

THE INVENTIONS OF HAWKINS

By EDGAR FRANKLIN

THE PUMPLESS PUMP.

There are some men to whom experience never teaches anything. Hawkins is one of them; I am another.

As concerns Hawkins, I feel pretty sure that some obscure mental aberration lies at the seat of his trouble; for my own part, I am inclined to blame my confiding, unsuspecting nature.

Now, when the Hawkins' cook and the Hawkins' maid came "cross lots" and carried off our own domestic staff to some festive, I should have been able to see the hand of Fate groping around in my locality, clearing the scene so as to leave me, alone and unprotected, with Hawkins.

Moreover, when Mrs. Hawkins drove over in style with Patrick, to take my wife to somebody's afternoon euchre, and brought me a message from her "Herbert," asking me to come and assist him in fighting off the demon of loneliness, I should have realized that Fate was fairly clutching at me.

By this time I should be aware that when Hawkins is left alone he doesn't bother with that sort of demon; he links arms with the old, original Satan, and together they stroll into Hawkins' workshop—to perfect an invention.

But I suspected nothing. I went over at once to keep Hawkins company.

When I reached his place, Hawkins didn't meet my eye at first, but something else did.

For a moment, I fancied that the Weather Bureau had recognized Hawkins' scientific attainments, and built an observatory for him out by the barn. Then I saw that the thing was merely a tall, skeleton steel tower, with a windmill on top—the contrivance with which many farmers pump water from their wells.

"Well," remarked Hawkins, appearing at this point, "can you name it?"

"Well," I said, leaning on the gate and regarding the affair, "I imagine that it is the common or domestic windmill."

"And your imagination, as usual, is all wrong," smiled Hawkins. "That, Griggs, is the Hawkins Pumpsless Pump."

"What!" I gasped, vaulting into the road. "Another invention?"

"Now, don't be a clown, Griggs," snapped the inventor. "It is—"

"Wait. Did you lure me over here, Hawkins, with the fiendish purpose of demonstrating that thing?"

"Certainly not. It is—"

"Just one minute more. Is it tied down? Will it, by any chance, suddenly gallop over here and fall upon us?"

"No, it will not," replied Hawkins shortly. The foundations run 20 feet into the ground. Are you coming in or not?"

"Under the circumstances—yes," I said, entering again, but keeping a wary eye on the steel tower. "But can't we spend the afternoon out here by the gate?"

"We cannot," said Hawkins sourly. "Your humor, Griggs, is as pointless as it is childish. When you see every farmer in the United States using that contrivance, you will blush to recall your idiotic words."

I was tempted to make some remark about the greater likelihood of memory producing a consumptive pallor; but I refrained and followed Hawkins to the veranda.

"When I built that tower," pursued the inventor, waving his hand at it, "I intended, of course, to use the regulation pump, taking the power from the windmill."

"Then I got an idea."

"You know how a grain elevator works—a series of buckets on an endless chain, running over two pulleys, just as a bicycle chain runs over two sprockets? Very well. Up at the top of that tower I extended the hub of the windmill back to form a shaft with big cogs. Down at the bottom of the well there is another corresponding shaft with the same cogs. Over the two, as you will see, runs an endless ladder of steel cable. Is that clear?"

"I guess so," I said, wearily. "Go on."

"Well, that's as far as I have gone. Next week the buckets are coming. I shall hitch one to each rung of the chain, or ladder, throw on the gear, and let her go."

"The buckets will run down into the well upside down, come up on the other side filled, run to the top of the tower, and dump the water into a reservoir tank—and go down again. Thus I pump water without a pump—in other words, with a pumpsless pump!"

"Simple! Efficient! Nothing to get out of order—no valves, no pistons, no air-chambers—nothing whatever!" finished Hawkins triumphantly.

"Wonderful!" I said absently.

"Isn't it?" cried the inventor. "Now, do you want to look over it, to-day, Griggs, or shall we run through those drawings of my new loom?"

