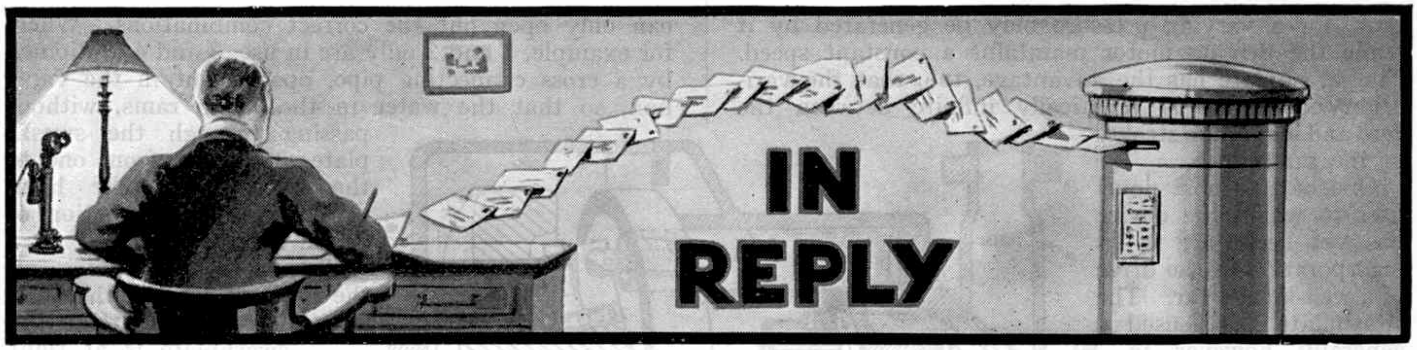


READERS' SUGGESTIONS FOR MECCANO IMPROVEMENTS

CONNECTING ROD.—We note your idea that a rod flattened and drilled at one end should be introduced. A part of this type might be used as a connecting rod in models of steam engines, etc., the rod being mounted directly on the crankshaft by means of its perforation, but the uses to which the part could be applied would be very limited, and therefore it would not form a suitable addition to the system. Regarding your idea for a double pulley block having two sheaves mounted at each end, a block of this type is rarely found in actual engineering and it would have no special application in the Meccano system. (*Reply to A. Wautier, Deurne, Antwerp*).

FLANGES ON PLATES.—We have noted your idea that extra flanges should be added to the 3½″×2½″ Flanged Plate. We do not consider that this alteration would be advisable, however, as the additional flanges would be liable to restrict the uses to which the Plate can be put in a number of models. The remarks do not of course apply to the 5½″×2½″ Flanged Plate, as this is considerably larger in size. If additional flanges are required when the Plate is used in a model, you will find it quite a simple matter to bolt 3½″ Angle Girders to the Plate to produce the required result. (*Reply to G. Manlios, Buenos Aires, S. America*).

RUBBER CORDS.—We were interested in your idea that endless rubber cords or bands should be introduced for use as driving belts in small models. The great drawback to this idea is the fact that a very large range of sizes of rubber cords would have to be introduced in order to supply every need met with in model-building, and such a procedure would be very costly. Consequently it would not be advisable to undertake this addition, but model-builders who wish to try out this type of driving transmission should have little difficulty in obtaining suitable rubber bands from stationers, etc. (*Reply to N. O'Neal, Londonderry, Ireland*).

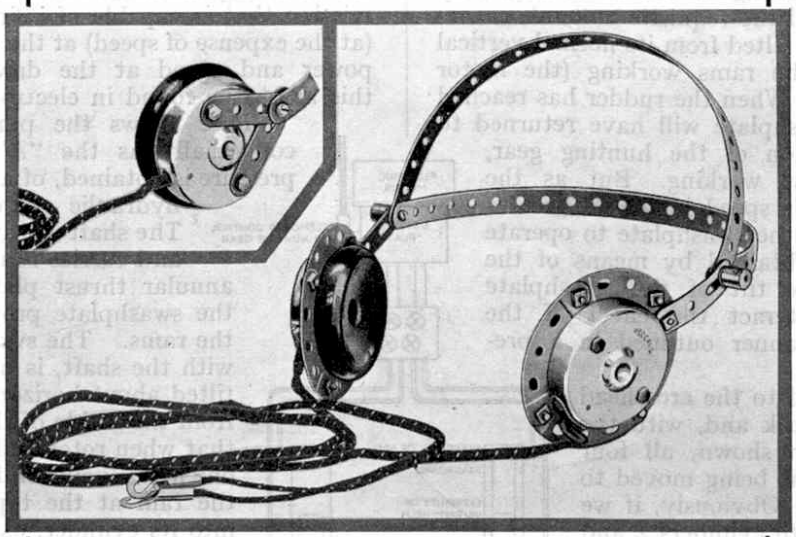
NEW FLANGED PLATE.—We are not in favour of your idea for a 3½″×2½″ Flanged Plate having flanges on all four sides, as few uses could be found for it in general model-building. Even in the few instances where your suggested part could be employed, it would be quite a simple matter to use a substitute composed of a 3½″×2½″ Flat Plate, and four Angle Girders. Regarding your proposed front axle for a motor car, there is no need for this, as a realistic front axle can be built up from standard accessories (see Motor Chassis Instruction Leaflet No. 1). (*Reply to A. Merieux and J. Moncomble, Nice, France*).

