go to the edge of the field and take a look at those oats. Most of us think that dynamite is used for tearing things apart, but here is a case where it is building up the land and making it produce greater crops. You farmers who are going to exhibit oats at the State Fair this year better look out for your laurels, because I think Joe Williams has the prize winner right there on that piece of dynamited land."

The afternoon was spent in examining the buildings and new machinery, and looking over the plans for the new house and barn. Bob had almost lost his voice by the time the last of the farmers had gone explaining to them the details of the work.

There was not a prouder or happier boy in the state of Pennsylvania that night than Bob Williams, for he felt that Brookside Farm was destined to be a great success and he had been a part of the redemption of the old homestead.

They sat out on the porch in the twilight. While Tony played on his flute they sang many songs. They were surprised how much talent they had in their own family circle. Aunt Bettie and Edith both had good soprano voices and Ruth a fair contralto. Bob sang tenor and his uncle bass. It was Maria, though, that surprised them with a remarkable good mezzo-soprano.

They were all too happy to sleep, so they sang song after song until the clock struck eleven. Then they sang "The Happy Farmer" song again and went to bed. It had been a great day for Brookside Farm.

XXI

FILLING THE SILO

While Bob and Tony (helped out by the neighbors' boys who came to Brookside Farm to learn the handling of cement) carried on the building work, Mr. Brady, the contractor, made rapid strides with the construction of the house and barn.

Joe Williams looked after the crops with occasional help from Bob and Tony. Ruth, who found the greatest pleasure in the fields, deserted Bob and his concrete mixer entirely for her uncle's machinery. She soon learned to handle the big tractor and used it to cut the entire field of oats. After acquiring the knack of using a pitchfork, it was surprising the work she did and thrived on. She had one vanity, however--that of having her picture taken nearly every day in her farmerette clothes. Edith, who took these pictures, declared Ruth spent her nights thinking up some new poses for the next day's pictures. But they were a happy family, and many a summer evening, when they all seemed too tired to move, Tony's sudden appearance with his flute would start them all singing and cause them to forget their bodily fatigue.

"The corn in the back field looks as though it's about ready for the silo, Bob," said his uncle one morning, "and I think we had better arrange to start filling it to-morrow. It will give us a chance to try

out our new machinery. It's surprising how large the corn in the new bottom has grown--I never would have believed it myself without having actually seen it."

"Don't you think, Uncle Joe, we should leave a small section of the best of it standing, say three or four acres, for seed corn? We could get \$5 a bushel next spring for good seed corn, besides having our own. Then, too, we ought to have some to exhibit at the Fair. I don't think there'll be any corn like it in the county."

"That's so," said his uncle. "It would be well to do that. We could exhibit some on the stalks, too, and then people could see how fertile Brookside Farm is. I've arranged to put on four men and three teams to help us, Bob, because it will take seven to handle the outfit. It ought not to take us more than three days to do the work--that would mean fifty tons per day to haul and three horses on the binder."

So the next morning at seven o'clock the new corn binder was started in the bottom field and by the end of the third day the corn was all harvested, cut to three-quarter inch length and placed in the silo, without a break or delay.

"There's one advantage in having the right kind of machinery to do a job, Uncle Joe," said Bob admiringly; "you can cut the corn when it's just right. If we had let the corn stand a few days longer, it would not have been as good as it is now. We'll probably have the best ensilage that will be put up this year."

[Illustration: TRANSFERRING THE GREEN CORN CROP FROM FIELD TO SILO. NO FARMER DOING WINTER FEEDING CAN AFFORD TO BE WITHOUT A PROFIT-MAKING SILO]

"What rate do you think we should charge for the corn binder and ensilage cutter, Bob?" asked his uncle. "Some of the neighbors want to hire it."

"Why not use twenty acres as a basis and charge the same as we decided for the other tools,"

"That looks pretty high," said his uncle.

"No higher than it should be," replied Bob. "If we kept the machines ourselves, Uncle Joe, they would be in good shape for five years, but you know when you rent a machine out, they don't take care of it as we do, so I think we ought to charge one per cent. of the cost of the two machines per acre to each farmer who rents it."

"But if you rent it to five farmers in a season, Bob, we would pay for the machines in one year and still own the machines. Isn't that a pretty high price?" asked his uncle.

"But wouldn't the machines have done five years' rated work, Uncle Joe? Do you know anybody who is renting them cheaper?"

"It might be cheaper for some fellows to club together and get the machines," said his uncle.

"Well, then let them do it and in the meantime our machines won't be worn out," said Bob.

"All right," said his uncle; "Billie Waterson put up a silo and wants to borrow our machines."

"I'd make him agree to return them in good condition and pay for all repairs necessary," said Bob; "don't forget that."

"All right," said his uncle; "I think I'll let him have it on that basis."

As soon as the silo had been filled, the apple-picking was started. They had been in a quandary to know just how to get this crop harvested, as the trees were exceptionally full of well-developed apples. Tony finally solved the problem by saying he could send to Pittsburgh and get three or four Italian boys who would be willing to work for a dollar or two a day, so they were engaged. All the apples were carefully picked by hand and assorted in sizes, using a device designed by Tony, where the apples were allowed to roll slowly down a trough. As the apples dropped through the hole in the bottom of the grading trough, they rolled down other chutes to the waiting crates.

"I think we'll sell our apples this year, Bob, by the piece instead of by the bushel," said his aunt, after inspecting the first that were picked. "They look so fine I think we can easily get four to five cents each for them if they are put in nice cartons and each apple wrapped in paper. We can put our label on them and after we have marketed them for a year or two, people will write in for their supply. I know some firms in the mountains of Virginia who are doing that now and selling all they can raise. We can keep the first and second grade apples for sale and the third for our own use and for cider making. I think perhaps the three best sellers would be the Winesaps, Black Twigs and Albemarle Pippins. They look exceptionally fine. I don't think I ever saw nicer apples than ours."

When they had the apples all gathered, they found they had 500 bushels of first and second grade apples of the three varieties and 63 bushels of the third grade. Of these latter they kept 13 bushels for their own use, and after making ten barrels of cider, they offered the rest for sale in town, where they obtained 50 cents per bushel for them.

"It will be better, Joe, to sell them off at a cheap price rather than keep them and sort them all winter. Besides, we don't want to market any but the best under the name of the farm."

"We must hurry the work, Bob, on the root cellar to take care of our apples," said his aunt.

"All right, Aunt Bettie," he replied; "it's nearly finished."

A few days after the cider-making had been completed, the new milking machine arrived. The agent for the manufacturers sent a man to show Bob how to erect it. When the machine had been completed and tried out, they tested it out that night. Bob found he could milk his ten best cows in just a half hour, or half the time it had taken before to milk by hand.

Milking by power certainly was a great idea and the cows didn't seem to object at all to the change. Bob and his aunt were sure now that they had not made any miscalculations on designing the dairy barn for

a twenty-cow herd; they felt they would be able to take care of that number easily.

"Let's go hunting, Bob," said Ruth one morning at breakfast a few days later. "I'd like to shoot some real game."

"All right," said Bob, "but we've only one gun between us. You see, I don't own a gun and Uncle Joe has only one."

