I nodded wisely.

"Subsequently," he continued, "through the exciting of the calibrator filaments, a communicatory current build-up circulating in sympathy with the centrifugal tripper-gear, establishes a milli-cycle sequence in the smooth-wave Razzini contour-selectors."

I scratched my leg and looked cunning.

"Finally," he went on, "when the mercury sphere split throw rotary seimic breaker is closed through all its baffle bars, the low voltage Glauber circuit will complete the pressure accumulation in the subsidiary arc-zones, so liberating the overload on the correcting condensers, resulting in the isolating of the shunt windings in the laminated ball screen. This, of course, will bring in the Graffe Compensator Relay actuating the self-centring armature feeder key. The Windle poloid jacket will short out the vector blades and complete the circuit to the McKillick conveyer-notcher. Thus is carried the ultimate current valuations to the final stages."

"In short," I ventured.

"In short" he said magnificently drawing himself to his full height and fixing me with a look of fanatical fervour—"In short—my 0-6-0 Tank will run round the track!"

I bounded to my feet—"It was never in doubt," I cried, and helped him to refold his masterpiece.

"Thank you for your valuable advice, Mr. Scorpio," he said, his voice deep with feeling.

I polished the fingernails of my right hand against my lapel, and smiled diffidently. "You're welcome," I told him generously—"If you never ask, you never learn!"

"SCORPIO."

THE JUBILEE OF SCALE MODEL TRACK.

By J. L. K. MANN.

I feel that a few comments are necessary on the Guest Editorial by Mr. H. A. Robinson in the April issue.

Development since 1903 has certainly not been at a consisent rate. For nearly twenty years, between the wars, "steam-roller scale" gauge O satisfied the vast majority of modellers. The firm responsible for the inauguration of "scale model track" seemed perfectly content to stick to its 1903 ideas, and the present day standard O gauge loco carries on the "steam-roller" tradition, along with "new" electric mechanisms on the now ancient principle of two side-plates held together by screws. On the other hand, the Leeds Model Company produced models accurate to prototype and on wheels of an admirable profile; furthermore, the finish and lining was a long way different from the printed tinplate effect of some model firms.

Surely the greatest steps forward in ideals and standards were made in the ten years following 1936. By this time OO had appeared and was beginning to win converts from O gaugers; electric propulsion was cheaper in the smaller scale (at any rate, as far as 'capital cost' went), and a finer degree of detailing was beginning to be the fashion. Soon came the war, and in the gap caused by the ceasation of manufacturing several individuals and groups came forward with ideas of their own, along with new standards—especially fine scale. Bond's was the only firm in pre-1939 days to produce a near-scale O gauge track; most modellers probably left it alone because cheap wheels to suit were not very readily available. In any case very many modellers in that period preferred to buy a loco in a box rather than to set to and make their own

In my opinion, the greatest single cause of the metamorphosis of the model railway man from the model-buyer to exacting model-maker is the continuance throughout the war, often under hazardous conditions, of the modelling journals. Men on active service, or working away from home had only the monthly magazine as a link with their hobby; the prototype drawings, particularly of pre-1923 examples, produced the desire for really true-scale work, even to a particular period. In addition, the photographs and descriptions of models by men intent on positive realism, such as Michael Longridge and F. J. Roche, produced the desire to do likewise. Furthermore, the new standards recommended by the B.R.M.S.B. were given full publicity; all this in addition to the many hundreds of hints, tips, and wrinkles on all matters of construction, from coach lining to baseboard structure and scenic work. Truly the editors and staffs of the modelling journals have every reason to feel pride, in looking round the present- day healthy state of the modelling hobby, that they themselves are responsible for much of the improvement since the "toys-for-boys-of- all-ages" era.

Our Cover Picture

Shows Westbury Station on the 4 mm. scale, 16.5 mm. gauge layout built and operated by Mr. C. Humphrey Leach of Cleckheaton. The scenic effects are very realistic and the Red Lion conveniently situated for travellers who require fortification for their journeys. Mr. Leach's layout will be described in our pages.

Correction.

Mr. E. H. Halliwell, whose Gauge O 4-6-4 ex-L & Y tank was featured on the cover of the July issue wishes to point out that the engine was not built by himself but was the work of Mr. Edward Exley of Bradford.

Publications.

"Western Region Shed Allocations."

Published by the Locomotive Club of Great Britain, 44, Shelburne Road, High Wycombe, Bucks. 42 pages including art inset of 8 pages of photographs. Price 1/9 nett.

This is the second of a series of books dealing with the regional allocations of locomotives. The first which covered the Southern Region was reviewed in our June issue.