IMPROVED 3″ WHEEL.—We note that you think it would be a good idea to form a groove in the rim of the 3″ diam. spoked Wheel so that a 3″ diam. Dunlop Tyre might be fitted to it. This idea is quite sound and we agree that spoked wheels, when fitted to model motors or to the Meccano Chassis, would enhance the appearance of the models considerably. Incidentally we have received quite a number of suggestions of this nature recently and we have therefore placed the scheme before our Production Department for consideration. (*Reply to Maulio Mazziolto, Rome, Italy*).

CONNECTING ROD.—There is no need for us to introduce a special connecting rod flattened and perforated at each end for use in models of steam engines, as a standard Strip of suitable length will serve this purpose admirably. Your suggested part would be very unadaptable. (*Reply to L. Faulkner, London, S.W.2*).

IMPROVED THREADED PIN.—In working models where the Threaded Pin is used as a pivot for a constantly moving part, there is a tendency for the nut securing the Pin to work loose after prolonged operation, and your idea that the threaded portion should be extended so that two nuts could be screwed on and locked together, is quite sound. As a matter of fact, if two Spanners are used when fixing the existing type of Pin in position, there is very little likelihood of the part working loose, but we are nevertheless considering your idea, and we may be able to comment on it further. (*Reply to D. W. McLennon, Manchester*).

An Inexpensive Meccano Telephone Headset



The above illustration shows how an excellent pair of headphones can be built up from two 4,000 ohm. Meccano earphones and a few standard Meccano parts. The Meccano earphones, as will be noted from page 840, cost only 3/– per pair, so that the complete headset is very inexpensive. The inset shows an alternative method of securing the "headband" to each earphone, two 2″ slotted Strips being secured on the hexagon bolts that pass through the case of the receiver. Either method of assembly will result in a headset possessing a high degree of efficiency and comfort.

THREADED ROD.—Your idea that we should introduce special threaded rod having threads that could be engaged with the Meccano Pinion is novel, but we regret quite impracticable. In order that the threads could mesh with the Pinions, the rod would have to be about the same diameter as the Meccano Worm, and it could not then of course be used in a similar manner to the existing Screwed Rod! Your suggested tapped washer appears to be an interesting idea and we hope to give it further attention. (*Reply to A. H. Williams, Cardiff*).

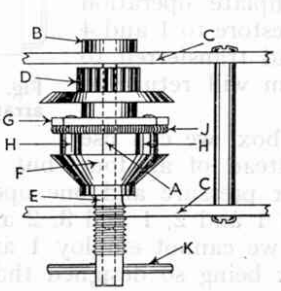
FLEXIBLE STRIPS.—There appears to be quite a number of uses for short perforated Strips prepared from springy tempered steel. They would, for instance, be useful in building up the laminated springs for a model automobile, while doubtless many other uses could be found for them. We hope to consider this idea in the near future. (*Reply to W. Stevens, Cardiff*).

DRILL.—We were quite interested in your suggestion that we should introduce a special twist drill that could be fitted into the bores of standard Meccano Couplings. We agree that a part of this type would increase the realism of model drills and similar machines, and it would no doubt be possible to drill wood, etc., with a model equipped in this manner. We hope to consider this idea further and in the meantime we suggest that you try using a 5/32″ diam. twist drill, which may be obtained from any tool shop. This size of drill will fit in a standard Meccano bore and will function quite well. (*Reply to A. Johnston, Melbourne, Australia*).

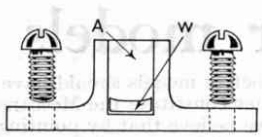
VENTILATORS.—Your suggestion regarding model ventilators is quite interesting. We have in mind the addition of several ship's fittings that cannot be reproduced easily with standard Meccano parts, and it may be possible to consider the introduction of ventilators. Your suggested small screw propeller might also prove useful in models, although it should be possible to build small propellers quite realistically from standard parts. In certain models of ships, for instance, the 2″ diameter Fan (part No. 157) could be used with good effect. We note that you think the Propeller Blades (part No. 41) are too large, but experience has shown that this size of blade "scales" best in the majority of models. (*Reply to R. Legoupillot, Sotteville les Rouen, France*).

NEW RUBBER RINGS.—We note your suggestion that rubber rings for fitting to the 2″ diam. Pulley Wheels should be introduced. These might be of some use as the tyres of small model cycles, etc., and for friction gearing. The 2″ Dunlop Tyre can in most instances be employed for these purposes, however, and consequently we do not consider it advisable to introduce this size of rubber ring. (*Reply to C. W. Lacey, Portsmouth*).

ADJUSTABLE GOVERNOR.—The diagrams and description of your proposed variable speed governor for the Clockwork Motor are very interesting, and for the benefit of readers we are including a sketch showing the main details of the proposed mechanism. The governor shaft A would be held in place between the Motor side plates C by means of a collar B. Its upper end would be journalled direct in the side plate, while its lower end would rotate in a threaded tube E, which could be adjusted in the lower side plate by rotating a key K. The governor shaft A would carry a pinion D, which would couple it to the main gear train of the Motor, a bevelled disc with which the brake lever would engage, and a slotted member G. Small brass weights H would be slipped into the slots in the portion G and would normally be held close to the axle A by an endless spring J. When the shaft A was set in motion, however, the weights H would move outward through centrifugal force and touch the inner surface of a hollow metal cone F secured to the upper end of the adjustable tube E. By altering the position of the cone F, the speed of the Motor could be controlled. This scheme is ingenious, but we are afraid that trouble would result through the weights H jamming against the face of the cone F. However, we intend to give the idea further attention. (*Reply to V. Welsby, Cardiff*).



"FOOTSTEP" BEARING.—Your suggestion that we should introduce a special socket for journalling the ends of vertical rotating shafts, known in engineering as a "footstep" bearing, is quite interesting. As will be seen from the sketch, the bearing would comprise a flanged brass or steel turning in which a "blind" hole A would be drilled to accommodate the end of a standard Meccano Axle Rod. A washer composed of anti-friction metal would be placed in the base of A and would be free to rotate. The upper surface of the washer W would be slightly concave, so that frictional contact between the end of the rotating shaft and the face of the washer would be reduced to a minimum. We agree that it is not possible to duplicate this bearing exactly with existing parts, but when a vertical Rod is to be supported in Meccano mechanisms, you will find that the best way is to mount a Collar close to the end of the Rod and slip the latter into the boss of a Bush Wheel or Double Arm Crank mounted on the basepiece. This form of vertical bearing is far more suited to a miniature engineering system than your proposed "footstep." (*Reply to L. Fisher, Guildford*).



60 DEGREE ANGLE GIRDERS.—At present it is not possible to produce a composite girder of triangular section using the existing Angle Girders, and your idea that we should introduce a range of special girders having their flanges set at 60 degrees to each other is quite interesting. We are keeping the idea in mind, but as there are very few instances where a triangular girder is essential, it is doubtful if many uses could be found for the parts. At present it is possible to improvise a triangular girder by using three Strips or Flat Girders of suitable length and bolting these together in the correct formation by means of Angle Brackets that have previously been bent so that their lugs form an angle of 60 degrees. (*Reply to H. Brown, Sibford*).

NAME PLATE.—Small metal plates on which the name "Meccano" was stamped or printed and fitted with perforated lugs for attachment to models would form quite interesting novelties if added to the system. It is however quite a simple matter to "name" a model after it is completed by cutting out the word "Meccano" from a price list, etc., and mounting this on a small piece of card, which in turn is affixed to the model. Another interesting method that some constructors adopt is to punch out the word "Meccano" on a strip of metal in a "Punch-your-Name" machine and attach this to the model. The resulting nameplate looks most effective, while it costs only a penny! Nevertheless we are making a note of your idea regarding the special metal plate, as it possesses possibilities. (*Reply to F. R. Ashdown, Teddington*).

