THE YOUNG ENGINEERS

TED AND THE TELEPHONE

FOLLOW TED'S ADVENTURE DISCOVERING HOW TELEPHONES BROUGHT PEOPLE CLOSER ACROSS GREAT DISTANCES

SARA WARE BASSETT

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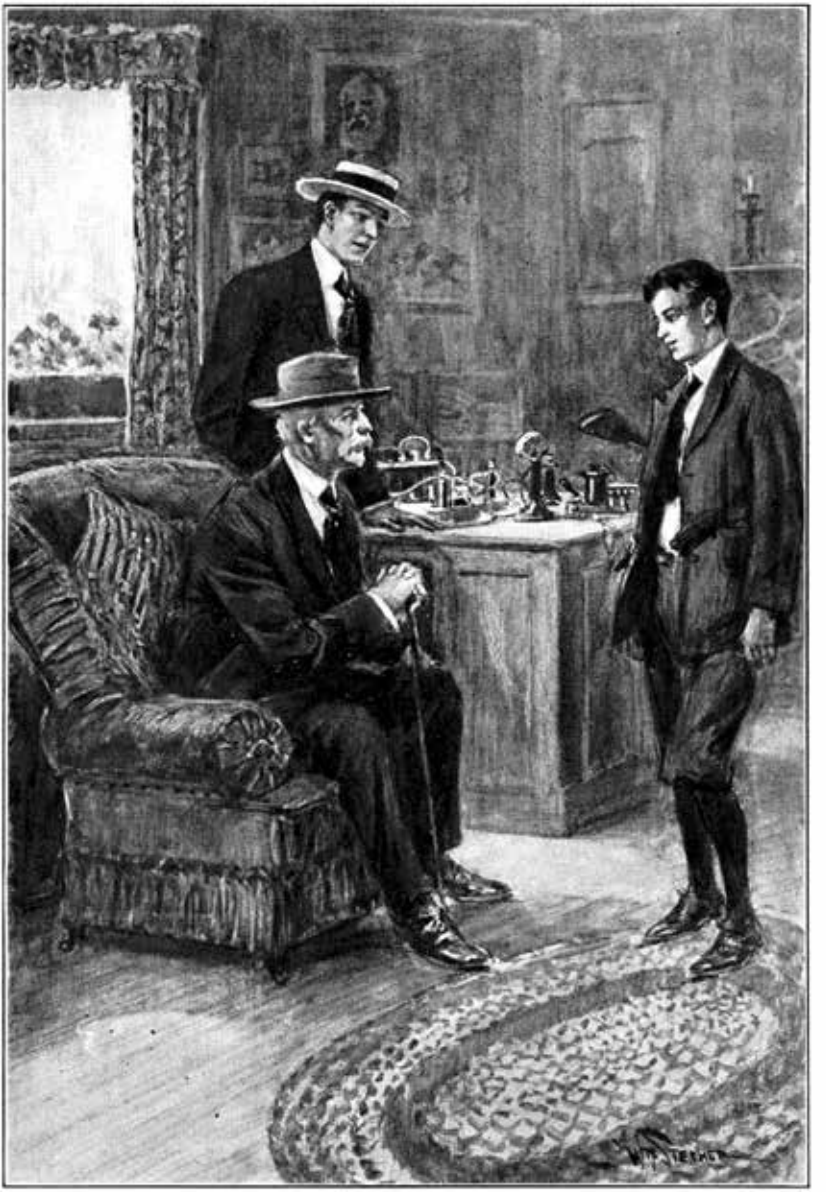
Ted and the Telephone

by

Sara Ware Bassett



"Would you like to go to college if you could?" persisted the elder man

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EDWIN T. HOLMES
WHO PLAYED A PART IN THE WONDERFUL
TELEPHONE STORY, THIS
BOOK IS AFFECTIONATELY INSCRIBED.
S. W. B.

CHAPTER I

AN UNHERALDED CHAMPION

Ted Turner lived at Freeman's Falls, a sleepy little town on the bank of a small New Hampshire river. There were cotton mills in the town; in fact, had there not been probably no town would have existed. The mills had not been attracted to the town; the town had arisen because of the mills. The river was responsible for the whole thing, for its swift current and foaming cascades had brought the mills, and the mills in turn had brought the village.

