

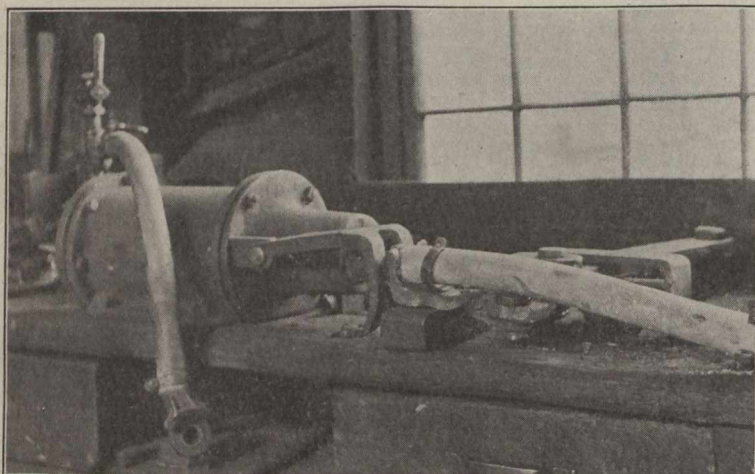
Railway Mechanical Methods and Devices.

Milling Shoes and Wedges in Grand Trunk Railway Shops at Stratford.

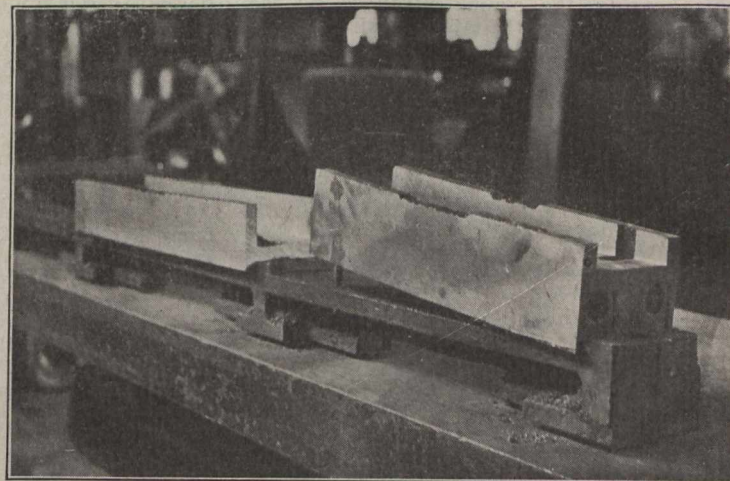
All the shoes and wedges made in the G.T.R. shops at Stratford, Ont., are manufactured on a horizontal milling machine, the jig shown in the accompanying illustration being used for both. The jig, it will be observed, is a double decked casting, the lower face planed and with a longitudinal

much superior to the older practice from the standpoint of tool renewal. The body is brass shell, cast with the central pin hole and roller cavities as cores. The body is turned on the outside, and the central core reamed out, but the roller cavities are left as cored, and as a perfect fit is not essential, they answer the purpose quite as satisfactorily as the usual type. Instead of the spring band around the outside, there is a cast band, with a 1-16 in. slot over each of

of vertical fingers, knife-edged on the inner face, into which the hose and coupling are depressed, with the knife edges entering the slight space between the hose end and coupling shoulder. Turning on the air forces the plunger out, stripping the hose from the coupling. The other coupling at the opposite end is handled in the same manner, only no auxiliary nut is required, as the shape of the coupling lends itself to gripping in behind the folding arm.



Removing Air Hose Couplings.