The presentation of the Western Region book follows that of its predecessor with loco. dimensions, names, numbers and shed allocations and the information is correct to 27th May, 1953. A supplementary sheet takes the record to June. All diesels and gas turbine locos are included and a lot of information has been packed into the pages. We anticipate that G.W.R. enthusiasts will welcome the publication.

Part 11.

A Gauge 0 Steam Loco for Beginners.

By "1121."

Front Cover.

The front cover is simplicity itself, consisting merely of 1/16 in. brass plate attached to the block with four screws. Cut the plate to size (Fig. 54) mark out the hole positions carefully and clamp it to the front end of the block with a piece of soft packing under the other jaw of the clamp to protect the other end of the block. Make sure, when doing a job of this sort, that the clamp jaws close parallel at least, or even "toe-first"—never "heel-first" on the edge of the job. (Fig. 55). Rest the job on two parallel blocks to clear the clamp (Fig. 56) and drill the four holes No. 51 through the cover and into the block about 3/16 in. deep. If you can't avoid your clamp covering up one of the hole positions, leave this one out and drill it later with the cover held in position by the other three screws. Put a centre-pop mark on the top edge of the cover to correspond with the similar mark on the top of the block, so that you know which way it goes on. Remove the clamp, tap the block 8 B.A. open out the holes in the cover No. 43, and remove all the burrs. This latter is very important—you'd be surprised how often we've had complaints about paper joints blowing out, only to find that the builder had omitted to remove the burrs round the holes, between the two parts, so that the paper joint was not being held at all.

It is possible that drilling and tapping the screw-holes in the block may slightly bulge the metal into the bore at the end, which will cause trouble when fitting the piston later, by causing the end of the bore to appear to be slightly smaller than it really is, so this must be watched for and any excess metal reamed, filed or scraped out. The same applies to the port-face.

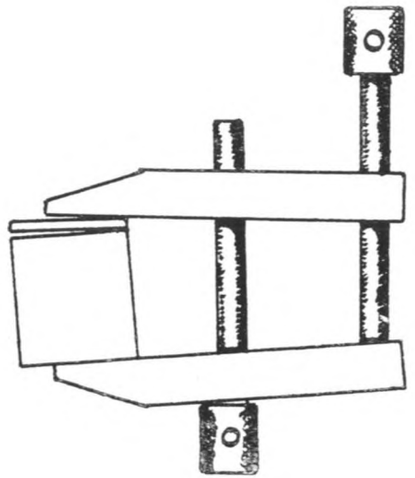


Fig. 55.

Keep the jaws of the toolmaker's clamp parallel —not like this!

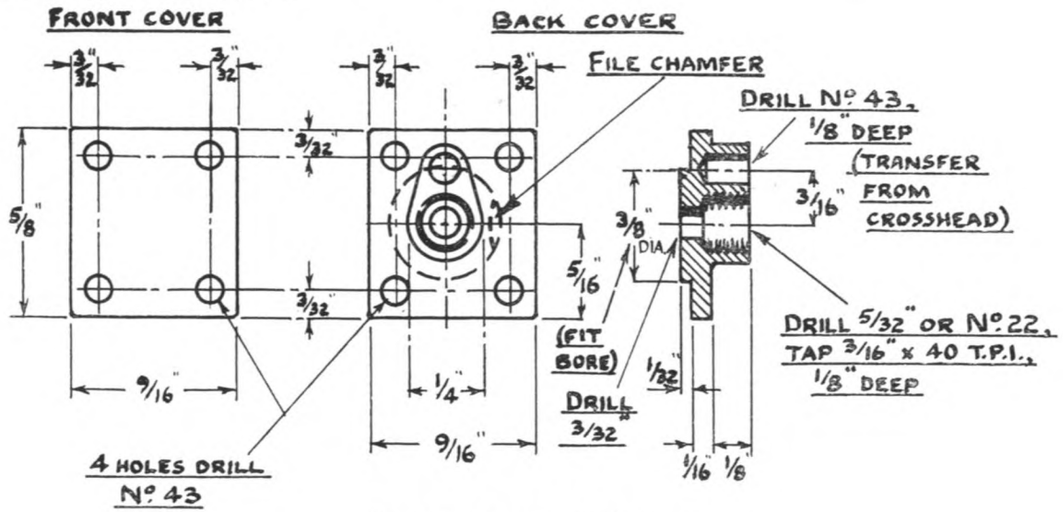


Fig. 54. The two cylinder covers

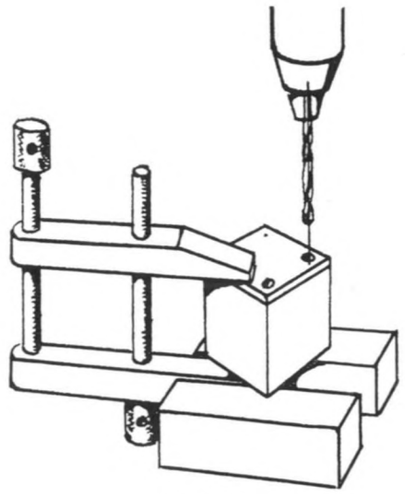


Fig. 56.
Drilling the fixing holes in the front cover and cylinder block in one operation.

