

Horaby Clockwork Trains.

I am sorry that so many of my readers have had to be kept waiting for these trains. We knew the demand would be very large, but we did not anticipate that it would be quite so big as has proved to be the case. Both dealers and boys are charmed with these trains and those boys who have been lucky enough to obtain them so far are having good times at home. More machines and more workpeople are being added to the Company's Train Department, and very soon I hope all demands will be filled.

The M.M. on Sale at your Dealers.

Do not forget that the *Meccano Magazine* can now be obtained through your regular dealer. To prevent disappointment, however, you should place an order with him to have a copy saved for you regularly. If you prefer to have it direct from us it will be necessary for you to send 6d. in stamps for the next six issues.

The Editor

New Essay Competition.

We have noted with pleasure the great interest taken in the recent Essay Competitions, and the unfailing popularity of this form of competition among Meccano boys. We are, therefore, announcing a new one, and we look forward to receiving a record number of entries.

The subject of the Competition is "How I would run the *Meccano Magazine* if I were Editor."

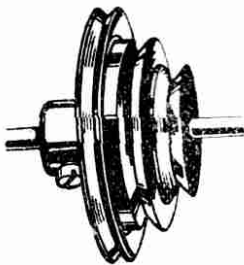
The Competition is open to all readers of the *Meccano Magazine*.

An Inventor's Outfit "B" will be awarded for the best Essay, with other awards for Essays showing special merit.

The closing date is February 19th, and the result will be announced in the March-April issue of the Magazine.

Write on one side of the paper only, about 500 words. Give your name and address and age on the back of each sheet, and address the envelope "Meccano Ltd., Essay Competition, Binns Road, Liverpool."

Meccano Cone Pulley.



A useful new Meccano accessory part which enables the user to drive a lathe or other machine at three different speeds. Our illustration shows the actual size of the pulley.

Meccano Cone Pulley .. 1s. 6d. each.

Life Story of Meccano

By FRANK HORNBY.
(Continued.)

As I have already said, our bolts are made from steel, and if they were sent out to you in the condition they come from the machines they would very quickly rust. To prevent this they are very carefully and thoroughly cleaned with chemicals, after which they are poured into an electrically operated plating vat which coats them with brass. During the whole of the brassing process they are turned over and over thousands of times, and by this means not only plated, but thoroughly polished.

After this they are sent to an Inspection Department where each bolt is inspected before it is assembled to a nut. We do this to fully ensure that faulty bolts will be rejected and not allowed to be placed into outfits. We have scores of girls whose sole work it is to assemble our nuts and bolts together, and although the cost of this is naturally very large, we feel that the results secured and the satisfaction given to all who build Meccano models amply repays us.

In this issue of the *Meccano Magazine* you will notice that we have included a photograph of a section of one of our departments. This is what we call our tool room, and the men employed in it are experienced, highly skilled and highly paid. It is in this room that the whole of the tools for making Meccano parts are made. Our tools are made from what is called high-speed steel, which contains a large percentage of carbon. It comes to us in bars about 12ft. long and when new tools of any kind are required pieces are first cut off from this bar of suitable length by a power operated machine called a saw.

The pieces then go to one of the shaping machines to have all their sides machined flat and true. Some of the shaping machines work horizontally, and these are used mostly for outside flat surfaces; others work ver-

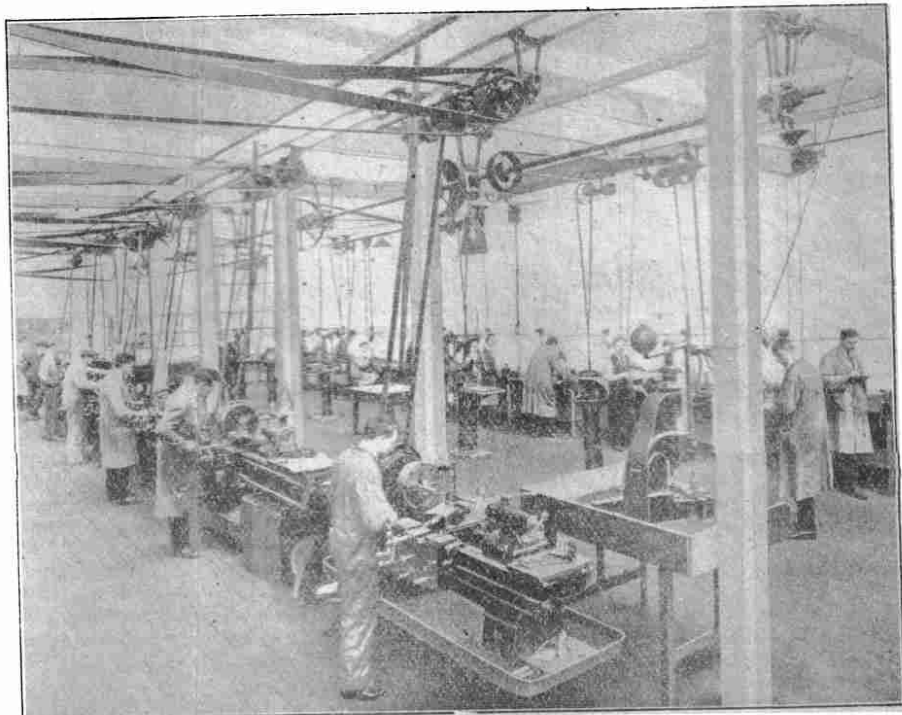
tically, and these are used mainly for inside machining or when a special outside shape is required. From there the shaped pieces go to a tool maker on the bench who takes charge of them from that point, and who is responsible for the final completed tools. He first marks out the shape of each tool on each piece, and then passes them back to a skilled machine man, who either turns them in a lathe, mills the surfaces in a milling machine, or shapes them in a shaping machine, exactly to the markings of the tool maker. The latter workman now takes them back to the bench and finally fits the whole of the parts of the tools together.

Certain parts, principally those which do the actual cutting, are then passed to a hardener to be tempered and hardened. The hardener must be a specialist at his work, otherwise the tools would be spoiled by incorrect handling. After they have been through this process each tool is ground down further to give a good cutting edge and to ensure perfect flatness. The whole of the parts of the tool are then sent back to the tool-maker on the bench, who assembles them and makes the final adjustments.

In this room we make the whole of our tools for producing the various Meccano parts, press tools for blanking and piercing, cutters for cutting gear wheels, all our drills, taps and dies, &c. It is really the quality of our work in this room which decides the final accuracy and quality of the finished Meccano parts, and you will understand, therefore, how essential it is that we employ none but the best class of labour.

The machines in this department work to one-thousandth part of an inch, which, of course, helps considerably to ensure the final accuracy of the tools. There are many kinds of tools but only one best, and that is the kind we believe in. A cheap or badly made tool may do good work for a short time, but it has no length of life, and as we require a very large output indeed from each tool, it pays us to have none but the very best.

(To be continued.)



A Section of the Meccano Tool Making Department.