Ted's father was a shipping clerk in one of the factories and his two older sisters were employed there also. Some day Ted himself expected to enter the great brick buildings, as the boys of the town usually did, and work his way up. Perhaps in time he might become a superintendent or even one of the firm. Who could tell? Such miracles did happen. Not that Ted Turner preferred a life in the cotton mills to any other career. Not at all. Deep down in his soul he detested the humming, panting, noisy place with its clatter of wheels, its monotonous piecework, and its limited horizon. But what choice had he? The mills were there and the only alternative before him. It was the mills or nothing, for people seldom came to live at Freeman's Falls if they did not intend to enter the factories of Fernald and Company. It was Fernald and Company that had led his father

to sell the tumble-down farm in Vermont and move with his family to New Hampshire.

"There is no money in farming," announced he, after the death of Ted's mother. "Suppose we pull up stakes and go to some mill town where we can all find work."

And therefore, without consideration for personal preferences, they had looked up mill towns and eventually settled on Freeman's Falls, not because they particularly liked its location but because labor was needed there. A very sad decision it was for Ted who had passionately loved the old farm on which he had been born, the half-blind gray horse, the few hens, and the lean Jersey cattle that his father asserted ate more than they were worth. To be cooped up in a manufacturing center after having had acres of open country to roam over was not an altogether joyous prospect. Would there be any chestnut, walnut, or apple trees at Freeman's Falls, he wondered.

Alas, the question was soon answered. Within the village there were almost no trees at all except a few sickly elms and maples whose foliage was pale for want of sunshine and grimy with smoke. In fact, there was not much of anything in the town save the long dingy factories that bordered the river; the group of cheap and gaudy shops on the main street; and rows upon rows of wooden houses, all identical in design, walling in the highway. It was not a spot where green things flourished. There was not room for anything to grow and if there had been the soot from the towering chimneys would soon have settled upon any venturesome leaf or flower and quickly shrivelled it beneath a cloak of cinders. Even the river was coated with a scum of oil and refuse that poured from the waste pipes of the factories into the stream and washed up along the shores which might otherwise have been fair and verdant.

Of course, if one could get far enough away there was beauty in plenty for in the outlying country stretched vistas of splendid pines, fields lush with ferns and flowers, and the unsullied span of the river, where in all its mountain-born purity it rushed gaily down toward the village. Here, well distant from the manufacturing atmosphere, were the homes of the Fernalds who owned the mills, the great estates of Mr. Lawrence Fernald and Mr. Clarence Fernald who every day rolled to their offices in giant limousines. Everybody in Freeman's Falls knew them by sight,—the big boss, as he was called, and his married son; and everybody thought how lucky they were to own the mills and take the money instead of doing the work. At least, that was what gossip said they did.

Unquestionably it was much nicer to live at Aldercliffe, the stately colonial mansion of Mr. Lawrence Fernald; or at Pine Lea, the home of Mr. Clarence Fernald, where sweeping lawns, bright awnings, gardens, conservatories, and flashing fountains made a wonderland of the place. Troupes of laughing guests seemed always to be going and coming at both houses and there were horses and motor-cars, tennis courts, a golf course, and canoes and launches moored at the edge of the river. Freeman's Falls was a very stupid spot when contrasted with all this jollity. It must be far pleasanter, too, when winter came to hurry off to New York for the holidays or to Florida or California, as Mr. Clarence Fernald frequently did.

With money enough to do whatever one pleased, how could a person help being happy? And yet there were those who declared that both Mr. Lawrence and Mr. Clarence Fernald would have bartered their fortunes to have had the crippled heir to the Fernald millions strong like other boys. Occasionally Ted had caught a glimpse of this Laurie Fernald, a fourteen-year-old

lad with thin, colorless face and eyes that were haunting with sadness. In the village he passed as "the poor little chap" or as "poor Master Laurie" and the employees always doffed their caps to him because they pitied him. Whether one liked Mr. Fernald or Mr. Clarence or did not, every one united in being sorry for Mr. Laurie. Perhaps the invalid realized this; at any rate, he never failed to return the greetings accorded him with a smile so gentle and sweet that it became a pleasure in the day of whomsoever received it.

It was said at the factories that the reason the Fernalds went to New York and Florida and California was because of Mr. Laurie; that was the reason, too, why so many celebrated doctors kept coming to Pine Lea, and why both Mr. Fernald and Mr. Clarence were often so sharp and unreasonable. In fact, almost everything the Fernalds did or did not do, said or did not say, could be traced back to Mr. Laurie. From the moment the boy was born—nay, long before—both Mr. Lawrence Fernald for whom he was named, and his father, Mr. Clarence Fernald, had planned how he should inherit the great mills and carry on the business they had founded. For years they had talked and talked of what should happen when Mr. Laurie grew up. And then had come the sudden and terrible illness, and after weeks of anxiety everybody realized that if Mr. Laurie lived he would be fortunate, and that he would never be able to carry on any business at all.