"Oh, that reminds me," said his uncle, "John White gave me a package yesterday to bring out for you and I was so busy I forgot and left it in the automobile last night. I guess it's still there," and he winked at Edith and Ruth across the table.

Bob got up and went to the barn and came back a few minutes later with a long package. When opened, he found, much to his delight, it contained a double-barreled hammerless shotgun. Tied to the gun was a card on which was written: "For my friend, Bob Williams, with best wishes, from John White."

"That was splendid of him to buy me a gun. I wonder why he did it," exclaimed Bob.

"Well, I guess he likes you, Bob," said his uncle, "and he feels you're helping to do a good work in the county, so he just bought it for you. It's the same gauge as mine, so you can use some of my shells, although he gave me two boxes of shells already loaded," and he handed over the shells to Bob. "And this is your belt," he said laughing, and he handed Bob a very fine belt of buff leather.

"We certainly can go hunting to-day, Ruth," said Bob, delighted with his new present, and as soon as the milking and chores were done, they set off back of the pond and through the woods, back of the "Old Round Top."

Bob had every confidence in Ruth's ability to shoot and did not fear an accident from her gun. While Ruth couldn't do many things, shooting was not one of them, for she had proven herself to be an expert shot on a number of occasions. When they reached the woods they separated and Bob went up the ravine while Ruth kept along the hillsides. They had not gone very far when a chicken hawk flew over the ravine just ahead of Bob and alighted on a tree. Here was an unexpected opportunity of making a good shot and bringing home a trophy worth while. So he took careful aim and fired, but the distance was either too great or the aim was bad, for the hawk flew away. He continued up the ravine until he came to a line fence which he followed up the hill and joined Ruth, neither one having had an opportunity of shooting at any other game.

"Too bad you missed him, Bob; he was such a fine-looking specimen."

"Did you see it, Ruth?"

"Yes, it ran alongside of me."

"What do you mean, it ran alongside of you?" asked Bob; "the last I saw of it, it was flying."

"Flying!" exclaimed Ruth. "Why it ran along the ground just like a dog

and had a big red bushy tail. I was sitting on a stump taking a rest when you fired. It came sneaking up the hill toward me, all the while watching you. It came up so close I could have put my hand out and touched it. It stopped right in, front of me for a minute or two and then ran off up over the ridge."

"What are you talking about Ruth?" asked Bob. "The thing I shot at was a hawk and it flew through the air. It didn't run along the ground at all."

"Oh," said Ruth, "what I saw must have been a fox, and, Bob, it stood just in front of me for a minute or two before it turned and went away."

"If that's so why didn't you shoot it?" demanded Bob.

"I was too excited. I never thought about shooting it."

"Well, you lost an opportunity of a lifetime. You'll probably never get a chance to get a fox as easy as that again."

"Please don't tell the folks at the house, Bob, that I had the buck fever--they'd never get through teasing me if they knew I'd let such a chance go by."

They hunted all the rest of the morning, but got only three grey squirrels, of which Ruth shot two.

A few days later, as Ruth was crossing the oat stubbles, she saw a small black and white animal skipping along through the stubbles just ahead of her. Thinking it was a kitten that had strayed from the house, she rushed after it and was almost ready to pick it up when she suddenly changed her mind and started for the house as fast as she could go.

The dinner bell had rung and as Ruth came around the side of the house, her aunt and Edith, who were sitting on the porch, shouted in unison: "Go 'way! Go 'way! Go out to the barn. Where've you been?"

"I tried to pick up a kitten out in the oat stubbles," confessed Ruth.

"Well, I guess you did, all right," said her aunt. "Wait until Edith gets you some clothes and then go out to the old icehouse and change them. Leave the clothes you have on out there, because you'll never be able to wear them again."

Ruth, who had been trying hard to control her feelings, now broke into sobs, for she had only one farmerette suit and this meant the loss of it.

"It was such an innocent-looking kitten, too," she said.

"Innocent nothing," said her uncle, who came in from the barn just then. "Don't you know a skunk when you see one?"

"No, I didn't, but I will next time," confessed Ruth. Edith then appeared with the necessary garments and took them to the icehouse where she left them and where Ruth later went and made the change. That afternoon she was particularly depressed, for she had to wear a

dress instead of her favorite breeches, which seemed to depress her more and more as the afternoon wore on. She gladly welcomed the appearance of Eddie Brown and Herbert Potter, who drove out to see the girls and to tell them they were about to leave to go to school.

Bob was now working on a new piggery, which he and Tony had well under way. The pens were to accommodate thirty pigs, and were built so they could be extended from time to time, as they might decide. In addition to the pen, they were constructing a large feeding floor, and now that work on the main barn had been completed, Mr. Brady was pushing the work on the new house, which was progressing rapidly. Bob was sorry it was necessary to build this house so quickly, as he would have liked to work out all the details for it, but he had to be satisfied with the development of the plan, which he and his Aunt Bettie worked out after a great many conferences.

The house was to face the south and have a long porch running the full width of the front with a return on the west end. The south front was to face the flower garden and the west front would connect with the drive, while the back of the house would open into the general barnyard.

They planned to build the woodshed and laundry between the new house and the dairy, with a heating system and the fuel in the cellar. This would prevent the cellar of the main house becoming too warm for storage purposes. They had also decided to build the new machinery house to take care of the implements with a good-size tool shed adjoining--also a garage large enough to accommodate an automobile and two motor trucks and an oil house at one end. They were also at work on fifty concrete apiaries for the protection of the bees. The septic tank was being built by Mr. Brady in connection with the house, but the root cellar, corn crib, manure pit and the sheep barn were yet to be completed by Bob and Tony; but the plans for them had already been worked out.

It had also been decided that they should build a sixty-foot greenhouse for the growing of cucumbers and other vegetables under glass, which they would try out that winter--also a half dozen cold frames and a small mushroom cellar.

The work on the piggery was to include a hog-dipping vat, a platform and scalding vat. A garbage burner had been installed at the rear of the dairy not far from the woodshed.

The plans for the house included a cistern for the collection of rain water in the cellar under the laundry. After these had been planned, they decided that the old brick smokehouse was in a bad location and too far away from the house. So this was abandoned and a new smokehouse added in the rear of the dairy buildings.

In order to get all the work completed, they had found it necessary to let Mr. Brady build Tony's bungalow also, although they would much have preferred to do this work themselves.

They found that even with this help, they would have to let a number of things go over until the next year--among them a bridge to carry the lane over the new ditch, and some ornamental concrete work in connection with the garden.

They could work much faster now than formerly, as many of the neighbors' boys were available for a few days at a time, and even though the fall weather was upon them, they hoped to get all their concrete work done before the December snows.

XXII

THE FAIR

The State Fair, an event that had long been anticipated at Brookside Farm, was scheduled to be held on September tenth that year. The summer was not more than half over before Joe Williams decided that he had, if any thing, a little better crops and stock than any other man in the county; in fact, he was beginning to "feel his oats," as the saying went, and wanted to show his neighbors just how good a farmer he really was, so he took a great deal of pride in getting his products ready to exhibit.