Hawkins has invented a loom, too. I don't know much about machinery in general, but I do know something about the plans, and from what I can judge by the plans, if any workman was fool-hardy enough to enter the room with Hawkins' loom in action, that intricate bit of mechanism would reach out for him, drag him in,

macerate him, and weave him into the cloth, all in about 30 seconds.

But an explanation of this to Hawkins would merely have precipitated another conflict. I chose what seemed to be the lesser evil: I elected to examine the pumpsless pump.

The pump was just as Hawkins had described—a thin steel ladder coming out of the well's black mouth, running up to and over the shaft, and descending into the blackness again. When we reached its side, it was stationary, for the air was still.

"There!" cried Hawkins. "All it needs is the buckets and the tank on top. That idea comes pretty near to actual execution, Griggs, doesn't it?"

"Most of your ideas do come pretty near to actual execution, Hawkins," I sighed.

"Now, look down here," he continued, leaning over the well with a calm disregard of the frailty of the human make-up, and grasping one of the rungs of the ladder. "Just look down here, Griggs. Sixty feet deep!"

"I'll take your word for it," I said. "I wouldn't hold on to that ladder, Hawkins; it might take a notion to go down with you."

"Nonsense!" smiled the inventor. "The gear's locked. It can't move. Why, look here!"

The man actually swung himself out to the ladder and stood there. It made my blood run cold.

I expected to see Hawkins, ladder, and all shoot down into the water, and I wondered whether Heaven would send wind enough to hoist him out before he drowned.

But nothing happened. Hawkins simply stood there and surveyed me with sneering triumph.

"You see, Griggs," he observed caustically, "once in a while I do know something about my inventions. Now, if your faint heart will allow it, I should advise you to take a peep down here. So far as I know, it's the only well in the State built entirely of white tiles. Just steady yourself on the ladder and look."

Like a senseless boy taking a dare, I reached out, gripped the rung above Hawkins, and looked down.

Certainly it was a fine well. I never paid much attention to wells, but I could see at a glance that this one was exceptional.

"I had it tiled last week," continued Hawkins. "A tiled well is absolutely safe, you see. Nothing can happen in a tiled well, no—"

"That was another of Hawkins' fallacies. Something happened right then and there."

A gentle breeze started the windmill. Slowly, spectacularly, the ladder began to move—downwards!

"Why, say!" cried the inventor, in amazement, as he made one futile effort to regain the ground. "Do you think—"

"I wasn't thinking for him, just then. All my wits were centered on one great, awful problem."

Before I could realize it, and release my hold, the ladder had dropped far enough to throw me off my balance. The problem was whether to let go and risk dashing down sixty feet, or to keep hold and run the very promising chance of a slow and chilly ducking.

I took the latter alternative, threw myself upon the ladder, and clung there, gasping with astonishment at the suddenness of the thing.

"Well, Hawkins?" I said, getting breath as my head sank below the level of the beautiful earth.

"Well, Griggs," said the inventor defiantly, from the second rung below, "the gear must have slipped—that's all."

"Isn't it lucky that this is a tiled well?"

"What do you mean?"

"Why," I said, "a tiled well is absolutely safe, you see. Nothing can happen in a tiled well, Hawkins."

"Now, don't stand there grinding out your cheap wit, Griggs," snapped Hawkins. "How the dickens are we going to escape being soaked?"

Down, down, down, went the ladder.

"Well," I said, thoughtfully, "the bottom usually falls out of your schemes, Hawkins. If the bottom will only fall out of the water department of your pumpsless pump within the next half-minute, all will be lovely!"

"Oh, dry up!" exclaimed the inventor nervously. "Goodness! We're half way down already!"

"Why not climb?" I suggested.

"Really, Griggs," cried the inventor, "for such an impractical man as yourself, that idea is remarkable! Climb, Griggs, climb. Get about it!"

I think myself that the notion was rather bright. If the ladder was climbing down into the well, we could climb up the ladder.

And we climbed! Good heavens, how we did climb! It was simply a perpendicular treadmill, and with the rungs a full yard apart, a mighty hard one to tread.

Every rung seemed to strain my muscles to the breaking point; but we kept on climbing, and we were gaining on the ladder. We were not

wide by four long—did the gear slip again?"