In what hushed tones the townspeople talked of the tragedy and how they speculated on what the Fernalds would do *now*. And how surprised the superintendent of one of the mills (who, by the way, had six husky boys of his own) had been to have Mr. Lawrence Fernald bridle with rage when he said he was sorry for him. A proud old man was Mr. Fernald, senior. He did not

fancy being pitied, as his employees soon found out. Possibly Mr. Clarence Fernald did not like it any better but whether he did or not he at least had the courtesy not to show his feelings.

Thus the years had passed and Mr. Laurie had grown from childhood to boyhood. He could now ride about in a motor-car if lifted into it; but he could still walk very little, although specialists had not given up hope that perhaps in time he might be able to do so. There was a rumor that he was strapped into a steel jacket which he was forced to wear continually, and the mill hands commented on its probable discomfort and wondered how the boy could always keep so even-tempered. For it was unavoidable that the large force of servants from Aldercliffe and Pine Lea should neighbor back and forth with the townsfolk and in this way many a tale of Mr. Laurie's rare disposition reached the village. And even had not these stories been rife, anybody could easily have guessed the patience and sweetness of Mr. Laurie's nature from his smile.

Among the employees of Fernald and Company he was popularly known as the Little Master and between him and them there existed a friendliness which neither his father nor his grandfather had ever been able to call out. The difference was that for Mr. Lawrence Fernald the men did only what they were paid to do; for Mr. Clarence they did fully what they were paid to do; and for Mr. Laurie they would gladly have done what they were paid to do and a great deal more.

"The poor lad!" they murmured one to another. "The poor little chap!"

Of course it followed that no one envied Mr. Laurie his wealth. How could they? One might perhaps envy Mr. Fernald, senior, or Mr. Clarence; but never Mr. Laurie even though the Fernald fortune and all the houses and gardens, with their

miles of acreage, as well as the vast cotton mills would one day be his. Even Ted Turner, poor as he was, and having only the prospect of the factories ahead of him, never thought of wishing to exchange his lot in life for that of Mr. Laurie. He would rather toil for Fernald and Company to his dying day than be this weak, dependent creature who was compelled to be carried about by those stronger than himself.

Nevertheless, in spite of this, there were intervals when Ted did wish he might exchange houses with Mr. Laurie. Not that Ted Turner coveted the big colonial mansion, or its fountains, its pergolas, its wide lawns; but he did love gardens, flowers, trees, and sky, and of these he had very little. He was, to be sure, fortunate in living on the outskirts of the village where he had more green and blue than did most of the mill workers. Still, it was not like Vermont and the unfenced miles of country to which he had been accustomed. A small tenement in Freeman's Falls, even though it had steam heat and running water, was in his opinion a poor substitute for all that had been left behind.

But Ted's father liked the new home better, far better, and so did Ruth and Nancy, his sisters. Many a time the boy heard his father congratulating himself that he was clear of the farm and no longer had to get up in the cold of the early morning to feed and water the stock and do the milking. And Ruth and Nancy echoed these felicitations and rejoiced that now there was neither butter to churn nor hens to care for.

Even Ted was forced to confess that Freeman's Falls had its advantages. Certainly the school was better, and as his father had resolved to keep him in it at least a part of the high-school term, Ted felt himself to be a lucky boy. He liked to study. He did not like all studies, of course. For example, he detested Latin, French, and history; but he revelled in shop-work, math-

"You can't be spreadin' wires an' jars an' things round my room!" protested Mr. Turner.

ematics, and the sciences. There was nothing more to his taste than putting things together, especially electrical things; and already he had tried at home several crude experiments with improvised telegraphs, telephones, and wireless contrivances. Doubtless he would have had many more such playthings had not materials cost so much, money been so scarce, and Ruth and Nancy so timid. They did not like mysterious sparks and buzzings in the pantry and about the kitchen and told him so in no uncertain terms.

"The next thing you know you'll be setting the house afire!" Ruth had asserted. "Besides, we've no room for wires and truck around here. You'll have to take your clutter somewhere else."

And so Ted had obediently bundled his precious possessions into the room where he slept with his father only to be as promptly ejected from that refuge also.

"You can't be spreadin' wires an' jars an' things round my room!" protested Mr. Turner with annoyance.