Back Cover.

This is another bit of brass plate, this time ⅛ in. thick, cut a little over size, and the pear-shaped boss, made from the same material, or ⅛ x ¼ in. strip, silver-soldered on in approximately the correct position. The boss is centre-popped for the piston-rod hole, and the whole thing held in the 4-jaw chuck, with the centre-pop running true and the surface of the plate running as flat as possible. The 3/32 in. drill is now put right through at the centre-pop mark, and the hole then opened out to 5/32 in. diameter for a depth of ⅛ in., and tapped 3/16 in. x 40 threads per inch with a plug tap—this can be put straight in as these fine threads are very easy to tap in brass. Note, incidentally, that when we give a certain depth for a drilled hole, this depth is to the "shoulder" of the drill, not to the extreme point. In other words, we need this depth of full diameter hole.

The inner side of the back cover has a short spigot turned on it to fit the end of the cylinder-bore, and a little low cunning has to be introduced at this point

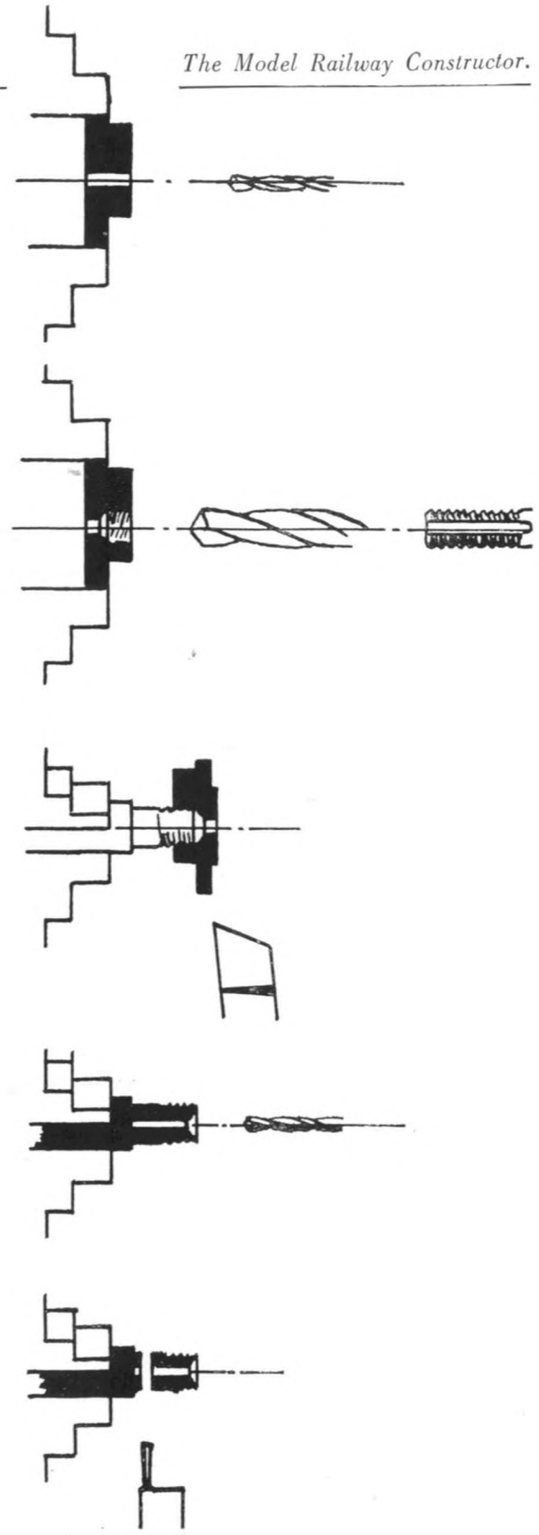


Fig. 57.
Sequence of operations for machining back cover and gland screws. Top to bottom.