"No, of course not," said the inventor. "The windmill's simply started ed turning in the opposite direction."

"It's a weak, powerless little thing, your windmill, isn't it?"

"Well, when I built it I calculated it to hoist two tons."

"Instead of which it has hoisted two—or rather, one—misguided man, who allowed himself to be enticed within its reach."

"See here," cried Hawkins wrathfully. "I suppose you blame me for getting you into a hole?"

"Not at all," I replied. "I blame you for getting me altogether too far out of the hole."

"Well, you needn't. If it hadn't been for your stupidity, we shouldn't be here now."

"What!"

"Certainly. Why didn't you jump off as we passed the mouth of the well?"

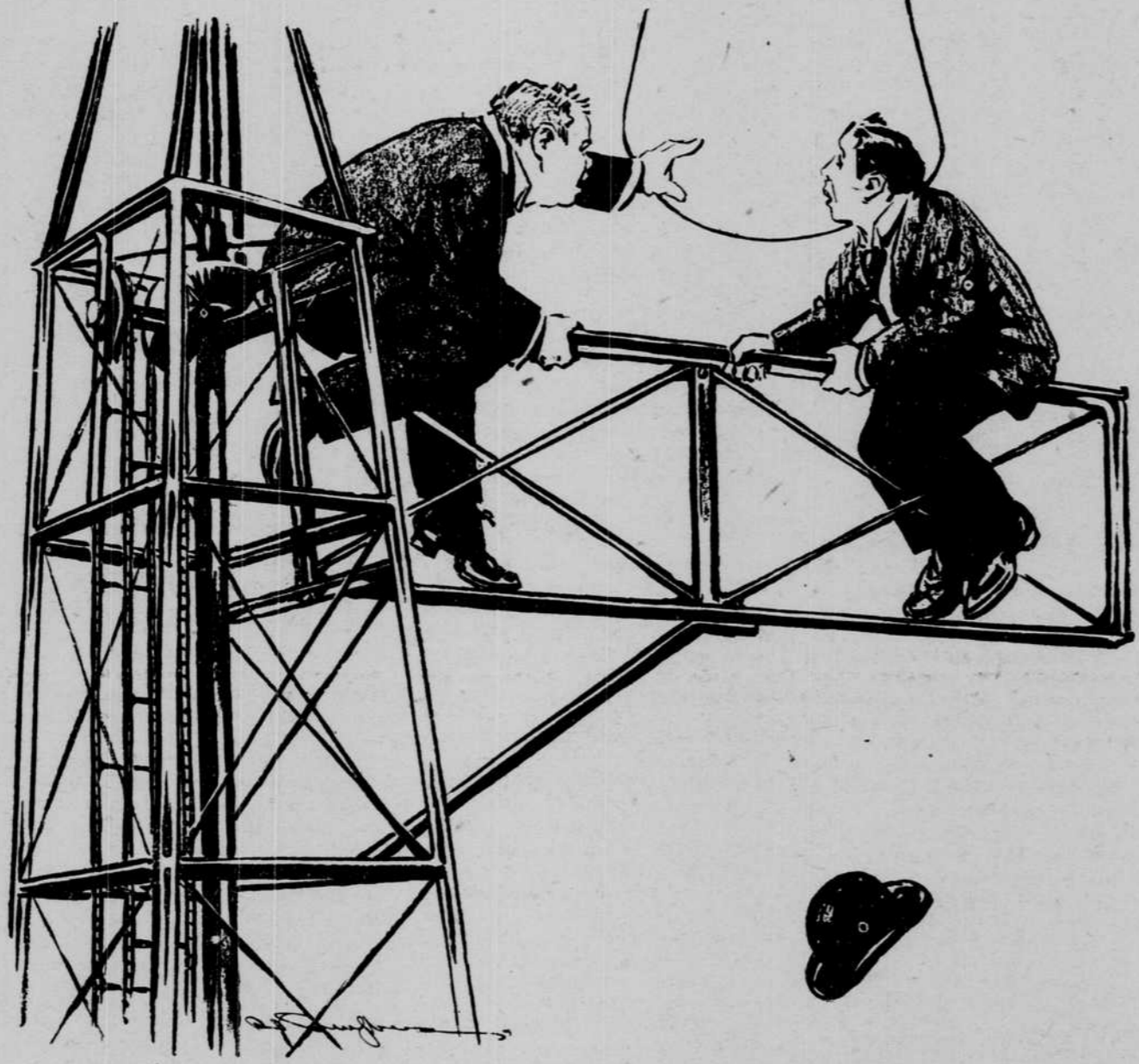
"My dear Hawkins," I said mildly, "do you realize that we flitted past that particular point at a speed of about 70 feet per second? Why didn't you jump?"