First he decided to enter his team of Belgian mares and their two handsome young colts; then his majesty, King Pontiac, the head of the Holstein herd, and four of his best Holstein cows; then he selected two handsome Holstein bulls and two heifer calves; two Berkshire sows, one with a litter of ten fine pigs, together with two young Berkshire shoats; then Jerry, the Southdown ram, and the best two Southdown ewes and two good lambs; two breeding pens of white Leghorns and two of white Plymouth rocks were then selected; also the best cock and hen and the best cockerel and pullet, together with a dozen eggs laid by each breed. Then he picked out two bushels of the finest corn that had been raised in the bottom land and two bushels of oats and a dozen each of the three varieties of apples, and two bushels of potatoes. Then Bob selected two pounds of his best comb honey and Aunt Bettie and the girls picked out five dozen of their choice jellies and jams, and on the opening day of the fair this exhibition was taken to the fair grounds.

All work on the buildings was stopped and a number of neighbor boys were engaged to help to take the exhibit to town.

All the cattle had been carefully groomed for several weeks in advance and were in fine shape for exhibition purposes, and attracted a great deal of attention.

When the awards had been made, Joe Williams found he had won first prize in every class he had exhibited and in a number he had also carried off second prizes and sweepstakes, while Bob won first prize with his honey and Aunt Bettie five first prizes and four second prizes on her jellies and jams.

As soon as the exhibits were in place, Joe Williams went from one exhibit to another and fastened white cards printed in dark blue letters, containing the following words: "Grown on Brookside Farm, Joseph Williams, Proprietor."

"Say, Bob," said Alex Wallace, "if your Uncle Joe had won a few prizes more there would not have been any left for the rest of us."

"Oh, I don't know," said Bob, "there were lots of other prizes awarded besides those Uncle Joe got. How many did you win?"

"We got first and second on our Jersey cattle and first on our Clydesdale mare and colt, but your Uncle Joe cleaned up all the prizes on the grain."

"Well, next year perhaps you can win them."

"We're going to try for them all right. Father says Joe Williams needn't think he can come back here from the West and annex the State Fair. If he wins next year, he'll have to go some. We bought a tractor to-day, Bob."

"That's fine, Alex. When are you going to start your silo?"

"Oh, pretty soon," he replied as he left Bob.

Thursday was the big day of the Fair, and Bob, as a special reward for his services, was permitted to go to the Fair each day; in fact, much of the care of the stock depended on him, although he was unable to stay in town overnight as he would have liked on account of taking care of the milking.

Whom should he meet early Thursday morning, as he was coming from milking his cows that were on exhibition, but his father.

"Why, hello, Bob. I was just looking for you. My, how you have grown. I'd scarcely have known you."

"How-do-you-do, dad; how'd you like to have a drink of good fresh milk? 'Grown on Brookside Farm, Joseph Williams, Proprietor,'" he laughed.

"Fine," said his father, whereupon Bob handed him a glass of rich milk.

"Not as good as Gurney's, but pretty good at that," remarked his father. "I've heard about the prizes you and your Uncle Joe have won and couldn't help but come in and look you over, even, though I'm very busy and it was hard to get away."

"How did you leave mother and the rest of the family?" was Bob's next inquiry.

"Oh, they're all well, Bob. Your mother was sorry she couldn't come with me, but it was hard for her to get away. How do you like farming?"

"Oh, I like farming very much and I want to be a farmer. You know, there are lots of interesting things to do on a farm, dad."

"By the way, I met a friend of yours, Bob--John White, of the First National Bank. He was telling me all about the things you've been doing on the old place. He says you even have a name for it."

"Why, yes; didn't you see it on the exhibits? We're going to sell everything under a trade name, just like thread and other things that

have names."

"How much do you weigh now, Bob?"

"I weight 137 pounds; that is 27 pounds more than when I went to the farm, and I'm two inches taller."

"I should say you have been growing, Bob. Has your Uncle Joe paid you yet for your year's work?"

"No, he hasn't; but he will when he gets 'round to it. You see, he hasn't sold his crops yet."

"How much do you think he will give you, Bob?"

"I don't know, but I think he'll be fair. Aunt Bettie will see to that, if he should forget it himself. If you come along with me, I'll show you how many prize winners we have," and he proudly took his father from one exhibit to another, all the time telling him of the permanent improvements they were making on the farm.

"You must come out to the farm to-night and see the place. You have no idea what it looks like with the old barn gone and nearly all the concrete buildings up. You can see the big silo ever so far away. Of course, the biggest change is the taking away of the pond. Just look at that corn standing there--that's what we got out of the old pond where you taught me to swim. We got over 10 tons per acre of ensilage, after leaving several hundred bushels from the field from which to select our seed. You can see for yourself what fine-looking corn it is. Just look at those big ears there, and all that fifteen acres raised before was muskrats and turtles."

"You're right, Bob, it was a 'Hidden Treasure'."

After the speed trials were over Bob milked his cows again, and with his father drove out to Brookside Farm.

"My, it certainly doesn't look like the old place, Bob," his father remarked, when they came in sight of the farm. "What a fine fence; are those stone posts, Bob?"

"No, dad, they're concrete, but will last just as long as stone."

Bob now stopped the car to give his father time to see all the changes.

"Why, the sawmill's gone too, Bob."

"Yes," he replied, "we'll drive down that way and go in at the lower gate."

It was hard for Bob's father to understand the reason for all the buildings and what conditions had made them different sizes and shapes.

He did not know until Bob explained to him that each building required special designing to suit certain conditions.

That night they sang the "Happy Farmer" song for him, and his father

sat up long after the others had retired, talking to his brother Joe.

On the way home from the Fair on Friday afternoon, the animals from Brookside Farm fell in behind those of the Wallace Farm. Alex Wallace was looking after their flock of Merino sheep, in which there was an old buck, and had with him their Scotch collie dog "Don." Bob was looking after his flock of Southdown sheep, which he had driven close behind Alex, so the boys could talk to each other back and forth as they went along.

After a while Alex got tired turning his head around to hear what Bob had to say, for the noise of the clattering feet of the sheep on the concrete road made it difficult for him to hear, so he left his dog "Don" between the two flocks and came back and joined Bob.

They proceeded thus for about a quarter of a mile when suddenly Jerry, the Southdown buck of Bob's flock, started forward and all the others followed, so that the two flocks became merged into one. As Bob rushed forward to separate them, the two bucks stepped up to each other and placed their heads together, when Alex, seeing Bob trying to separate them, shouted:

"That's right, Bob, take your big fellow away or mine will kill him."

The remark angered Bob, whereupon he ceased his efforts and said:

"Well, if you think that little runt of yours can kill ours, I guess we had better let them fight it out." "All right," said Alex; "I'm satisfied."

So the two boys stood still while the two bucks placed their heads together, then stepped slowly backwards until they were on opposite sides of the road, where they stood looking at each other. The ewes crowded back and left an open space between them and stood as intently interested as the boys, waiting the coming battle.

After the bucks had paused for a moment, they lowered their heads and rushed at each other. Now, it must be remembered that a Southdown buck stands very much higher than one of the Merino breed, which is rather short in the legs and set close to the ground. Also that the Southdown had been used to associating with sheep of his own size; consequently when he lowered his head to strike, he did not take into account that the Merino was so much lower than himself. This gave the Merino the advantage, and, instead of the Merino striking his adversary on the hard skull as the latter expected he would do, he struck him on the point of the nose, breaking Jerry's neck.

