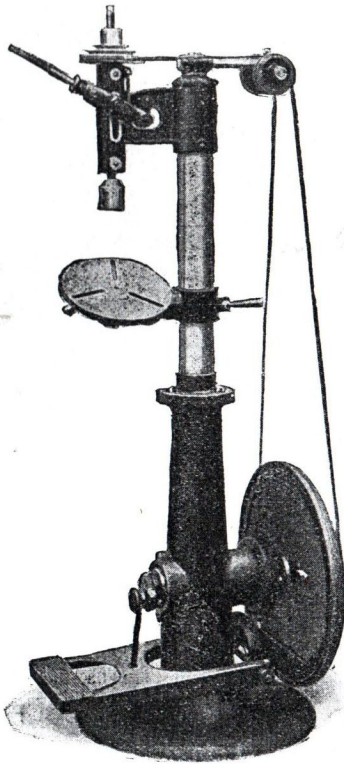


The News of the Trade.

New Drummond Tools.

The latest introduction of Messrs. Drummond Bros., Ltd., Rydes Hill, Guildford, is a foot-power sensitive drilling machine, as depicted in the accompanying photograph. Visitors to our recent Exhibition will remember that one of these machines was on Messrs. Drummond's stand, while another rendered good service in the Workshop of the Society of Model and Experimental Engineers. This machine has been more particularly designed to overcome the objection to drills driven by foot power which, as usually made, require an inconvenient amount of labour to drive, the labour becoming, as a rule, quite excessive when such machines are used up to anything near their rated capacity. The flywheel is of greater weight than usual, and its spindle runs on two ball bearings of ample size, accurately held in a rigid single casting, bolted as a separate unit to the pedestal. The drill spindle runs in phosphor-bronze bushes, and the driven pulley runs on a similar bush rigidly held in the head, relieving the spindle of the belt strain. The spindle is fitted with a ball-thrust collar. These improvements, combined with the simplicity of belt-drive design, enable the full capacity of the machine to be available with comparatively light work on the operator's part when used as a treadle machine. The spindle is fitted



A NEW DRILLING MACHINE BY MESSRS. DRUMMOND BROS., LTD.

with a self-centring drill chuck of first-class quality. The table is made to swivel at any angle, and can, therefore, be used in a vertical as well as a horizontal position or at any desired angle, enabling many jobs, otherwise awkward to hold, to be easily fixed without the use of an angle-plate. The height over-all is 5 ft. 6 ins., the greatest height between chuck and table is 12 ins., the travel of the spindle is 3½ ins., and the machine will drill holes up to ½ in. diameter. Another novelty recently brought out by Messrs. Drummond is an electric tool grinder. This takes the form of an enclosed electric motor having a grinding wheel mounted on the projecting end of the armature spindle, and a neatly designed swivelling tool rest supported by a bracket on the cover casting of the motor. The whole thing is very compact, and it can be operated from any electric lamp socket. It is therefore well adapted for use in private workshops and garages. It is stocked in various voltages from 50 to 250 for continuous current only. A useful point about the design is that the grinding wheel can be removed and a suitable chuck

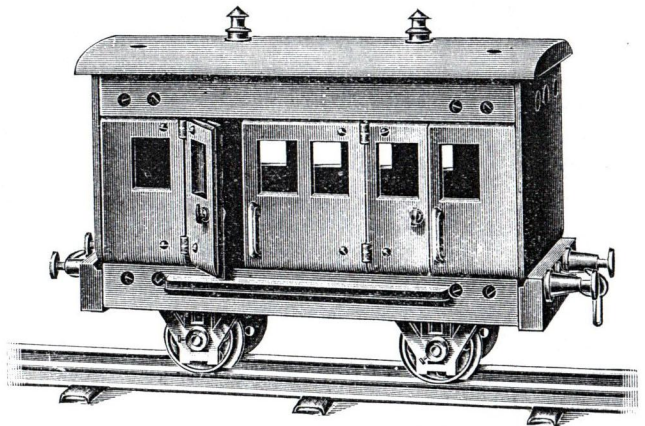
substituted, or the spindle will take a pulley so that the machine can be used as a motor. Messrs. Drummond Bros., Ltd., will be pleased to send fuller particulars of these machines to any reader who is interested.

The Clyde Model Dockyard.

The new season's list from the Clyde Model Dockyard, Argyll Arcade, Glasgow, is, as usual, of quite an interesting character. The model railway section is one of its strong features, and here the enthusiast has a large variety to choose from as regards both engines and rolling stock. One of the leading lines amongst the locomotives is a scale model of the N.B.R. "Flying Scotsman" four-coupled express engine. This is 24 ins. in length over-all, and is built for the No. 1 (1½ ins.) gauge track. The boiler is of solid brass, with brazed joints, and has flue and water tubes. The firebox is of the internal type, and the boiler of each engine is tested to 50 lb. pressure. The fittings include steam dome, whistle, glass water gauge, an accurate steam pressure gauge, water cock, reversing lever, and throttle valve in cab, and a patent vapourising spirit lamp. The cylinders are of the double-action slide-valve type; there are dummy Westinghouse pumps; and the model is enamelled and finished in the correct N.B. Railway colours, including the Company's crest. It is a handsome and powerful-looking engine. Another good model shown is a scale reproduction of the well-known L.N.W. Railway locomotive "Experiment." This is propelled by clockwork, and has a brake reversing gear worked from cab or rail. The engine is of the six-coupled type, and has great hauling power. It is made in two sizes suitable for No. 0 and No. 1 gauges respectively. There are a number of other clockwork and steam locomotives shown, many of them being excellent representations of their prototypes on the leading British railways. Horizontal steam engines, cranes, and hot-air engines occupy several pages, while the well illustrated section devoted to model railway rolling stock and permanent way is excellent. Several pages are devoted to small working models, and an electrical and miscellaneous section completes the list. Here may be found a great variety of small motors and dynamos, coils, motor parts, cinematographs, and other scientific items. Altogether the catalogue covers 64 pages, and is thoroughly well got-up. It will be sent post free to any reader on receipt of 2d. for postage.

"Primus" Engineering Outfits.

"Primus" photographic specialities are well known to every user of a camera, and it is interesting to find this appellation now being applied to something of an engineering nature emanating from the same makers, Messrs. W. Butcher & Sons, Ltd., of Camera House, Farringdon Avenue, London, E.C. The "Primus" engineering outfits which this firm are introducing belong to the class of con-



A "PRIMUS" PASSENGER COACH BY W. BUTCHER & SONS, LTD.

structive toys which are now becoming so popular as presents for the rising generation. There is this difference, however, that the "Primus" outfits are specially suited to the boy with a taste for railway subjects. The materials are put up in divided boxes, and consist of wheels, collars, trunnions, buffers, handles, nuts, screws, rods, and plates, and other items in metal, and an assortment of pieces of wood cut to size and shape, and bored with holes where necessary. With these parts and a screwdriver any boy can build up a most interesting variety of simple or complicated models, and these can be taken to pieces and used again and again to make other models. Amongst the numerous examples shown in the guide book are various kinds of railway trucks, signals, foot-bridges, stations, station buildings, cranes, a vertical saw, a machine hammer, and a staircase. Our illustration shows a passenger coach built up from one of these sets. The materials are splendidly turned out and boxed, and the outfits are put up in five different sizes at varying prices.