"I—I didn't want to desert you, Griggs," rejoined Hawkins weakly, looking away.

"That was truly noble of you," I observed. "It reveals a beautiful side of your character which I had never suspected, Hawkins."

"That'll do," said the inventor shortly. "Are you going down first or shall I?"

"Do you propose to trust all that



"What Will Happen If the Breeze Hits This Infernal Machine Now?"

is mortal of yourself to that capricious little ladder again?"

"Certainly. What else?"

"I was thinking that it might be safer, if slightly less comfortable, to wait here until Patrick gets back. He could put up a ladder—a real, old-fashioned, wooden ladder—for us."

"Yes, and when Patrick gets back those women will get back with him, replied Hawkins heatedly. "Your wife's coming over here to tea."

"Well, do you suppose I'm going to be found stuck up here like a confounded rooster on a weather vane?" shouted the inventor. "No, sir! You can stay and look all the fool you like. I won't. I'm going down now!"

Hawkins reached gingerly with one foot for a place on the ladder. I looked at him, wondered whether it would be really wicked to hurl him into space, and looked away again. In the direction of the woods.

My gaze traveled about a mile, and my nerves received another shock.

"See here, Hawkins!" I cried. "Well, what do you want?" demanded the inventor gruffly, still striving for a footing.

"What will happen if a breeze hits this infernal machine now?"

"You'll be knocked into Kingdom Come, for one thing," snapped Hawkins with apparent satisfaction. "That arm of the windmill right behind you will rap your head with force enough to put some sense in it."

I glanced backward. He was right—about the fact of the rapping, at any rate.

The huge wing was precisely in line to deal my unoffending cranium a terrific whack, which would probably stun me, and certainly brush me from my perch.

"There's a big wind coming!" I cried. "Look at those trees."

"By Jimminy! You're right!"

10 feet from the top when Hawkins called out:

"Wait, Griggs! Hey! Wait a minute! Yes! by Jove, she's stopped!"

She had. I noticed that, far above, the windmill had ceased to revolve. The ladder was motionless.

"Oh, I knew we'd get out all right," remarked the inventor, dashing all perspiration from his brow. "I felt it."

"Yes, I noticed that you were entirely confident a minute or two ago," I observed.

"Well, go on now and climb out," said Hawkins, waving an answer to the observation. "Go ahead, Griggs."

I was too thankful for our near deliverance to spend my breath on vituperation. I reached toward the rung above me and prepared to pull myself back to earth.

And then a strange thing happened! The rung shot upward. I shot after it. One instant I was in the twilight of the well; the next instant I was blinded by the sun.

Too late I realized that I had ascended above the mouth, and was journeying rapidly toward the top of the tower. It had all happened with that sickening, surprising suddenness that characterizes Hawkins' inventions.

Up, up, up, I went, at first quickly, and then more slowly, and still more slowly, until the ladder stopped again, with my eyes peering over the top of the tower.

I didn't waste any time in thanking the ladder. Before the accursed thing could get into motion again, I climbed to the shaft and perched there, dizzy and bewildered.

Hawkins followed suit, clambered to the opposite end of the shaft, and arranging himself there, astride.

"Well," I remarked, when I had found a comparatively secure seat on the bearing—a seat fully two inches

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MENTAL TELEGRAPH

BY ITS USE LOST PARTS OF MACHINERY WERE FOUND.

Civil Engineer Has Remarkable Experience While Building Road in India—Developed to a Wonderful Degree.

"Many persons deride the idea of mental telegraphy, but if they would spend a year or two in India, as I did, and work shoulder to shoulder with the educated East Indians they would cease their scoffing," said G. R. Scragham, organization manager for the international policyholders' committee, and one of the most prominent electric railway men in Ohio. "It is wonderful to what a degree of perfection those people over there have developed the faculty of wireless communication without the aid of any instrument other than their sensitive brains. They were using the wireless system over three centuries before Marconi and De Forest were born."

"Let me give you an instance in point, and it is only one of many which changed me from a skeptic to a convert. Several years ago, when I was in active work as a civil engineer with railroad construction as my specialty, I went to India to assist in building a line into the interior. We came to a heading where the use of rock drills, of the tripod style you see in use here in New York in making excavations was absolutely necessary. This had been foreseen in the surveys made in advance of the construction work, and we had ordered a battery of those steam drills. Finally we worked right up to the place where we needed them, and we could not do much more effective work until we got them."

"I was in the office one day, fuming and fretting about those drills and wondering whether the steamship upon which they should have arrived had reached Calcutta and whether the drills were in her cargo. I asked one of my assistants if he had heard anything from Calcutta, which was many miles away. He replied in the negative. He had not even received advices that the steamship had arrived. I was turning away in discontent when one of the East Indians who had been assigned by the government to assist us, stepped forward. He was educated highly and spoke English fluently."

"Excuse me," he said, "were you asking if the steamship had arrived?"

"Yes—we are expecting several steam drills on her and cannot do much more work until we get them," I replied.

"She arrived this morning and the drills have been unloaded from her," said the East Indian. "They are on the pier now, but something seems to be missing from them. Are they funny looking things that stand on three legs?"

"Oh, Griggs!"

"I told him they were and showed to him a picture of one of the drills. He looked at it carefully and then replied:

"Yes; they're what are in those long packages on the pier, but that part is missing from each of them."

"He indicated an essential part in the body of the drill as that which was missing from each. At first I was inclined to regard what he said as a joke, but his seriousness impressed me. I instructed the operator to wire to Calcutta and ascertain what the condition was. In a little while he received a reply which corroborated everything the East Indian had told me, and, worst of all, that when the cases were opened it was discovered the parts were missing. That meant long delay, because the drills were worthless without the missing parts. In my dilemma I called the East Indian to me and said:

"Can you tell me whether those missing parts were shipped with the drills?"

"Without hesitation he replied:

"Yes; but they have not been taken from the ship."

"Where are they?" I inquired.

"They are away down in the hold, beneath a lot of heavy bales which are going to be taken to another port," he said, with perfectly serious face.

"I summoned the telegraph operator and instructed him to wire our representative in Calcutta what the information I gave instructions that the bales in the hold should be removed and the missing drill parts got from beneath them. Within three hours I received a return message that my orders had been carried out and that the missing parts had been found exactly where the East Indian said they were concealed. In a few days thereafter the drills reached us and were put at work cutting into the rock in the heading after that experience, and others like it, do you wonder that I believe in mental telegraphy as it is practiced in India by the educated East Indians?"

Consumption of Coffee.

According to the department of commerce and labor, during 1904 1,053,000,000 pounds of coffee were consumed in the United States, valued at \$31,000,000.

ONE OF THE RIGHT SORT.

Tommy—I like old Dr. Dosem.

Maggie—Why?

Tommy—Oh, he let's me stick out my tongue at him.

THE HIGHEST HONOR.

The "golden rose" which the pope presented Princess Ena on the occasion of her marriage, is the highest honor that can be conferred on a Catholic princess. It is a mimic plant of pure gold in a golden pot whereon are embossed the papal arms. It has leaves, buds and flowers, the leaves being set with small jewels in imitation of dewdrops. In the central flower is a tiny receptacle in which is contained a small palm leaf blessed by the pope.

German Universities.

