

I know that you are not in the hammer department. Are you able to keep the oil out of those cylinders?" "Yes, sir, providing you will give me the necessary authority to do it." The President wrote him a letter, stating that he had authority to discharge anyone who disobeyed the orders of this young man in the matter of keeping the oil out of the cylinders, and armed with this letter he returned to the works, and appointed a hammer-man on day shift and one on night shift, for each hammer, part of whose duty it was to see that no oil got into the cylinder of his hammer. He showed him the President's letter and told him that if any oil was found in the cylinder of a steam hammer on his shift he would discharge him, whether he put it there, allowed it to get there, or not. In addition to this, he chained up the various inlets to the cylinder and locked them with heavy padlocks, so as to make it difficult to get at the cylinders to oil them. Before starting to do this, however, he wrote a letter to the President of the Company, telling him that he believed it was a mistaken policy to keep the oil out of the cylinders; that it was his personal conviction that the cylinders would cut without oil and be ruined. The President answered that he had had a steam engine in one of his other establishments running for some twenty years without any oil in the cylinder, and that he would therefore take the personal responsibility of the matter himself.

About three or four months later the company paid a bill of many thousands of dollars to have the cylinders of its steam hammers rebored. They had almost all cut for lack of oil.

This young man, however, had proved by these two incidents, first, that he had common-sense enough to recognize the fact that his employer wanted him above all things to save money; second, that he had the grit and pluck required to do disagreeable things; and third, that he could obey orders even if he personally disagreed with the policy; and these incidents marked the starting point in the career of one of our most successful engineers and managers.

In the spring of 1900 a large company decided to exhibit a big machine in the Paris Exhibition. It was so late, however, when they came to this conclusion that the machines of most of their competitors were already in the exhibition. They, however, were able to obtain space, and it was of course necessary to have the machine in operation at the earliest possible minute. There were a great many young college graduates in the employ of this com-

pany; Many of them wanted to go over with the exhibit, and have charge of it, and were fairly well equipped in that they had a certain knowledge of French. It, of course, was of the greatest importance to select men who would be sure to get the machine going in the shortest space of time, and these young college men were surprised to find that two young men were chosen, neither of whom had a college education, both of whom, however, had shown their resourcefulness and their ability to "get there." Many of those in the company, however, were greatly surprised at their appointment, because neither of them spoke one word of French.

These young men arrived in Paris ahead of their machine, and found that a large proportion of the machines which had arrived in their department were still unpacked, and far from being set up, because the rules of the Exhibition required that all of the work done in the Exhibition should be done by official employees, official masons, bricklayers, carpenters, etc. These men saw clearly that if they waited their turn it would be well on into the summer before their machine would be up, so they bought a car-load of bricks, mortar, shovels, etc., for building foundations and had them consigned to themselves in the Exhibition. When the car arrived they pinched it opposite their materials themselves, and unloaded all the building materials at night. The next day there was great horror in the Exhibition when these men were found digging their own foundation and preparing to build it themselves. There was, however, no rule which prevented the exhibitors from doing any work which they themselves saw fit, so the officials of the Exhibition could not interfere with their getting the foundation up. The foundation was done by the time the machine arrived, and at the same time that the machine came into the works they had another car sent in, with rigging materials, tackle, etc., for unloading it. They again pinched their car with rigging materials and their car with their machine into the exhibit opposite their space, and unloaded their 20-ton machine, with the help of one or two other laborers and exhibitors whom they were able to get with them. They placed the machine on its foundation, put up their counter shaft, and had it running before many of the machines which were in the Exhibition before they had started from America.

These young men, who did not speak a word of French, and who were not college educated, fully justified their choice. I received a letter a few days

ago from one of them, stating that he had just finished building a works which had cost \$600,000, which he had completed in a year and a quarter, and that he was about to begin another works of the same kind which he hoped would be done in eight months. The other of the two young men is at the head of a very successful selling force.

Now, as an illustration of what plain, every-day persistence will do, many years ago, when I was foreman of a machine shop, there was a young man at the head of one of the rather unimportant departments who had been dropped from Annapolis. He didn't have brains and scholarship enough to keep up with his class. My chief business at the head of this department was that of making repairs, and keeping the place running, and all of the heads of the other departments came to me one after another with their breakdowns. They were all in a hurry, and I had to use my best judgment in deciding which repair was of the greatest importance. This young Annapolis failure came into my office one day and explained that he had to have a certain repair made right away. "Well, I'm sorry, but I can't do it. There are a lot of things that are ahead of you."

"Well, what are they?"

"Oh, I haven't time to go all over it, I'm too busy."

He said, "Won't you tell me what other repairs are ahead of mine?"

"No, I haven't time. I'll make your repair as soon as I have a chance."

"Well, what machine are you going to put my broken piece on to repair it?"

"On to the slotter."

"Well, what work is ahead of that slotter?"

"Oh, I can't tell you, I have too many other things on hand."

So my friend went out of my office, walked all of the way across the works, about a quarter of a mile, to the central office, found the superintendent of the company and placed before him a piece of paper for his signature, which read:

"Mr. Taylor. Please tell Mr. . . . what pieces of work will go in the slotter in advance of his breakdown. I am desirous of having Mr. . . . 's work done as soon as possible."

He walked all the way back again to my office and gave me that piece of paper. I, of course, wrote at once the names of the parts which were ahead of his. He again walked back to the central office and again returned to my office, with a second paper, reading:

"Mr. Taylor. Please do work on the slotter in the following order," stating exactly the time which his work came on. He practiced this same scheme on me enough times for me to find that it paid better to drop all work when he came in the office and answer his questions, rather than to waste time in finally having to write the whole thing out.

Now this quality of persistence certainly is not a very brilliant one, and surely requires comparatively little brains, and yet it was just that quality which has placed this young man at the head of a works employing some 5,000 men.

Brilliant suggestions as to new, great and revolutionary changes and improvements are the last things that your employer wants. He has enough of these at all times to last him for years. He is not looking for some one to tell him what to do. He is looking for some one to carry out the plain, simple, every-day, much needed improvements which are always in sight.

Let me give you an illustration of the fact that one simple idea is enough to last a successful man a life-time. During the Centennial Exhibition, held in Philadelphia in 1876, I left my apprenticeship to take charge of a lot of New England machines that were exhibited. One day an old gentleman came into my exhibit, and I saw at once by the questions which he asked that he was a fine mechanic. I took every pains to explain our machines and tried to sell him some. After a while he sat down and asked me to sit alongside of him. He said:

"What is your idea for success in life?"

I said I didn't know, that I had no particular idea.

"Why," he said, "you must have something that you are working for."

I said: "Yes, sir, I am working to get to be a machinist and earn \$2.50 a day."

"Oh, no," he said, "I don't mean that. When I was your age and before I was out of my apprenticeship, I had made up my mind just what I was going to do. I decided that I was going to learn how to do work just a little more accurately than any of the other apprentices around me, and when I had succeeded in doing this, then I decided that I would learn to do it still more accurately than I had done before. Throughout my whole life that has been my one idea. I have never cared so much about the rapidity of the work—although I worked about as fast as other people—but I have always been determined to do a little better work than anyone else around. That is what I am still aiming at to-day—to do better work next