

is slow in making progress, though it may after a long time develop the theory. On this principle, less than a century ago, the youth would apprentice himself to a shopmaster, and in this shop generally spent the greater part of his life, finally to become a skilled workman on his particular machine. He was familiar only with the tools that were used in that one shop, and in many cases he understood only the construction of the few machines he built.

However, there were some men who understood the theory as well as its application, and they built some machinery that may never be excelled in its practicability.

A young man aspiring to become a mechanic to-day has not these difficulties to contend with. He may go to one of the many schools and there be taught the theory and how to put it in practice. These schools are maintained by the government, so that a boy may very easily get a good education though his means be limited.

Then to put the theory taught in the class room to test is the object of our shops. But nothing can be done well unless the doer takes an interest in the work. Hence to create this interest it is necessary that the shops be continually improved.

Our shops should not only practice on the old theories, but they should, in other words, be a laboratory in which researches and tests are made, and new experiments tried. I don't mean by this that our principal idea should be to invent new machinery, but to keep up with the very latest improvements on and inventions of machinery. By doing this we would in time see any inefficiency

of a machine and apply our theory in improving it.

To be informed of the latest practice in mechanics, the instructors generally spend their vacations in traveling over the country inspecting different kinds of machinery in railroad shops, other construction shops, manufacturing establishments, etc.

Professor Burgoon traveled in the East, and there obtained some valuable information on the latest improved machinery, both land and marine. While inspecting the latter he apparently tried to commit suicide by jumping overboard, but was, to our joy, saved from destruction by fire.

Professor Whitlock and Professor Gideon also made trips during the summer. Professor Gideon visited among others, the Pullman car shops, also a school for manual training. He reports his trip as very profitable for the information obtained, and he has improved his department to a great extent.

Professor Whitlock will introduce the check system in the shops, having begun with the first class, but intends to extend it to all classes later. The object of this is to prevent careless handling of the tools, and put responsibility on the users. This is a very good plan to bring our shops nearer the standard of a model for other shops, which it certainly should be.

The first class will build one or more electric motors this year, and hopes also to make tests of boilers and some other machinery.

Finally, let our aim be to thoroughly combine practice with theory, and thus be able to meet any problem that may confront a mechanical engineer.