Both boys were horrified to see Bob's prize-winning buck lying dead in the road, and while they looked at him speechless, Tony, who was coming along behind with some of the cattle, rushed forward and quickly turned him into mutton, while Bob with a heavy heart went on to the farm with the others.

It was not necessary for Bob to explain the fight to his uncle, who came along the road shortly behind him and to whom Tony explained the accident.

"It's all right, Bob," said his uncle, as he drove up into the barnyard. "I know just how you felt when Alex Wallace challenged you

to let them fight, and while I'm sorry Jerry is dead, still I think if I had been there myself, I would have taken up his dare, just as you did. You know Brookside Farm has a reputation to maintain, and, while I don't believe in quarreling, still this was a case where I think you were justified in letting them scrap it out. At any rate, we've had such a profitable year at Brookside, I guess we can afford to charge Jerry to the profit and loss account. He has not been exactly a gross loss. Tony has turned him into mutton, and, as soon as I get the cattle stowed away, I'm going back for him."

As soon as the Fair was over and all returned to the farm, they started in to dig their potatoes. Joe Williams expected a good yield from the field, but he was surprised when he found that from the seven acres he obtained 1400 bushels, which was considerably more than he thought was possible. To lessen the work, a potato plow was used to dig them, and they were graded by machinery in the field.

The new concrete root cellar had been completed just a few days before and the potatoes were taken there and put into bins.

"Do you know what I think, Uncle Joe?" said Bob one evening at supper, after the potatoes had all been gathered.

"What have you thought of now?" asked his uncle laughing, for since his crop had turned out so well and he had won so many prizes at the Fair, Joe Williams was very happy.

"I think if we would take our seven-acre potato field and put in an overhead sprinkler system, and put plenty of manure on it next year, we could increase the yield from 1400 bushels to 4200 bushels."

"How could it be possible to get that many potatoes out of seven acres of ground, Bob?" asked his uncle incredulously.

"Well, I've been reading of a farm in New Jersey where they do that, and they got \$960 per acre for the potatoes, which were only one of three crops raised on the ground the same year."

"If that's so, Bob, why wouldn't it pay to plant the whole farm in potatoes?"

"Well, maybe it would, Uncle Joe, at least several of the fields. The story of the farm I was reading about said they put on one hundred tons of manure, worth \$2.50 per ton, on each acre of ground."

"What!" said his uncle; "\$250 worth of manure on each acre. That wouldn't be possible."

"Well, that's what the paper said--plenty of water and plenty of manure, and the crops take care of themselves."

"That's right, Joe," said his wife. "Bob showed me the same article. The farm averaged over \$2000 per acre and I think it would be a good idea to buy the outfit next year, Joe. The same as our growing of vegetables under glass. I'm very much interested in growing vegetables out of season--there isn't much work to do in winter and we can easily take care of them, and in that way we may find we could make more money on less ground than by doing general farming."

"Well, it's worth looking into," said her husband. "All of our things so far have panned out pretty good and I'm not willing to pass up anything now without giving it a thorough investigation. By the way, Bettie, don't you think we ought to put an orchard on 'Old Round Top?' That's one field we can't very well plow."

"What had you thought of planting, Joe?"

"I thought peaches would be a good crop there--peaches ought to do well on the south slope."

"Well, you know a peach orchard doesn't live very long and it's rather a fickle crop," she replied.

"I tell you what I was thinking of, Uncle Joe," said Bob.

"What's that?" asked his uncle.

"Planting it with peaches with black walnut trees in between."

"What do you want with black walnuts?" asked Bob's uncle.

"Well, when the trees are grown, you have the walnuts, and when the trees get older black walnut timber, which is very valuable. A hill such as Round Top that isn't much good for anything else, would raise good black walnut timber. Of course, you'd have to dynamite the holes good and deep where you put the trees, so they'd have no trouble getting good roots. Once they were well started, I don't think there'd be any trouble with them."

"I hadn't thought of that, Bob," said his uncle, "but I guess we had better look into it. By the time the peach trees were dead, the walnut trees would have a good start. How many trees will it take to plant it?"

"I figure if we took the whole twelve acres, it would require twelve hundred peach trees," said Bob.

"But that would be a good many peach trees to take care of, Uncle Joe."

"Yes, but we won't be building any concrete buildings by the time they begin bearing, so why not plant it all in peach trees with the black walnuts in between, as you say?"

"I'll have Edith write to a grower to-night, if you wish, Joe, and find what the peaches will cost," said his wife.

"How about the black walnuts?" asked Bob. "Shall we plant the trees or nuts?"

"I think we had better plant nuts and let them grow themselves. We can stick a lot of them between the peach trees and, of course, the peach trees will be dead long before the walnuts get to be any size."

Much to the regret of every one, two days later Ruth and Edith said good-by to Brookside Farm and went back to their New England homes. They had intended to stay a few weeks longer, but a telegram from Edith's father saying her mother had been taken suddenly ill and

needed her, caused them to decide that they should return at once. When Bob came back from an inspection trip with John White and the County Commissioners over the new concrete road, they had packed their trunks and were ready to leave for the afternoon train. He drove the girls and their Aunt Bettie to town in the car and was particularly depressed when he said good-by at the station--somehow or other they had become part of the life at Brookside Farm, and now that they were going he began to realize how much he would miss them. Even the good-natured Ruth, in her impetuous way and ability to get into trouble, had added much to the life on the farm. Edith was very quiet all the way to the station, and Bob could not tell whether it was worrying over the possible illness of her mother or her disappointment in having to return so soon, or maybe, as he hoped, it was for another reason she was silent--at any rate, she had little to say to him as he bid her good-by, but just before she ascended the steps of the train, when, for a second, they looked full into each others' eyes, he seemed to feel that perhaps he was right in attributing it to that reason.

So the girls went on their way and Bob went back to work.

XXIII

CHRISTMAS AT BROOKSIDE FARM

One evening a few days before Thanksgiving, shortly after they had moved into the new house, Bob sat before the open fire talking with his aunt and uncle, when the latter said:

"Bob, it's just a little over nine months since you came to live with us and turned our farm upside down, digging after 'Hidden Treasure.' Do you remember the Sunday we let the water out of the old pond?"

"Yes, I do, Uncle Joe."

"Do you remember the conversation you and I had that day?"

"I haven't forgotten that either, Uncle Joe," said Bob with a smile.

"Well, it's getting around kind of close to payday, don't you think, Bob?"

"Oh, I don't need any money, Uncle Joe. I received \$250 for my honey this fall, and I haven't spent very much yet."

"That's no reason why you should not be paid just the same. You've done your work. I don't know what you feel you've earned, but what would you say if I gave you \$540--that's at the rate of \$60 per month with board."

"Do you mean to pay me in money, Uncle Joe?"

"Of course, in money. I don't suppose you want to take it out in sand and gravel, do you?"

"No, Uncle Joe, of course not; but do you think I've earned that much

money, Uncle Joe?"

"Yes, and more, but that's as much as I feel I can pay you, and if you stay with us another year, and we prosper as well as we did this year, what do you say to calling it \$75 per month with board?"

