

Inventions of the Month.

[By HENRY HUGHES, Patent Agent, Wellington.]

IMPROVEMENTS IN WINDOW SASHES.—(No. 6393, C. J. Cooze, Carterton.)—This invention relates to improvements in window sashes and apparatus for hanging the same, and has for its object the enabling the sashes to slide easily up or down to enable them to be tilted or turned over so as to be readily cleaned on both sides or repaired with facility; and another object of this invention is to balance the sashes when open without the use of the ordinary cords and pulleys in such a manner that the sashes may be partially opened or closed and fixed in position.

A CONCEALED SLIDE SEAT APPLIED TO VEHICLES.—(No. 6460, F. S. Potter, Auckland.)—This invention consists of two rails with plates attached, on which the seat slides, catch irons which keep the seat from rising when in use, springs which keep the seat from moving backwards or forwards, and hoop iron and staple for keeping the legs in position when in use.

AN IMPROVED HORSE SHOE.—(No. 6470, W. Tompsitt and G. Robinson, Manakau, Wellington.)—This invention is for the purpose of readily fixing calks to the shoe so as to prevent slipping, and also to repair the shoe by renewal of the calks or bearing pieces; recessed sockets are formed in the shoe and calks, of the required shape placed in them, and by slightly hammering the face of the calk, the recess is filled, thus preventing the return of the calk.

ATTACHMENT OF SHAFTS TO THE SPRINGS OF TWO-WHEELED VEHICLES.—(No. 6473, William Reeves, Masterton.)—Scroll springs are bolted at their inner ends to the back joints of the springs of a two-wheeled vehicle. The other end of the scroll springs (horizontally elongated) are secured to the shafts; thus allowing a free swing to the shafts when in motion, and preventing a sudden jerk of the vehicle when starting.

IMPROVEMENTS IN MACHINERY FOR PRINTING IN COLOURS.—(No. 6525, J. L. Davies, Chipstead, Surrey.)—This invention applies to colour printing machines in which the colour or colours to be used are formed in a dry solid block, the surface of which for each impression is moistened with turpentine or other solvent, so that a thin film of colour may be transferred or conveyed from the block to the paper to be printed. The invention is applicable to existing colour printing machines, and also to ordinary lithographic machines. The colour block is moistened with the turpentine or other suitable solvent by means of a solvent roller working over and in intermittent contact with the colour block, and having its upper surface supplied with the turpentine by contact with one or more rollers, receiving a supply of turpentine from a piece of flannel which dips into the supply vessel. The solvent roller is intermittently wiped clean on alternate sides by means of wiping cloths, which cloths are moved so as to present a fresh surface each time that they are used.

POTATO DIGGER.—(No. 6925, J. Vorbach, Renwicktown, Marlborough.)—This invention consists of a frame carried on two side wheels with a steering wheel behind; and drawn by horse power. It carries a scoop pointing to the front of the machine armed with a share to lift the potatoes on to a screening elevator consisting of a set of wheels and pulleys carrying an endless chain, and held in position by guides. The wheels are cleaned by a suitable scraper, and the screening elevator raised or lowered by a lever. A side delivering screen is attached, and also a skim coulter to cut and throw aside the weeds.

AN IMPROVED FILLING, FOR THE SURFACE OF WOOD.—(No. 6943, J. P. Ward, Ponsonby, Auckland.)—This invention consists in the use of Oamaru Stone dust, triturated and prepared in a special manner, and mixed with other materials.

AN IMPROVED BILLIARD CUE.—(No. 6945, A. Taylor, Papanui, Christchurch.)—The addition to an ordinary cue of a metallic ferrule containing an internal screw into which tip holders may be screwed, also of a tip holder containing a recess in front to fit the tip, and provided with a screw at the back capable of being screwed into the ferrule.