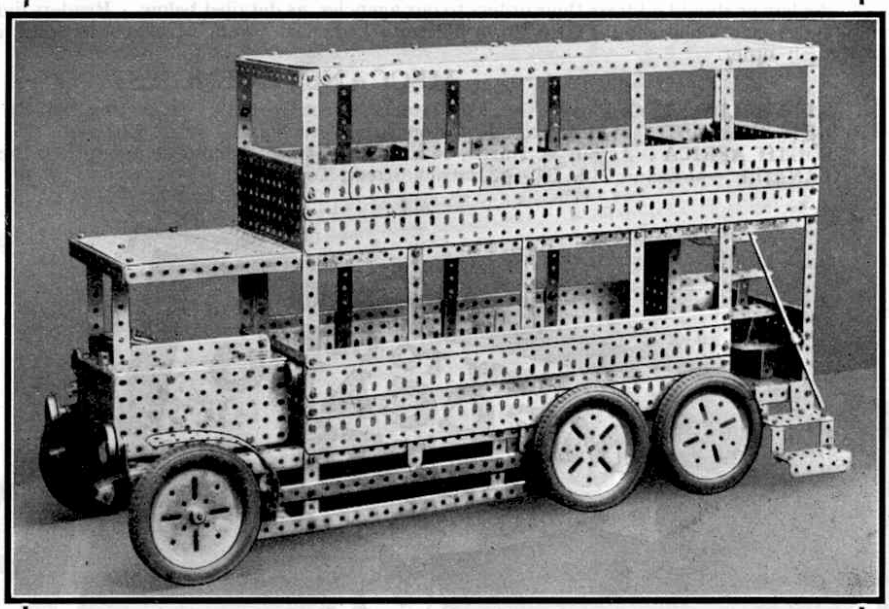
LAMP COVERS.—We note your proposal that small shields made from sheet metal, and fitted with coloured glass or celluloid windows, should be introduced for fitting over the Meccano lamps. These shields could be employed in models of automatic colour signals, electric warning indicators, etc., but you should have little difficulty in making small shields from thin cardboard and coloured celluloid or gelatine. The "coloured glasses" in the Meccano "Automatic Traffic Control Signal" (see "Suggestions Section," June, 1929) were devised in this way. (*Reply to J. R. Sprent, Portsmouth*).

IMPROVED POINTER.—We are interested in your suggestion that the existing Pointer (part No. 156) should be redesigned. Your idea apparently is to delete the "tail" portion of the pointer, as you consider that this portion serves no useful purpose. We would point out to you, however, that the tail portion is of considerable use in delicate mechanisms as it will automatically return the "arrowhead" of the pointer to the zero mark on the scale after the deflecting force has been removed. We are also interested in your suggestion that clock hands should be produced in several sizes on similar lines to your modified pointer. This idea is quite sound, and we hope to consider it. (*Reply to C. Cooper, Ipswich*).

SMALL BALL BEARING.—We were interested in your proposal that conical bearing pieces and suitable balls for constructing a "bicycle" type ball bearing should be introduced. The special cones would be designed so that they could be attached to the bosses of the standard Gears and Pulleys, and when mounted in this way the various wheels could be rotated with a minimum of friction. Numerous uses could no doubt be found for a bearing of this type, and we shall give your idea careful attention. (*Reply to W. D. Butler, Redditch*).

FIBRE DISC.—Small perforated discs cut from fibre or some insulating substance might be of use in the construction of Meccano electrical gear such as rotary switches and similar mechanisms. We are considering this suggestion, and at the same time would remind you that by using the Meccano Insulating Bushes and Washers it is possible to isolate electrically a number of metal contacts mounted on a standard metal Bush Wheel. Your suggestion for an insulated terminal is interesting and has been noted for attention. (*Reply to F. Woods, Newcastle-on-Tyne*).

A WELL-PROPORTIONED MODEL OMNIBUS



Our illustration shows a particularly handsome Meccano six-wheeler motor bus built by Edgar Bell of Felixstowe. The model conveys a good idea of the size and power of a modern double-decked omnibus, and also shows what excellent "coachwork" can be constructed with the aid of standard Meccano parts. For this splendid effort Bell was awarded one of the principal prizes in a recent Model-building Competition.

NEW COLLECTOR SHOE.—A small collector shoe somewhat similar to Part No. 149, but fitted with only one "spoon," might be of some use in the Meccano system. The suggested shoe would certainly be more compact than the existing pattern of current collector, but against this must be placed the fact that a single spoon collector would not provide such a reliable contact as the "double spoon" type. In certain cases where current has to be fed to a motor, etc., mounted in a revolving frame, the suggested small pattern of shoe would be useful, and we are therefore keeping your idea before us. (*Reply to X. Poincet, Paris*).