"That'll be splendid, Uncle Joe, and I'll be perfectly satisfied."

"All right," said his uncle, "then it's a bargain, and here's your check for the money," and he handed him a check already made out and drawn to his order for \$540.

"Thank you, Uncle Joe," said Bob, looking first at the check and then at his aunt and uncle in turn. "I hope you both feel I've earned it all."

"Oh, yes, you've earned it all right, Bob; don't worry about that," said his uncle.

"If I were you," said his aunt, "I'd stop in at Bush & Company, tailors, and have a couple of nice suits of clothes made--a specially good one for Sunday and another one for general dress-up wear. You should have a new overcoat, too, and some other nice things. You're nineteen years old now, Bob, and you've been working pretty hard this summer, and not paying much attention to your clothes. We'll like you just as well in your old clothes as we will in the new ones, but while you're a farmer, that's no reason why you should not have some good clothes, the same as other boys. You know, Brookside Farm has established a reputation, and while I don't believe in wasting money on clothes, I think we should all be dressed comfortably and be neat."

"All right, Aunt Bettie, I'll be going to town to-morrow and I'll take care of it."

Time flew quickly at Brookside Farm, while they hurried to finish their concrete buildings and get their new fences up before the ground froze up solidly.

After this was done, Joe Williams fixed up a lot of wire racks to take care of his seed corn, and carefully winnowed out his prize oats for good fertile seed. The chickens, too, claimed considerable of their combined attention.

Now that Edith had gone they both began to realize how much help she had been in her quiet way and the many things she had done while there. Bob kept hoping she might be able to return the coming year, although the letters she wrote gave him no encouragement to hope.

"Merry Christmas, Bob," called his aunt, as he came in from doing his chores on Christmas morning, and she handed him a handsome gold watch and chain.

"Merry Christmas, Aunt Bettie," he replied. "Who is this from?"

"That's from your Uncle Joe and me," said his aunt, "and a Merry Christmas I think it should be, for I heard your uncle say yesterday that you finished the last foot of wire fence and that all the concrete work was done, except some garden furniture."

"It has certainly been a busy year for you, Bob," continued his aunt; "when I think of all that has been accomplished, it seems almost inconceivable how we changed the old place in such a short time, and how much more comfortable we are now than when I first came to the farm in April. Do you know, Bob, one of the nicest buildings we have on the farm is Tony's little cottage down by the pond. I am never tired of looking at it."

"It is a handsome building, Aunt Bettie, down there under those big elm trees," said Bob, "and with the pond back of it, it has a very homelike appearance."

"What are you planning to do this winter, Bob, now that the concrete work is practically all done?" she asked.

"Well, I was thinking, Aunt Bettie, now that Brookside has shown its earning capacity, that we might get the pipe ready for the overhead irrigation system in the field over by the main road, and build a pump house down near the pond. The more I read and think of intensive cultivating, the more I believe there's a lot of money can be made by this method. Of course, if we don't want to raise potatoes, we could easily raise celery or other vegetables, and you know we can get four crops a year off the ground instead of one, if we plant it right, and fertilize it heavy enough."

"We'll do no work to-day, Bob, for this is a holiday, so we'll just have a good time. Did you get your new clothes from the tailor?"

"Yes, I got them last night. Maybe I'll dress up to-day just to see how they look," he added, smiling back at her.

"Why are we having such a large table for Christmas dinner, Aunt Bettie?" he asked a little later in the morning, as he passed through the dining room and saw the table extended to an unusual size.

"I didn't know but some one might drop in for dinner on Christmas," said his aunt evasively.

"Why, is there some one coming, Aunt Bettie?" he asked.

"You just wait and see," spoke up his uncle, who came into the room.

"All right," said Bob; "I guess I'll have to wait."

"That reminds me," said his uncle, winking at his wife. "I forgot something in town that I was to bring out. John White asked me to stop around at the bank, so I'll have to go back--guess I'll have time to get in and back again before dinner."

"We won't have dinner to-day until 12:30, Joe," said his wife, "so if you start now you ought to be back easily by that time," she added smiling.

When the new house at Brookside was planned, a small room had been built on the first floor to--be used as a sort of an office. In this room a flat-top desk with drawers had been placed and a bookcase to contain all their bulletins and other information had been built at one end in a convenient place. The set of books containing the cost accounting system of the farm was kept in this desk. In this room Bob

also kept a small draughting board and his instruments. At odd times he sketched new buildings and other things for the improvement of the farm. He now went to this room and began work again on the designs of some garden furniture, which they were planning to place on the sloping ground in front of the house the following spring. He was busy at work when his attention was attracted by the sound of an automobile coming up the driveway. He looked out of the window as the car flashed past; he recognized some of the faces, and rushed out to the porch to greet them.

There was something very unfamiliar about the car as it came up the driveway. As it drew near he saw the reason, for instead of the Ford his uncle had taken to town, he was now sitting in a new seven-passenger Buick. In the front seat, with his uncle, sat Bob's father, and in the back seat was his mother, with his grandmother and grandfather on either side of her.

Bob had rushed out bare headed to greet them. He kissed his mother and grandmother and shook hands with the others.

"Well, what do you think of your Aunt Bettie's Christmas gift, Bob?" asked his uncle, as they got back on the porch and turned around to look at the new car.

"What do you mean, Aunt Bettie's Christmas gift?" he asked.

"The new car," said his uncle.

"Is that her car, Uncle Joe?"

"Yes, I just bought it for her--that's her Christmas gift. Isn't it a dandy?"

"Whee! It surely is," said Bob. "Does she know yet that you bought it?"

"No, that's a surprise that's coming to her," and they both ran into the dining room where she was busy with the dinner, to escort her out to inspect the car.

Bob had never seen his aunt so happy as when she inspected the car and his uncle insisted upon her getting into the seat, as he explained to her the operation of the levers. Her eyes were bright with joy when she got out of the car a moment later and went back to her dinner and her guests.

"It was very kind of you, Joe, to remember me in this way," and her eyes were suspiciously wet. "I feel more than repaid for all the work I have done to help you build up Brookside Farm."

Christmas Day at Brookside was an event long to be remembered, for not only had Bob the pleasure of explaining to his mother and father the work they had been doing all summer and telling them of their plans for the coming year, but during the afternoon a large auto truck arrived at the house and unloaded a fine piano and victrola, the latter with a dozen well-selected records.

His aunt couldn't believe her eyes when this second Christmas present arrived. The only satisfaction she could get from her husband was that

he and John White had talked it over and decided that they needed some music at Brookside to brighten their evenings. After supper that night, his Aunt Bettie sat down at the piano and began to play.

It was only a few minutes before they were all gathered around the piano singing. Naturally, the first song was Edith's "Happy Farmer"; they were just in the midst of the song when the door opened and in walked Tony and Maria. After a few minutes' interruption, they started singing again--Tony and his wife joining in with the others.

Once the singing started there was no stopping them and for several hours they sang song after song. It was really the first time since Brookside Farm had become a reality, that they had a chance to let each other know just how happy they felt, as they gave vent to their feelings in song.

"I'm only sorry," said Bob's aunt, "that my own father and mother couldn't have lived to see the happiness and joy that has come to us. This has been the happiest Christmas Day I have ever spent."