It did not seem to occur to him that it was Ted's room as well,—the only room the boy had.

Altogether, his treasures found no welcome anywhere in the tiny apartment, and at length convinced of this, Ted took everything down and stowed it away in a box beneath the bed, henceforth confining his scientific adventures to the school laboratories where they might possibly have remained forever but for Mr. Wharton, the manager of the farms at Aldercliffe and Pine Lea.

CHAPTER II

TED RENEWS OLD TIMES

Mr. Wharton was about the last person on earth one would have connected with boxes of strings and wires hidden away beneath beds. He was a graduate of a Massachusetts agricultural college; a keen-eyed, quick, impatient creature toward whom people in general stood somewhat in awe. He had the reputation of being a top-notch farmer and those who knew him declared with zest that there was nothing he did not know about soils, fertilizers, and crops. There was no nonsense when Mr. Wharton appeared on the scene. The men who worked for him soon found that out. You didn't lean on your hoe, light your pipe, and hazard the guess that there would be rain to-morrow; you just hoed as hard as you could and did not stop to guess anything.

Now it happened that it was haying time both at Aldercliffe and Pine Lea and the rumor got abroad that the crop was an unusually heavy one; that Mr. Wharton was short of help and ready to hire at a good wage extra men from the adjoining village. Mr. Turner brought the tidings home from the mill one June night when he returned from work.

"Why don't you try for a job up at Aldercliffe, my lad?" concluded he, after stating the case. "Ever since you were knee-high to a grasshopper you had a knack for pitching hay. Besides, you'd

make a fine bit of money and the work would be no heavier than handling freight down at the mills. You've got to work somewhere through your summer vacation."

He made the latter statement as a matter of course for a matter of course it had long since become. Ted always worked when he was not studying. Vacations, holidays, Saturdays, he was always busy earning money for if he had not been, there would have been no chance of his going to school the rest of the time. Sometimes he did errands for one of the dry-goods stores; sometimes, if there were a vacancy, he helped in Fernald and Company's shipping rooms; sometimes he worked at the town market or rode about on the grocer's wagon, delivering orders. By one means or another he had usually contrived, since he was quite a small boy, to pick up odd sums that went toward his clothes and "keep." As he grew older, these sums had increased until now they had become a recognized part of the family income. For it was understood that Ted would turn in toward the household expenses all that he earned. His father had never believed in a boy having money to spend and even if he had, every cent which the Turners could scrape together was needed at home. Ted knew well how much sugar and butter cost and therefore without demur he cheerfully placed in the hands of his sister Ruth, who ran the house, every farthing that was given him.

From childhood this sense of responsibility had always been in his background. He had known what it was to go hungry that he might have shoes and go without shoes that he might have underwear. Money had been very scarce on the Vermont farm, and although there was now more of it than there ever had been in the past, nevertheless it was not plentiful. Therefore, as vacation was approaching and he must get a job anyway, he decided

to present himself before Mr. Wharton and ask for a chance to help in harvesting the hay crops at Aldercliffe and Pine Lea.

"You are younger than the men I am hiring," Mr. Wharton said, after he had scanned the lad critically. "How old are you?"

"Fourteen."

"I thought as much. What I want is men."

"But I have farmed all my life," protested Ted with spirit.

"Indeed!" the manager exclaimed not unkindly. "Where?"

"In Vermont."

"You don't say so! I was born in the Green Mountains," was the quick retort. "Where did you live?"

"Newfane."

Instantly the man's face lighted.

"I know that place well. And you came from Newfane here? How did you happen to do that?"

"My father could not make the farm pay and we needed money."

"Humph! Were you sorry to give up farming?"

"Yes, sir. I didn't want to come to Freeman's Falls. But," added the boy brightening, "I like the school here."

The manager paused, studying the sharp, eager face, the spare figure, and the fine carriage of the lad before him.

"Do you like haying?" asked he presently.

"Not particularly," Ted owned with honesty.

Mr. Wharton laughed.

"I see you are a human boy," he said. "If you don't like it, why are you so anxious to do it now?"

"I've got to earn some money or give up going to school in the fall."

"Oh, so that's it! And what are you working at in school that is so alluring?" demanded the man with a quizzical glance.

"Electricity."

"Electricity!"

"Wireless, telegraphs, telephones, and things like that," put in Ted.

For comment Mr. Wharton tipped back in his chair and once more let his eye wander over the boy's face; then he wheeled abruptly around to his desk, opened a drawer, and took out a yellow card across which he scrawled a line with his fountain pen.