ROTARY MACHINE FOR DRESSING CLOVER SEEDS.—(No. 6946, G. G. Stead and D. Barclay, Christchurch.)—Consists of frame work and casing enclosing four or more revolving hollow perforated cylinders, arranged in pairs, and slightly sloping from the feed end to the delivery end, and driven by power or hand. A revolving brush is placed over and between each pair of cylinders for the purpose of keeping the perforations clean. The cylinders and brushes are so arranged as to revolve simultaneously. An elevator is attached for feeding which delivers the seed into the upper end of each pair of cylinders, the good seed passing through the cylinders and thence into sacks, and the refuse matter falls through the perforations into hoppers communicating with other sacks.

IMPROVEMENTS IN WINDMILLS.—(No. 6950, T. Danks, Lichfield, Christchurch.)—This invention consists in providing a tubular guide and guide pulleys so that the rope which pulls the windmill out of gear may be more readily handled and prevented from getting entangled.

A HOOK LINK CHAIN.—(No. 6957, J. Vorbach, Renwicktown, Marlborough.)—This invention consists in an ingenious method of making a durable chain by a series of hooked links.

IMPROVED BUCKET.—(No. 6959, William Dalton, Stratford, Taranaki.)—This invention consists in passing a bend around the top of an ordinary bucket to which brackets or lugs are welded or fixed for the reception of the handle.

AN IMPROVED RABBIT TRAP.—(No. 6961, H. Young, Cromwell, Otago.)—This improvement consists in making the trap lighter and more compact, by doing away with the usual long projecting spring, and substituting for it a gun lock spring. The jaws of the trap are so arranged that they catch the leg of the rabbit and also pierce the body.

IMPROVEMENTS IN SELF-ACTING BALL VALVES.—(No. 6962, T. H. Austin, Dunedin.)—By these improvements the liquid can be maintained and adjusted to any desired height. The valve admits of a full inflow up to the highest level. The vessel can also be allowed to empty to any desired level, and admits a full supply at that level.

PURIFICATION OF CARBONIC ACID GAS.—(No. 6965, H. S. Elworthy, Essex.)—This invention consists in placing on the top of a vat an apparatus for collecting the carbonic acid gas given off during fermentation as in the manufacture of alcoholic liquors. The apparatus consists of a chamber with an India-rubber or elastic cover or diaphragm under which is a pipe communicating with a pump to draw off the gas, such pipe having a weighted valve which rises intermittently with the rise or fall of the elastic diaphragm due to the varying pressure of the gas given off. After the carbonic acid gas is collected it is purified by being treated with metallic fat, oil, or other hydro-carbon, and then passed through heated chambers containing oxide of copper or other easily reducible metallic oxide.

R. COCKERELL'S JOINTED OPEN-DRAIN PLOUGHSHARES.—(No. 6966, R. Cockerell, Dunedin.)—The shares are suspended from the coulter, which coulter works in a mortice near the point of the share, the mortice acting as a regulator joint for the purpose of setting to any grade, for conveying the material cut from the drain to either side required on the surface.

IMPROVEMENTS IN WAGGON OR DRAY LIFTING MACHINES.—(No. 6968, O. King and C. Bussing, Gore.)—This invention consists in an application of the lever and fulcrum for the purpose of lifting heavy waggons or other light vehicles, and by which a double eccentric handle raises the beam with its superincumbent weight clear over the body of the machine, and with the same movement, allows the beam with its weight to rest on the body without any further strain on the handle, the whole being locked in position by the double eccentric movement.

LIFE SAVING AND SWIMMING APPARATUS.—(No. 6969, J. A. Morgan, Sydenham.)—This invention consists of a tube similar to a ladies' boa made of waterproof material varying from 3 to 10 feet in length, and 2 to 6 inches in diameter. A small tube is fitted at one end for inflating. The apparatus is passed round the neck, crosses at the back, and buckles in front.

IMPROVEMENTS IN OR RELATING TO TREATMENT OF ORES.—