Jig for Milling Shoes and Wedges.

rib to fit in the miller table, and with bolt holes, while the upper face is also finished with cross ribs to act as stops for the shoes and wedges placed thereon. For the wedges there are three pairs of adjustable studs to raise the wedge end for the requisite taper. The practice is to first mill off the back of the shoes and wedges, then place in this jig, which will hold three, placing two jigs end for end to take a total of six. A combination cutter will then finish the three inside faces and four outside ones in one pass. This jig has been found to be a great

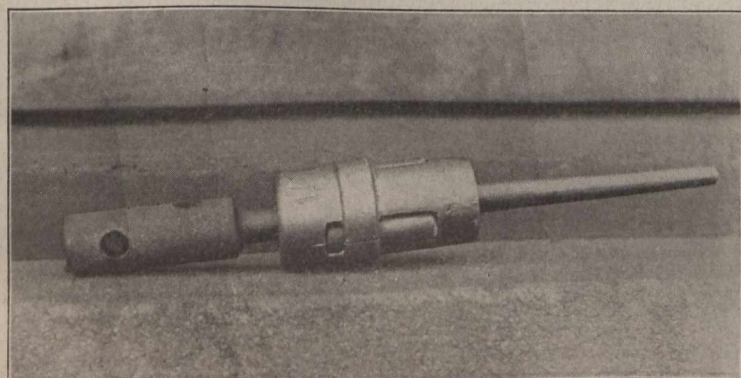
the rollers to clear the dirt, which maintains the rollers in position. The rollers are inserted in the tool from the inside in the usual manner.

Removing Air Hose Couplings in Michigan Central Rd. Shops, St. Thomas.

There is in use in the M.C.R. car shops at St. Thomas, Ont., a handy air operated machine for removing the couplings of air

Milling Valve Strips in the Grand Trunk Railway Shops at Stratford.

A jig for holding valve strips while having the cross slots for mortising at the corners, and which is of simple design, is in use in the G.T.R. shops at Stratford, Ont., and is illustrated herewith. From the very nature of their lightness and small section they do not offer themselves to rapid handling on the machine, requiring under ordinary conditions to be set up separately for



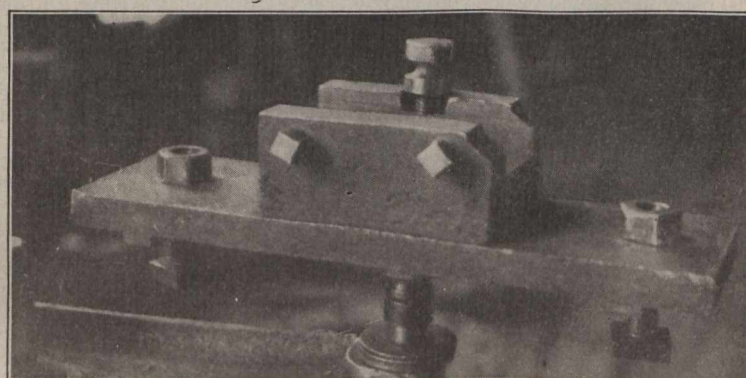
Tube Expander With a Cast Brass Body.

time saver, as well as making possible rapid production of interchangeable shoes and wedges.

Tube Expander in Pere Marquette Railroad Shops at St. Thomas.

The conventional tube expander, consisting of a shell containing 3 rollers with central tapered pin is in almost universal use for fitting tubes into the tube sheets. It is usually made from a solid body, cut from bar stock, with the three roller cavities drilled and reamed out. The P.M.R. shops at St. Thomas, Ont., have a wrinkle that is

hose when the latter require replacement, and which is shown in the accompanying illustration. The power for the machine is obtained from an old air cylinder, mounted on a work bench, adjoining the machine for mounting air hose couplings, which was described in Canadian Railway and Marine World two years ago. On the threaded coupling of the hose, a nut is loosely screwed on, which fits in behind the hinged arm attached to the cylinder head on the left side of the cylinder as shown. The plunger is attached through a head to a fulcrum arm, pivotted at the rear of the table, the free end of which has an arm with a pair



Jig for Holding Valve Strips for Mating Slots.

each piece, and correctly aligned. This jig overcomes many of these difficulties of rapid production. It consists of a forged base for attaching to the milling machine table, cross keys on the under face fitting the table slots. On this base is the strip vise, consisting of a channeled section, in which the strip is set, and secured in place horizontally by two set screws, and vertically by the flange screw in the rear, the flange of which bears on the side of the strip, holding down in place. The milling cutter passes over the strip at the right end, which is shown bevelled in conformity to the cutter.