"Bob!" called his uncle. "Come here a minute. I almost forgot to give you something. Here's a letter that John White asked me to deliver to you."

Bob took the letter, read it and then re-read it, his face a puzzle.

What is it? "asked his uncle smiling.

"I don't know," said Bob; "it's a peculiar kind of a letter, and I don't understand it at all."

"Let me see it," asked his father, and Bob handed him the letter.

After looking at it a moment, he read aloud:

"This is to certify that we have this day bought the sixty acres of land adjoining Brookside Farm, on the east, for the sum of Eighteen Hundred Dollars (\$1800), to be held in trust for Robert Williams, and to be turned over to him whenever he wishes to take possession. The sum of \$1800, the purchase price, to be paid to the First National Bank at his convenience and draw six per cent. interest until paid. The first payment of One Hundred Dollars (\$100) on account, is hereby acknowledged. (Signed), The First National Bank, John White, President."

"What does it mean, Uncle Joe?" asked Bob, looking at his uncle, who was smiling across at him.

"Well, it simply means this, Bob: John White wanted to make sure when you got ready to buy a farm that there'd be one waiting for you. He persuaded Bruce Wallace to sell him his sixty acres adjoining Brookside on the east. He said he wanted you to have the land next to Brookside. That was the only piece that had the proper exposure and good water; besides this, he pointed out that the water from our pond runs through this also, and that there is a place there where you can have a pond of your own, if you want it."

"What about the \$100 on account, Uncle Joe?" asked Bob.

"Oh," laughed his uncle, "that's your Christmas gift from John White."

Bob was silent while he tried to realize the full purport of the letter. Then he suddenly said:

"I've no money to buy a farm, Uncle Joe."

"He doesn't say that you have to take it up right away, or that you have to pay for it by any particular time. You see, Bob, since the new concrete road has been built, farms are soon going to advance in price and he wanted you to have the advantage of buying yours at the original price. He feels you are largely responsible for the improvements that have been made in this section and that you should benefit by them."

"I guess we'll have to sing Edith's 'Happy Farmer' song again," said Bob's aunt, as she seated herself at the piano and struck up the familiar air, in which they all joined with a will.

XXIV

COST ACCOUNTING

Shortly after Christmas, Tony came to Joe Williams and explained that his brother, who was then visiting them, would like to stay at Brookside and work. As Tony had given eminent satisfaction, and his brother seemed to be a capable young man, he was engaged to look after the dairy.

In February Bob had taken two weeks off. He had gone to visit his father and mother. When he returned he found that many important events had occurred at Brookside Farm.

"Who do you think is here?" asked his uncle, as Bob came into the sitting room.

"I don't know," said Bob; "unless it's Edith back again."

"I believe you're pretty fond of Edith," said his uncle, eyeing him suspiciously; "seems to me you two were together a good deal last summer, come to think of it."

"Well, isn't she a nice girl, Uncle Joe?" "She certainly is a fine girl, Bob, and I'm sorry to disappoint you, but it isn't Edith this time--it's Joseph Williams, Jr.," said his uncle proudly, "three days old to-day."

"You don't mean it, Uncle Joe," exclaimed Bob.

"Yes, sir, Bob; twelve pounds on the scale, and every inch a farmer. We've produced some prize winners at Brookside Farm, Bob, but this one heads the list."

"That's splendid, Uncle Joe. May I see him?"

"As soon as we get warm, Bob. I wouldn't go into the room until you've had a chance to warm up some."

A few minutes later Bob was conducted to his aunt's room and there was not only allowed to see, but to hold in his arms, the heir of Brookside Farm.

"My, but he's little," said Bob.

"Little!" exclaimed his uncle. "Why, he's a bouncing big boy."

"Well, maybe it's the clothes that make him look so small."

"Don't tell us that," said his uncle, "for we know better."

"That's what you told me when I first came to the farm," laughed Bob.

"That's right. I remember now you did look small, Bob, but you've grown a lot since then."

"Guess he'll grow too, Uncle Joe. Everything seems to grow fast on Brookside."

Then the baby asserted himself.

"My, what a good pair of lungs he has, Uncle Joe," said Bob.

"Just see what nice black hair he has, too," smiled his Aunt Bettie.

"I tell you what," said Bob, after a moment's thought, "they'll have to go some to get ahead of Brookside Farm."

"This isn't the only thing that has happened since you left," said his uncle. "You ought to go down to Tony's cottage and see what's been doing there."

"What?" asked Bob.

"Oh, they have the finest little black-haired two-day-old girl you ever saw," said his aunt.

"You don't mean it," said Bob.

"Tony's so excited," said his uncle, "that he forgets everything you ask him to do."

"Well, this is certainly fine news," said Bob. "I don't suppose I dare go down and see her."

"I think I'd wait a day or two if I were you, Bob, before going down."

Bob and his uncle now retired to the sitting room and were talking over the events that had happened while he was away, when Alex Wallace dropped in to see them.

"How's the new boy, Joe?" asked Alex.

"He's fine, Alex--greatest prize winner at Brookside Farm."

"Where have you been, Bob?" asked Alex.

"I've been visiting my father and mother," said Bob.

"I came over to see about the ice, Joe," said Alex. "I suppose, since you've made the improvements at Brookside, we can't go down to the pond and help ourselves any more."

"You had better talk that over with Bob," said his uncle, as the baby began to cry and he left them to see what was happening to it.

"That's right," said Bob; "we pay for everything we get and charge for everything that goes off the farm."

"You don't mean you're going to charge for ice!" exclaimed Alex almost incredulously.

"Well, why not?" said Bob. "It's worth something, isn't it? The pond cost us money and occupies ground that could be used for other purposes."

"That's so," said Alex. "I hadn't thought of that."

"The pond has to pay rent for the ground, and ice is one of the things it produces."

"What does ice bring this winter?" asked Alex.

"Fifty cents per ton on the water," said Bob, "and you cut it yourself."

"How can you tell how much it takes to make a ton?" asked Alex.

"Oh, that's easy," said Bob. "You measure the size of the cakes, and, when you know the thickness, you can refer to a schedule in one of the bulletins and that will tell you exactly how much it weighs."

"Well, I don't think my father will be willing to pay for ice," said Alex.

"Why not?" said Bob. "It's worth something."

"Yes, but nobody charges for ice," said Alex.

"Well, of course, if you know of any one who has nice ice to give away, that's the place to get it," said Bob, "but if you want ice from Brookside, you better let us know soon, because three or four people are asking for the full cutting of the pond, and, of course, we want to fill our own icehouse first, and after that--first come, first served."

"You had better hold it for us, Bob, until I find out."

"You'll have to make up your mind whether you want it or not; there's the telephone--call up your father and see what he says."

After a few minutes talk with his father, Alex came out of the office and said:

"We'll take it, Bob. Put us down for the first cutting after you get your own off. I think it will take a full cutting of the entire pond to fill our icehouse. There's another thing I was going to ask you about, too. Could we have Tony a while to help us with some concrete work?"

"What are you going to build, Alex?" asked Bob.

"Oh, we want to make some concrete fence posts, and fence in our property. Since father sold the sixty-acre farm to the First National Bank we thought we'd improve the remaining hundred and forty by putting up a wire fence on concrete posts."