"You may begin work to-morrow morning," he remarked curtly. "If it is pleasant, Stevens will be cutting the further meadow with a gang of men. Come promptly at eight o'clock, prepared to stay all day, and bring this card with you."

He waved the bit of pasteboard to and fro in the air an instant to be certain that the ink on it was dry and afterward handed it to Ted. Instinctively the boy's gaze dropped to the message written upon it and before he realized it he had read the brief words:

"Ted Turner. He says he has farmed in Vermont. If he shows any evidence of it keep him. If not turn him off. Wharton."

The man in the chair watched him as he read.

"Well?" said he.

"I beg your pardon, sir. I did not mean to read it," Ted replied with a start. "I'm very much obliged to you for giving me the job."

"I don't see that you've got it yet."

"But I shall have," asserted the lad confidently. "All I asked was a chance."

"That's all the world gives any of us," responded the manager gruffly, as he drew forth a sheet of paper and began to write. "Nobody can develop our brains, train our muscles, or save our souls but ourselves."

With this terse observation he turned his back on the boy, and after loitering a moment to make sure that he had nothing more to say, the lad slipped away, triumphantly bearing with him the coveted morsel of yellow pasteboard. That its import was noncommittal and even contained a tang of skepticism troubled him not a whit. The chief thing was that he had wrested from the manager an opportunity, no matter how grudgingly accorded, to show what he was worth. He could farm and he knew it and he had no doubt that he could demonstrate the fact to any boss he might encounter.

Therefore with high courage he was promptly on hand the next morning and even before the time assigned he approached Stevens, the superintendent.

"What do you want, youngster?" demanded the man sharply. He was in a hurry and it was obvious that something had nettled him and that he was in no humor to be delayed.

"I came to help with the haying."

"We don't want any boys as young as you," Stevens returned, moving away.

"I've a card from Mr. Wharton."

"A card, eh? Why didn't you say so in the first place? Shell it out."

Shyly Ted produced his magic fragment of paper which the overseer read with disapproval in his glance.

"Well, since Wharton wants you tried out, you can pitch in with the crowd," grumbled he. "But I still think you're too young. I've had boys your age before and never found them any earthly use. However, you won't be here long if you're not—that's one thing. You'll find a pitchfork in the barn. Follow along behind the men who are mowing and spread the grass out."

"I know."

"Oh, you do, do you! Trust people your size for knowing everything."

To the final remark the lad vouchsafed no reply. Instead he moved away and soon returned, fork in hand. What a flood of old memories came surging back with the touch of the implement! Again he was in Vermont in the stretch of mowings that fronted the old white house where he was born. The scent of the hay in his nostrils stirred him like an elixir, and with a thrill of pleasure he set to work. He had not anticipated toiling out there in the hot sunshine at a task which he had always disliked; but to-day, by a strange miracle, it did not seem to be a task so much as a privilege.

How familiar the scene was! As he approached the group of older men it took him only a second to see where he was needed and he thrust his pitchfork into the swath at his feet with a swing of easy grace.

"Guess you've done this job before," called a man behind him after he had worked for an interval.

"Yes, I have."

"You show it," was the brief observation.

They moved on in silence up the field.

"Where'd you learn to handle that fork, sonny?" another voice shouted, as they neared the farther wall.

"In Vermont," laughed Ted.

"I judged as much," grunted the speaker. "They don't train up farmers of your size in this part of the world."

Ted flushed with pleasure and for the first time he stopped work and mopped the perspiration from his forehead. He was hot and thirsty but he found himself strangely exhilarated by the exercise and the sweet morning air and sunshine. Again he took up his fork and tossed the newly cut grass up into the

light, spreading it on the ground with a methodical sweep of his young arm. The sun had risen higher now and its dazzling brilliance poured all about him. Up and down the meadow he went and presently he was surprised to find himself alone near the point from which he had started. His fellow-laborers were no longer in sight. The field was very still and because it was, Ted began to whistle softly to himself.

He was startled to hear a quiet laugh at his elbow.

"Don't you ever eat anything, kid?"

Mr. Wharton was standing beside him, a flicker of amusement in his gray eyes.

"I didn't know it was noon," gasped Ted.

"We'll have to tie an alarm clock on you," chuckled the manager. "The gang stopped work a quarter of an hour ago."

"I didn't notice they had."

The boy flushed. He felt very foolish to have been discovered working there all by himself in this ridiculous fashion.

