Novel Model-Building Competition

£5 for the Best Model of a Dragline

IN our April issue we described the heaviest Dragline in the world, and we announced that Messrs. Ruston & Hornsby Ltd., the makers of the great machine, have offered a prize for the best Meccano model of their Dragline. The prize is a cheque for £5, with second and third prizes added by Meccano Limited of Meccano products to the value of Three Guineas and Two Guineas respectively, to be chosen by the winner from the current Meccano catalogue.

Draglines at Panama

Draglines are excavators something after the design of steam navvies, which were described and illustrated in a recent issue of the "*M.M.*" A Dragline obtains its name from the fact that the bucket is dragged towards the machine on a flexible rope, instead of being mounted on an arm that pivots on a jib as in a steam navvy.

Draglines excavate below the level on which they stand and work towards themselves, travelling backwards when they have excavated all the material within reach. They are used principally for drainage work where the ground is too wet to allow a steam navvy to stand. Draglines were extensively used in the construction of certain parts of the Panama Canal, and in conjunction with steam navvies they accomplished the work of thousands of labourers at a fraction of the cost.

A Monster Excavator

The heaviest Dragline in the world is that known as the Ruston & Hornsby No. 250. It weighs over 300 tons when fully equipped and in working order, and the bucket has a capacity of eight cubic yards. The jib is 120 ft. in length, and a cutting power of 30 tons is exerted on the bucket teeth. The coal bunker of this giant has a capacity of four tons and is filled by a special hoist. The main engines are upwards of 400 h.p., and separate engines of 200 h.p. are fitted for the slewing motion.

We have already illustrated this machine in its entirety and in detail, and this month we are able to give a further view, which clearly shows the method of mounting the jib, and other interesting details.

Photograph courtesy] [*Messrs. Ruston & Hornsby Ltd.*

The Ruston 250 Dragline

Suggestions for Competitors

We hope that a large number of our readers will enter for this competition. Those who intend doing so will note that the jib and the engine platform rotate on the base by means of a wheel-race, which may be seen in the accompanying illustration. The base itself is mounted on flanged wheels which run on rails. These wheels are driven by sprocket chain from gear wheels centrally mounted immediately under the platform. The gear wheels themselves may be driven by axle rods, deriving their power—through bevel gearing—from a vertical shaft, gearing directly to the engine on the platform above.

Those who do not wish to make their model so intricate as to embody this driving mechanism may very well dispose of the driving shaft and chains and simply fix their model to a base mounted on wheels. The wheel-race, on which the platform and jib pivot, might even be eliminated if desired, such modifications as these being quite at the discretion of the model-builder.

Competition Conditions

There is no age limit, and any size of Meccano Outfit may be used. Entrants should state their age and the number of Outfit used, however, as this will be taken into consideration in making the awards. The competition will close on September 30 next. Actual models should not be submitted, but drawings or photographs may be sent together with a description of the special features of the model entered, and on these the awards will be made. We shall illustrate a Meccano model of this 250 Dragline when announcing the results of this competition in our November issue.

BRIGHT IDEAS

These columns are reserved for dealing with suggestions sent in by Meccano users for new parts, new models, and new ways of making Meccano model-building attractive. We are always pleased to hear from any Meccano boy who has an idea which he considers will be useful in the Meccano system.

E. W. Goodman (Dulwich, S.E.).—Sorry we overlooked replying to your idea for a 1 × 1½ double angle strip. We have made a note of it and it will come up for review shortly.

L. Nash (Uxbridge).—We have quite a number of new accessories in view for the Hornby trains. They will be announced as they become ready for the market.

R. Ball (Rainford).—The split coupling you suggest for a big end joint seems to us at first glance to be a rather awkward and expensive piece to manufacture. We shall look into it, however.

Percy R. Newnham (Birmingham).—We incline to the opinion that your suggestion is prompted by some excessive strain, imposed on the wheels of your particular models. We have never had the experience of grub screws failing to hold, even under stress. Your suggested wheels with lengthened cones to permit of two grub screws would add very materially to their cost.

H. V. Small (London, W.C.).—A reversed crank may be made from existing parts, i.e., two cranks bolted together.

N. Carter (Purley).—(1) A 2½" diameter flanged wheel may be formed by bolting the flanged disc to the face plate. (2) We are experimenting with channel sections.

L. Brown (Liverpool). — The Meccano system is continually being improved by the addition of new parts. A new parts list has been sent to you, as requested.

W. O'Brien (Dublin). — The Hornby Tank Loco is 11½" in length, and is fitted at both ends with a special bogey. By the way, the name of this loco has now changed and henceforth it will be known as No. 2 Tank Loco.

J. Johnson (Tunbridge Wells).—A strong application of your screwdriver and spanner to the nut and bolt securing the girder will give you a firm fastening.

"The Editor of the '*M.M.*' as I imagine him"

The Editor of the "*M.M.*" according to Master Eric Mitchells, of Stockton-on-Tees, one of the prize winners in our recent competition

John Candler (Tulse Hill, S.W.).—The objection to a sleeve piece to fit over the Meccano rod is that it would not fit the standard-sized holes throughout the Meccano system.

F. A. Berardt (W. Dulwich, S.E.).—We rather think that the governor on your Hornby engine has become defective. It should control the speed of the engine to ensure it keeping to the track without load.

J. Maiden (Windermere). — The adaptability of Meccano is such that very good representations of cylinders and pistons may be constructed from it. To introduce cylinders and pistons, as you suggest, would only be duplication, and moreover they would not serve a general purpose.

J. Cleaver (Wigan). — The couplings on the Hornby Trains are made sufficiently long to permit of free action of the carriage on the narrow radius curves, otherwise the buffers would foul each other.

P. H. Doherty (Streatham Hill, S.W.).—As the formation you suggest is so infrequently employed there would be no object in introducing it when it can be obtained from existing parts.