"You'd have to put up a shed and get some moulds and all that sort of thing," said Bob. "Why not let us sell you posts?"

"Will you sell us some?" asked Alex.

"Surely," said Bob. "Tony has been making a lot of fence posts this winter. We're going to make a regular business."

"How much will they cost us?" asked Alex.

"Seventy-five cents at the pit and you can haul them yourselves."

"I'll speak to father about it and see what he says. He rather thought, though, we'd make them ourselves."

"Just as you like," said Bob. "The posts will cost you less if you make them yourselves and you'll have the advantage, when the shed is once up, you can make all kinds of things."

"I think that's what we'd rather do. I'd like to work in cement myself. I think it must be very interesting, and I'd like to get father started so we can get some concrete buildings like Brookside Farm. You haven't any idea, Bob, how nice your buildings look from over at the turn of the road."

"Oh, yes, I do. I often stop when I'm coming out from town to take a look from that point."

"How long do you want Tony?" asked Bob.

"We'd like to have him two or three weeks," said Alex.

"That will be all right--we can let him go."

The next few weeks Bob spent sharpening up their tools, oiling the machines and touching up the paint on those that showed wear. As soon as this was completed, he began making fifty additional concrete apiaries. The bees had paid so well the previous year that he decided to increase their number to one hundred colonies. Another thing that caused him to arrive at this decision was a letter from Edith, a few days before, saying she had her mother's permission to return to Brookside in the early spring and that she would again spend the summer with them.

"Do you know what day this is, Bob?" asked his uncle a few weeks later, as they sat down to breakfast.

"It's Thursday, Uncle Joe," said Bob.

"Yes, Thursday, March first, and it will be just one year to-morrow since you came to Brookside Farm. Your Aunt Bettie and I've been talking it over and we've decided we should take our inventory to-day and balance our books to-night, and see how much we've made or lost during the year," he added smiling. "Bettie thinks it's better to take inventory on March first instead of April first, so that all the labor that goes on the spring plowing may be charged in the new year. As soon as we have our breakfast, Bob, we'll go to the barn and take a careful inventory of all the grain, live stock, poultry and other products."

It took them until four o'clock in the afternoon to make the inventory, which was then laid aside until after supper, when they would figure out the amount and compare the results with the previous year.

They had just sat down to supper when the door of the dining room was suddenly opened and there stood Ruth and Edith, cheeks aglow and eyes sparkling.

"Where in the world did you girls come from?" asked their aunt, who was the first to see them.

"Oh, we came in on the afternoon train," laughed Ruth, "and we got Henry Smith to drive us out. We wanted to surprise you."

"Well, you certainly have," said their uncle, as they all crowded around to welcome them back to Brookside Farm.

"Where's your new farmhand, Aunt Bettie?" asked Ruth. "I want to see him."

Her aunt looked puzzled for a moment and then said:

"He's around somewhere if you'd like to see him, but why are you so anxious to see him, Ruth? He's Tony's brother, you know."

"Oh, I mean Joseph Williams, Jr.," exclaimed Ruth excitedly.

"Oh, he's asleep upstairs," said her aunt; "you may see him directly, but you must have something to eat first."

Their wraps were soon removed. A few minutes later happenings on Brookside Farm were intermingled with happenings in New England, as they asked and answered each others' questions.

After supper was over and while the girls were inspecting the new baby, Bob and his uncle sat in the office and figured out the inventory. Bob was just completing the written statement of the account, when his aunt and the two girls came into the office.

"Have you the inventory finished yet?" asked his aunt.

"Just finished," he said, laying down the sheet.

"Then we're just in time," said Edith, "for that's why we planned to

reach here to-day; we wanted to know the result of the year's work, and I'm sure it must be a good report."

INVENTORY

ITEM	APRIL 15, 1916	MARCH 1, 1917
Farm, 125 acres.....	\$6,000.00	\$6,000.00
New Buildings.....	20,000.00	
Cows:		
10 head @ \$175	1,750.00	1,500.00
8 head @ \$60	480.00	
Heifers, 5 head @ \$50.....	250.00	
Bulls:		
1 head @ \$350	350.00	350.00
1 head @ \$75	75.00	
Calves, 4 head @ \$10.....	40.00	
Horses:		
2 head @ \$350	700.00	600.00
2 head @ \$200	400.00	
Colts, 2 head @ \$200.....	400.00	
Hogs:		
5 head @ \$40	200.00	150.00
6 head @ \$30	180.00	
8 head @ \$25	200.00	
1 head @ \$75	75.00	
Sheep, 12 head @ \$20.....	240.00	240.00
Chickens	50.00	550.00
Machinery and Tools.....	125.00	5,000.00
Automobile.....	440.00	1,400.00
Feed and Supplies.....	300.00	566.00
Growing Crops (Labor and Seed).....	80.00	150.00
Cash.....	110.00	3,725.00
Bills Receivable.....	75.00	1,275.00
Seed on Hand.....	600.00	
Ice	60.00	
Wood	200.00	
Total Resources.....	\$11,520.00	\$43,366.00
Mortgage and Bills Payable.....	6,000.00	31,500.00
Net Worth.....	\$5,620.00	\$11,866.00
Gain for the Year.....	6,246.00	
	\$11,866.00	\$11,866.00

Her aunt picked up the sheet and read it over carefully and said:

"The farm shows a gross earning of \$12,420 for the new year, and after paying the interest on the mortgage and loans of \$1860; \$2000 for wages and \$2214 for new furniture, piano, victrola and new automobile, a total of \$6074, it still leaves a balance \$6346, as a net gain, and that without counting the earnings from the sand pit. Our new buildings and fencing cost us \$20,000, and our new machinery and tools \$5000. The farm shows a profit of \$124 per acre for the ground under cultivation. If we do as well this coming year as we did last year, we ought to have the farm free and clear, but, of course, we won't have to depend on that as we have the earnings from the sand pit to help out, if we want to use it for that purpose, but instead of paying off the mortgage in full, I think we will irrigate the seven acres along the main road and put that field under intensive cultivation."

"We ought to do a great deal better next year, Uncle Joe," said Bob, "as we won't have the buildings to bother with and I can devote all my time to the work; then we ought to be able to do a great deal more work, too, on account of the saving of time, due to having modern buildings and all our power installed, which we didn't have for the full season last year."

They studied the inventory for some minutes, comparing the gross earnings per acre of one crop with another, and were very much surprised to find that in many cases crops they had previously thought to be quite profitable showed up in the schedule rather poorly by comparison with others.

"Why, the oats seem to have earned only \$21 per acre, while the corn shows an earning of \$44 per acre--more than twice as much as the oats," said Edith.

"You know, Edith," said her uncle, "that after the oats were taken off we pastured sixty pigs in the oat stubble for the balance of the summer. Of course, that must be credited up to the oat field, because the crop made it possible to raise the rape and afford a good pasture for them."

"Oh, I hadn't thought of that," said Edith.

"The apples paid well," said Ruth; "almost \$140 per acre, and we were just starting our new system of selling by mail."