"I wanted to finish this side of the field and I forgot about the time," he stammered apologetically.

"Have you done it to your satisfaction?"

"Yes, I'm just through."

For the life of him Ted could not tell whether the manager was laughing at him or not. He kicked the turf sheepishly.

"Aren't you tired?" inquired Mr. Wharton at length.

"No—at least—well, I haven't thought about it. Perhaps I am a little."

"And well you may be. You've put in a stiff morning's work. You'd better go and wash up now and eat your lunch. Take your full hour of rest. No matter if the others do get back here before you. Stevens says you are worth any two of them, anyway."

"It's just that I'm used to it," was the modest reply.

"We'll let it go at that," Mr. Wharton returned ambiguously. "And one thing more before you go. You needn't worry about staying on. We can use you one way or another all summer. There'll always be work for a boy who knows how to do a job well."

CHAPTER III

GOING TO HOUSEKEEPING

Thus it came about that Ted Turner began the long, golden days of his summer vacation at the great estates of the Fernalds, and soon he had made himself such an indispensable part of the farming staff that both Mr. Wharton and Mr. Stevens came to rely on him for many services outside of those usually turned over to the men.

"Just step over to the south lot at Pine Lea, Ted, and see if those fellows are thinning the beets properly," Mr. Wharton would say. "I gave them their orders but they may not have taken them in. You know how the thing should be done. Sing out to them if they are not doing the job right."

Or:

"Mr. Stevens and I shall be busy this morning checking up the pay roll. Suppose you have an eye on the hilling up of the potatoes, Ted. Show the men how you want it done and start them at it. I'll be over later to see how it's going."

Frequently, instead of working, the boy was called in to give an opinion on some agricultural matter with which he had had experience.

"We are finding white grubs in the corner of the Pine Lea garden. They are gnawing off the roots of the plants and making

no end of trouble. What did you do to get rid of them when you were up in Vermont?"

"Salt and wood ashes worked better than anything else," Ted would reply modestly. "It might not be any good here but we had luck with it at home."

"We can try it, at least. You tell Mr. Stevens what the proportions are and how you applied it."

And because the advice was followed by a successful extermination of the plague, the lad's prestige increased and he was summoned to future conclaves when troublesome conditions arose.

Now and then there was a morning when Mr. Stevens would remark to Mr. Wharton:

"I've got to go to the Falls to-day to see about some freight. Ted Turner will be round here, though, and I guess things will be all right. The men can ask him if they want anything."

And so it went.

First Ted filled one corner, then another. He did errands for Mr. Wharton, very special errands, that required thought and care, and which the manager would not have entrusted to every one. Sometimes he ventured valuable suggestions which Mr. Stevens, who really had had far less farming experience than he, was only too grateful to follow.

If the boy felt at all puffed up by the dependence placed upon him, he certainly failed to show it. On the contrary he did his part enthusiastically, faithfully, generously, and without a thought of praise or reward. Although he was young to direct others, when he did give orders to the men he was tactful and retiring enough to issue his commands in the form of wishes and immediately they were heeded without protest. He never shirked the hard work he asked others to perform but was always ready to roll up the sleeves of his blue jeans and pitch with vigor into

any task, no matter how menial it was. Had he been arrogant and made an overbearing use of his authority, the men would quickly have rated him as a conceited little popinjay, the pet of the boss, and made his life miserable; but as he remained quite unspoiled by the preference shown him and exhibited toward every one he encountered a kindly sympathy and consideration, the workmen soon accepted him as a matter of course and even began to turn to him whenever a dilemma confronted them.

Perhaps Ted was too genuinely interested in what he was doing to think much about himself or realize that the place he held was an unusual one. At home he and his father had threshed out many a problem together and each given to it the best his brain had to offer, without thought of the difference in their ages. Sometimes Ted's way proved the better, sometimes Mr. Turner's. Whichever plan promised to bring the more successful results was followed without regard for the years of him who had sponsored it. They were working together and for the same goal and what did it matter which of them had proposed the scheme they finally followed? To get the work completed and lay low the obstacles in their path were the only issues of importance.

So it was now. Things at Aldercliffe and Pine Lea must be done and done well, and only what furthered that end counted. Nevertheless, Ted would not have been a human boy had he not been pleased when some idea of his was adopted and found to be of use; this triumph, however, was less because the programme followed was his own than because it put forward the enterprise in hand. There was a satisfaction in finding the key to a balking problem and see it cease to be a problem. It was fun, for example, to think about the potatoes and then say to Mr. Wharton: