

**MANUAL TRAINING SCHOOLS.**

J. W. Van Cleave, president of the National Association of Manufacturers, addressing a recent convention in Indianapolis, made some remarks of an interesting nature on education.

The United States, he says, has had manual training schools for more than a quarter of a century. Many of them, like the Winona Technical Institute, are excellent institutions. The part which these schools were intended to perform, they perform well. They graduate tens of thousands of skilled workers every year.

But, my friends, these schools meet only a small—a very small—part of the popular demand for industrial education. Virtually, all the manual training and technical schools are of the academic grade. Some of them are of the collegiate grade. Nearly all of them charge for tuition. Thus, they are out of the reach of the children of poor parents, who everywhere constitute the vast majority of the community. Nearly all of their graduates enter the technical professions. The ordinary mechanical trades receive very few of the pupils of the manual training schools of the present day.

What is needed is a scheme of industrial education which rejects caste and class lines of all sorts. It must be as broad as the entire land. It must be as free as the air and the sunlight.

It must take in every American boy, regardless of nativity, the poverty and obscurity of his parents. The poorer and the obscurer the parents, the greater the need for the training which will equip the children to lift themselves out of obscurity and poverty.

This training should take the boy in charge at his most impressionable age. It should begin at nine or ten, or at as early an age as he can take hold of the ordinary mechanical tools without physical danger to himself. This training should keep step with the boy through his entire course in the primary school.

For several reasons, I emphasize the need of the beginning of this training of the boy's hand and eye at the earliest practical moment. The boy can learn the use of tools quicker at from nine to ten or twelve years of age than he can when he gets older. These intermissions in the workshop will brighten the entire school day and lift his studies out of the rut and ruck of drudgery, and make them seem like play. Boys begin leaving school to become bread winners at ten or eleven years of age.

The dense ignorance of the average boy of the present day when he leaves school and applies for work is a constant surprise and regret to employers. Not only does he lack the skill of hand which even the most rudimentary of manual training gives him, and thus has to begin at the very bottom in the work which he gets, but he likewise lacks the mental stimulus and alertness which this training imparts. And thus his advancement is slow, and usually it is short as well as slow.

Very few persons realize that of the boys who are in schools at the age of eight, less than one out of twelve ever enters a high school. Yet the figures of the National Board of Education show that this is a fact. Notwithstanding the compulsory laws which are on the statute books in many localities all the schooling which the majority of the boys in the United States receive is that which they get before reaching the age of twelve. The necessity of earning his own bread, or of assisting in earning bread for himself and the other members of his family takes him out of school before reaching that age. As at present conducted schooling becomes repellant to many boys, and they are glad to leave it, even to go to work for a living.

This is not only a calamity for the boy, but it is a misfortune for the country.

We must lengthen this period of schooling.

The introduction of manual training in all our public schools will do this. By interspersing his ordinary studies with daily intermissions or vacations at the lathe, with the saw, the chisel or the plane, or with some other form of work, we will make school so interesting for the boy that he will be anxious to remain in it. We want to make the boy's parents, as well as the boy himself, feel that while in school he is learning the rudiments of a trade which will make his wages higher when he goes to work than they otherwise would be. Thus we will give his parents an incentive to keep him in school longer.

There is another advantage for this system of training which we must keep in mind. By beginning to use tools early, a boy quickly learns his own inclination and aptitude, and is able to make an intelligent selection of the sort of a mechanical calling for which he is best fitted. He is thus saved from the mistakes committed under the present conditions, when, at a later age, necessity compels him to make a choice of trade without any preliminary reconnaissance of the ground such as the primary school work in the elements of the tool handling will give him. These mistakes in the choice of a trade are probably far more numerous than most persons imagine. Usually they are discovered too late to be remedied. Often they disastrously affect the person in his whole life work.

Let us send "the whole boy" to school.

We will thus make a broader and better man of him, make the country prouder of him and make the country better because he has lived.

Moreover, by teaching the boy the new things which we propose to teach him he will also be learning more of the old things than he learns now. A boy who gives an hour a day to manual training will make greater progress in his ordinary school studies than will the boy who omits this instruction. This is the testimony of educators everywhere who have experience in this field.

One of the reasons why we must adopt some widely diffused method of creating skilled workers is that under the labor union policy of restriction and exclusion the old-time apprentice system has almost disappeared in the United States. And, within the next twenty or twenty-five years it promises to entirely disappear. A large proportion of the new mechanics whom we are getting now we are getting from Europe. As most of these are, at the outset, ignorant of our language, and as practically all of them are ignorant of our ways, we must teach them many things before we can fully utilize them in our industries.

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—In "breasting" a saw to make it round, do not buck the piece you joint with right up to the saw as if you were going to cut a piece of wood. The piece, whatever it is, should be passed back and forth in front of the saw, so when it is done the edge of the teeth will be square and full. If you jamb a piece of emery hard against a saw to joint it, it uses up about  $\frac{1}{4}$ -inch before the teeth are filed down to a full point, and when this is done the saw will want jointing again before it will do good work. Most people think that a block of emery is just the stuff for this purpose, but unless you know how to use it, it is the poorest stuff in the world for this use. A good way to breast a table saw is to life the table so that a piece of emery will just hit the teeth, and pass it back and forth across the saw.

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**WANTED.**—Position to take charge of modern mill. British Columbia preferred. Can run rotary or band saw, any kind of feed. Good references. Apply "Canadian Woodworker," Toronto.