1. Hold in 4 jaw chuck on edges of plate with boss outwards, centre and drill 3/32 in.

2. Open out to 5/32 in. for 1/8 in. deep, tap 3/16 in. x 40 T.P.I. full depth.

3. Turn and screw bar 3/16 in. x 40 T.P.I., screw on cover and turn spigot.

4. Remove cover, centre bar, drill 3/32 in., countersink to full diameter.

5. Part off and repeat for second screw.

to ensure that this spigot is truly concentric with the piston-rod hole. It will be appreciated that no effort must be spared to be certain that no eccentricities creep in between the two, or between the piston and its rod, otherwise severe binding will result. The next stage, therefore, is to hold a piece of brass or bronze rod in the 3-jaw chuck and turn it down to 3/16 in. diameter and screw 3/16 in. x 40 threads per inch for a length of 3/16 in. The rod you use for this can be anything over 3/16 in.—¼ in. would be a convenient size— unless you are one of the lucky ones with a collet lathe you cannot rely on using 3/16 in. rod and getting a true thread on it, as this bit is destined to become one of the gland screws and the above remarks on concentricity apply. When you do all this, have as short a length of rod sticking out of the chuck as you can conveniently manage. Now screw your half-finished back cover on to the thread, and very carefully start turning the spigot, using the end of the bore in the cylinder-block as a gauge, until it will just push on. Watch out for the corners of the plate coming round as you feed the tool in, and aim to get a flat surface on the plate where it comes against the end of the block, and a sharp corner where this surface joins the spigot. The spigot must only be 1/32 in. long, which means that the plate being ⅛ in. thick you have got 1/32 in. spare to experiment with when getting the diameter right, which surplus 1/32 in. is subsequently faced off to bring the plate down to 3/32 in. thickness.

When you've finished all this, centre the end of the bit of bar, drill it up 3/32 in. diameter (you can do this before you screw on the cover for machining, if you are at all afraid of knocking the bar out of truth when unscrewing the cover) and cut it off ¼ in. long overall. This whole sequence of operations is shown in Fig. 57. While you are at it, make another gland screw which

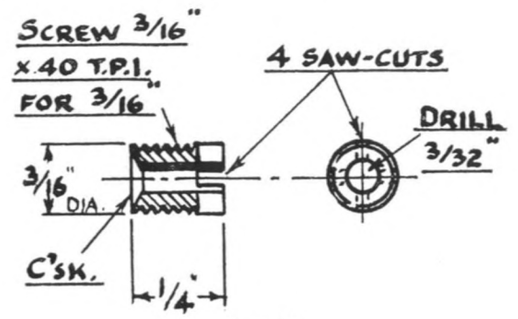
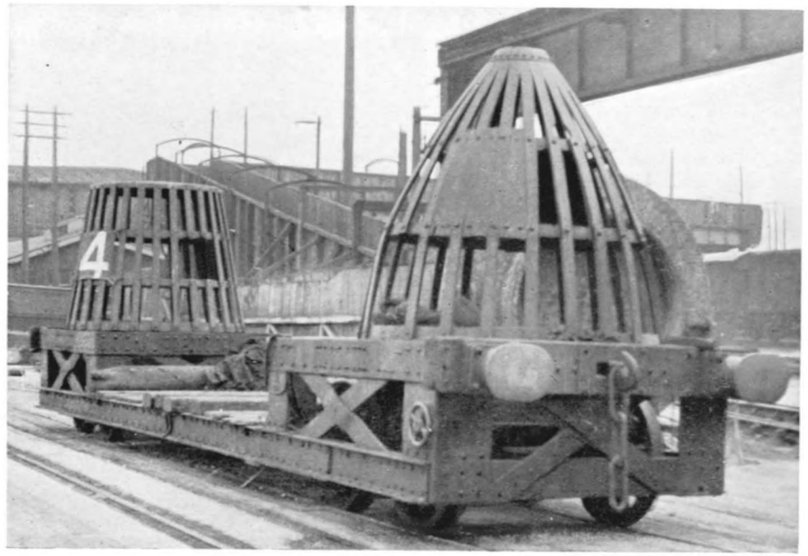


Fig. 58.
Gland screws (2 required for piston rod and valve spindle).

will be needed later on for the steam chest. They are both the same, and are shown in Fig. 58, from which it will be seen that they have four little notches the full 1/16 in. depth of their heads, formed by sawing right across the end at right-angles, and cleaning up with a thin flat file. These little notches are for digging into in order to screw the glands up later on.

The back cover is now held on the end of the cylinder block, with the pear-shaped boss as near as you can judge vertical (make sure it is pointing towards the top side of the block) and the scriber run round the back to mark its finished size. File it down all round almost to the lines, and finally trim it down while it is clamped on to the block itself, only take care of that port face. Remove burrs, mark out hole centres, and drill in place exactly as detailed for the front cover. The hole for the guide bar is *not* drilled at this stage.

LIKE SOMETHING UNUSUAL FOR THE LAYOUT?



The picture shows a Buoy Wagon used at Heysham Harbour (L.M. Region) and will interest readers who own layouts with docks. For the benefit of photographers, the photo was taken on a dull day at 1/50th sec. at f8 using Ilford H.P. 3 film.

Photo: Christopher Hood.