NEW ANGLE GIRDERS.—Your idea that an Angle Girder 1" long should be produced is quite good. We are rather doubtful as to whether a very large number of uses could be found for the part, but we are nevertheless keeping the idea before us. It would not be advisable however to fit a boss to the 2½" Curved Strip, as the resulting accessory would have little practical application. The Double Arm Crank fulfils the function of a strip fitted with centre boss. (*Reply to F. Marquand, Woodville, New Zealand*).

IMPROVED BOILER.—If the Meccano Boiler (Part No. 162) were embossed in a similar manner to the boiler casing of the Meccano Steam Engine it would certainly look more realistic when fitted to models of steam engines, but you must remember that the Boiler is a very adaptable part, and is used for many purposes such as petrol tanks, pump cylinders, and bonnets, in addition to its function as a boiler. If a steam cock and man-hole covers were embossed on the Boiler they would consequently look very out of place in many models. We regret, therefore, that we cannot consider this alteration. (*Reply to J. B. Forster, Birmingham*).

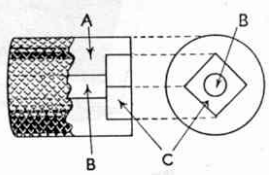
LONGER LENGTHS OF CORD.—We were interested in your suggestion that we should introduce extra long lengths of Meccano cord, and we agree that these would be useful in certain large models such as the Block Setting Crane and the Ship Coaler, where multi-sheave pulley blocks, etc., are employed. We are keeping your idea in mind, and in the meantime would remind you that a number of lengths of Cord if tied together carefully will function quite satisfactorily. When a knot has been tied, you should nip it several times with a pair of flat-nosed pliers, thus rendering it much thinner than at first. A small knot so treated should give little or no trouble when passing round the pulleys in large blocks. (*Reply to D. Garnett, Bournemouth*).

WORM GEAR STIRRUP.—We note your idea that we should manufacture a special casting suitably drilled so that axles carrying a Meccano Worm and a Gear Wheel or Pinion could be journalled in it. The purpose of this part would apparently be to ensure that the Worm and Gear Wheel were kept constantly in mesh, and that the Worm would not "ride up" over the teeth of the Gear when considerable pressure was applied to the axle carrying the latter. This part would be an unnecessary addition however, as you will find it quite a simple matter to build up a rigid stirrup or bracket from standard Meccano parts, and there will be no tendency for the Worm to bind in the teeth of the Gear if the unit is adjusted carefully. (*Reply to N. C. Brown, Glasgow*).

SPECIAL RODS.—The idea that lengths of standard rod tapped at each end should be introduced has been put forward previously, but we cannot consider introducing these parts as their range of utility would be extremely limited. The standard Screwed Rods will be found to fulfil practically all the functions of your suggested accessories. (*Reply to R. C. Randall, St. Albans*).

ALLOY PARTS.—Your idea that the various strips, plates, etc., in the Meccano system should be manufactured from non-ferrous metal is, we are afraid, quite impracticable. We agree that if, for instance, the parts were made from an aluminium alloy, they would be impervious to rust, but they would not possess the requisite strength. In addition, the use of non-ferrous metal would mean a considerable increase in the price of all the parts in the system. (*Reply to S. Jennings, Whitehaven*).

THUMB SPANNER.—The operation of screwing up nuts and bolts is one of the most important in Meccano model-building and new ideas for the simplification of this task are consequently always of interest. Your idea for a special "nut holder" or "thumb spanner" is ingenious, and for the benefit of other readers we are including a sketch of the proposed "gadget" herewith. The holder would consist of a short length of brass or steel rod A milled on its outer surface so as to provide a good grip for the fingers. A hole B (standard axle size) would be bored through its centre and a square recess C formed in one end as shown in the sketch. When using the spanner, a nut would be placed in the recess C and the portion A then rotated by the fingers. As the nut would be screwed into place, the shank of the bolt, etc., would pass down the bore B. We note that you think this device would be useful in screwing up nuts in awkward places, but we are afraid that it would not possess any advantages over the Box Spanner (part No. 34b), on account of its bulk. The key portion of the existing Box Spanner is smaller than your special spanner and consequently it is more adaptable. We are not losing sight of your idea, however, and may be able to give it further consideration. (*Reply to E. Akerman, Newcastle, N.S.W.*).



REVERSING SWITCH.—We are not thinking of introducing a special four-pole reversing switch as a separate unit, as a switch of this type can be built from standard parts. (*Reply to F. Goldberg, Tipton*).