"Of course, last year we had an exceptionally nice crop," said their aunt, "which was partly due, no doubt, to Bob's bees, and I think some credit should be given to the dynamiting of the land. Next year I'm sure we can sell every apple raised at a good price."

"Did we make \$430 out of pigs last year?" asked Ruth, looking at the hog account.

"That's what we did," laughed her uncle.

"I had no idea so much money could be made raising pigs."

"Well, that's probably due to two reasons," said her uncle; "first, we started with a good breed, and, second, we took good care of them. You see we use a well-lighted and ventilated piggery and were able to average two litters in the year, which, of course, is just twice as good as raising one. Then we were fortunate in having good litters. We raised eight pigs per litter, which is beyond the average."

"Of course, Uncle Joe, Brookside Farm is no 'average' farm, and we ought to do better than average farming," she said.

"Yes, Ruth, but it takes work and study to do that and the information that is in the bulletins must be transferred into our heads if we're going to work successfully."

Hearing his wife chuckle, Williams looked up and said:

"Well, now, Bettie, what are you laughing at?"

"I was just thinking of our conference a year ago when we made up our first inventory. _I_ was the school teacher then, but I've evidently lost my position, for you are now the teacher of modern methods, Joe," said his wife.

"And why not? Haven't you a job now that's big enough for any woman, looking after that son of ours?"

"Well, I guess that will take some of my time, Joe," she laughed, "but just the same I'm pleased to know you're so interested in scientific investigation."

"The potatoes paid \$170 per acre," said Edith, "which is the highest rate per acre of all."

"The wheat averaged well, too," said Joe Williams, "a little over \$41 per acre. I'm sorry we didn't have a larger acreage in hay--this statement shows an earning of over \$50 per acre."

"That's so," said Bob, "but the dairy has earned a larger amount than any of the rest, for after deducting all expenses it shows a clear profit of \$2954."

"The poultry made a good showing, too, I want you to observe," said Edith; "\$1373 isn't bad for a flock of chickens, I'd have you know, and remember, we were only making our start last year. One person could handle 1000 hens just as easily as 500, and the profit would be relatively larger. I'm sure the poultry will beat the dairy this coming year."

"But look at Bob's 'Hidden Treasure' here," smiled Joe Williams; "\$400 worth of ice off that little pond, and to think we allowed the neighbors to take away all they wanted for nothing in previous years."

"Speaking of 'Hidden Treasure,' don't forget the \$300 we got for cord wood from the old rail fences, Uncle Joe," said Bob.

"They've all made a good showing," said his aunt, "and I think next year we can make the farm average \$150 per acre or better."

"It certainly is a good report," said Bob, "and I think we all should be very happy that our combined efforts have produced such fine results."

"By the way, Bob," said his uncle, "when I settled with you last November, I paid you up to only November first, so here's a check for \$225 for your wages to date. I figured it out at the new rate rather than the old one. Hereafter, I'll give you a check on the first day of each month."

Bob took the check and looked at it. Then he discovered that he had not one check, but two.

"Why, who is this other check for, Uncle Joe?" he asked, handing back the second one.

"That's for you, too, Bob."

"You don't owe me this money, Uncle Joe," he said, looking at the

check.

"Yes, I do, Bob. Do you remember the day we let the water out of the pond?"

"But we took that into account when you paid me in November."

"Oh, no, Bob, I didn't. I just paid you for your actual work then, not for any ideas you furnished. This is for the suggestions you furnished. It was you who suggested the draining of the pond and the selling of the sand and gravel--and more than that, you saved me several thousand dollars by advising me not to sell the sand pit to Brady when I needed a little money so badly. Now, I'm paying you what I think is yours by right."

"I couldn't think of taking any money from you for that kind of work, Uncle Joe," persisted Bob.

"Your Aunt Bettie, John White and I have talked it over, Bob, and we felt that one-third of the money earned by the sand pit should be paid to you. Our records show that after paying Duncan Wallace and a few other charges, the pit has earned a little over \$9000, and one-third of this, or your share, is \$3000, so you must take the check for that amount, Bob."

"Why, that would more than pay for the sixty acres John White is holding in trust for me," said Bob, realizing for the first time what so much money actually meant.

"Of course," laughed his uncle, "that's why he bought it. He and I talked this matter over before Christmas and we decided that that was the best way to arrange it. All you need to do now is to deposit this check and draw one in favor of the First National Bank for \$1700 plus the interest, and then you can put up a sign on the sixty acres of land adjoining Brookside, 'Robert Williams, Proprietor.' I have a suggestion to make to you, Bob," continued his uncle, after they had discussed the acquiring of the new farm for some time; "I think, now that the buildings are all up, we could handle your sixty acres along with Brookside for a year or two until you get ready to take the farm over for yourself," and his eyes shifted from Bob to Edith, and back to Bob again, as he talked.

"I think that would be a good arrangement, Uncle, Joe; we could use the land for pasturing, if we couldn't plant it all."

"Let's go into the living room," said Ruth, "and have some music. Have you seen Aunt Bettie's new piano yet, Edith?"

"No, I haven't," said Edith.

"Oh, you must see it, Edith, and play it, too," and they adjourned to the living room and gathered around the piano, where for an hour or more they gave expression to their joyful feelings in music.

"I tell you," said Joe Williams, as they sang the "Happy Farmer" song, "there's nothing like music to give anyone vent for their feelings. I didn't list the piano in our assets, but I really think it's one of the best we have on the farm, because it helps to bring us together and keep us happy."

"May I play the victrola a while, Aunt Bettie?" asked Ruth.

"If you want to," said her aunt.

"How much did you say the poultry brought us last year?" asked Edith suddenly, as Ruth began playing.

"I don't exactly remember," said Bob, "but it's in the book in the office."

"Let's go and take a look at it," she said, and they left the others and adjourned to the office.

Edith sat down in the chair at the desk. Bob opened the book at the poultry account, and, sitting on the arm of the chair, their heads close together, they began studying the figures.

"I think it's perfectly splendid," said Edith, "the showing the poultry made last year, and you know, Bob, we had a rather bad start in the spring on account of not having the buildings erected."

"That was your good work, Edith," he said, letting his arm fall lightly across her shoulders.

"I was never so happy as last summer here on the farm and I could scarcely wait until I came back again this spring, Bob," she said, looking up at him.

Bob was silent for a few moments, and then suddenly asked:

"Do you like the country well enough, Edith, to be willing to stay here always, and be Mrs. Robert Williams?"

After a short silence, Edith looked at him shyly and said:

"Yes, Bob, I would," nestling close to him. "I don't know any place where I could be happier than here and I've never met anyone with whom I could be happier than with you."

"I've loved you ever since I first met you, Edith," he declared, "and I'm sure we'll be very happy together," and Bob leaned over and kissed the inviting upturned lips.

"Oh! Uncle Joe, just come here and see what's going on in your office," shouted Ruth. "Bob's kissing Edith."

"Have you been spying on them, Ruth?" remonstrated her aunt.

"Spying on them, Aunt Bettie? How could I be spying on them when they left the door wide open and the lights turned on? I couldn't help but see them when I looked in."

At Ruth's interruption, Bob and Edith had jumped up from the desk and stood blushing in the doorway leading from the office to the living room. Suddenly Bob took her hand and together they stepped out into the room before the others.

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