A remarkable increase in the number of students attending the 21 universities of Germany is reported by the Journal of Education. The matriculated students now number 42,390, an increase of 13,273 over the attendance of ten years ago, or nearly 50 per cent. The University of Berlin leads, with 8,081 students; Bonn has 2,908, and Heidelberg 1,443.

Not Every Bullet Found Its Billet.

Of the 45,000,000 bullets fired by the Russians during the Crimean war 44,952,000 failed to fulfill their errand of death.

TIES SCARCE IN WEST CANADA.

This Is Due to the Rapid Construction of New Lines.

The rapid construction of new lines of railway in the west, and the large amount of repair work, which must constantly be done, has necessitated the use of vast quantities of railway ties during the present summer, and the fear has been expressed that there might soon be a shortage in this essential of railroad building, says the Winnipeg Free Press.

The nature of the demand for railway ties is strikingly instanced in the gradual disappearance of the vast piles of ties, accumulated during the previous year, by the Canadian Pacific railway at Vermilion on the main line east between the city and Port Arthur.

At the beginning of the year hundreds of thousands of ties were stored in the pits at Vermilion awaiting the time when they would be needed in connection with the development of the various lines in the central west. At the present time of all these ties, very few remain, and it has become necessary to turn to other sources for the large number required. Fortunately there is no lack of ties of the quality required and the work of construction and improvement goes on unintermitted.

At the present time the dividing line for the supply of railway ties is at Moose Jaw. The ties needed on all lines east of that point come from the territory between Rat Portage and Fort William. The ties for the territory west of Moose Jaw come chiefly from the Crow's Nest branch, the points of supply being chiefly between Elko and Kootenay. Next year it is hoped that the ties for the Edmonton branch may be secured at Red Deer, the material being rafted down the river to that point from the mountains. At the present time all ties used on the branch, including those used on the Lacombe and Westaskin extension, must be brought all the way from the mills on the Crow's Nest branch, part of the haul being through the mountains, where the cost of transportation is excessive. In addition to the mills between Elko and Kootenay Landing, there are others in the far west, where ties in large numbers are produced, notably the mills of the Columbia River Lumber company, which at Golden, sometimes manufactures as many as 500,000 in a single season.

The ties needed for the railway of Vancouver island are of course produced on the island, and those of the Prince Albert branch are manufactured at Prince Albert.

The price of good ties has risen steadily during the past 20 years and is still rising. The price is now 50 per cent higher in the eastern portion of western lines than in the western portion, varying from 32 to 40 cents per tie, between Winnipeg and Port Arthur, and from 22 to 26 cents in the mountains. The lumber used in production is much the same east or west. Spruce, tamarack and jack pine are the trees chiefly used, in addition to which cedar is employed in British Columbia.

JOHNNY KNEW WHAT IT MEANT.

It Was Something the Teacher Used Every Day.

A girl was teaching her first term of school last winter in a small country place called Oliveville, Ct. The scholars, as in most country schools, were a miscellaneous lot from six to 14 years of age, some of them being a little hard to manage. More than once the teacher was obliged to resort to the old-fashioned method to keep order.

One day one of the older scholars came to the word "sarcasm" in the reading lesson. This was too much for him, and he asked the teacher what that word meant. The teacher was surprised that one of his age did not know the meaning of so common a word, and finally asked if there was anyone in school who did, and if so, to raise their hand. No hand was raised.

"Why," said the teacher, "it's something I use myself nearly every day here in school." A knowing look went over a little fellow's face sitting near the front, and up went his hand.

"Well, Johnny," said the teacher, "do you know what it means?"

"Yes, marm," said Johnny. "It means a ruler."

Useless Self-Immolation.

Enoch Arden had returned and discovered that his wife had given him up for dead and married another man.

"I suppose I ought to go in and upset all that," he muttered, as he softly retreated from the window through which he had been peeping; "but it would kick up a terrible rumpus. Besides, it would knock a good poem into a cocked hat."

If he had lived a few years longer, however, his more mature judgment would have assured him that such a wadup could not have spoiled the poem to any great extent.—Chicago Tribune.

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