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M. T. PETERSON

RIM TOOL

Filed Dec. 2, 1925

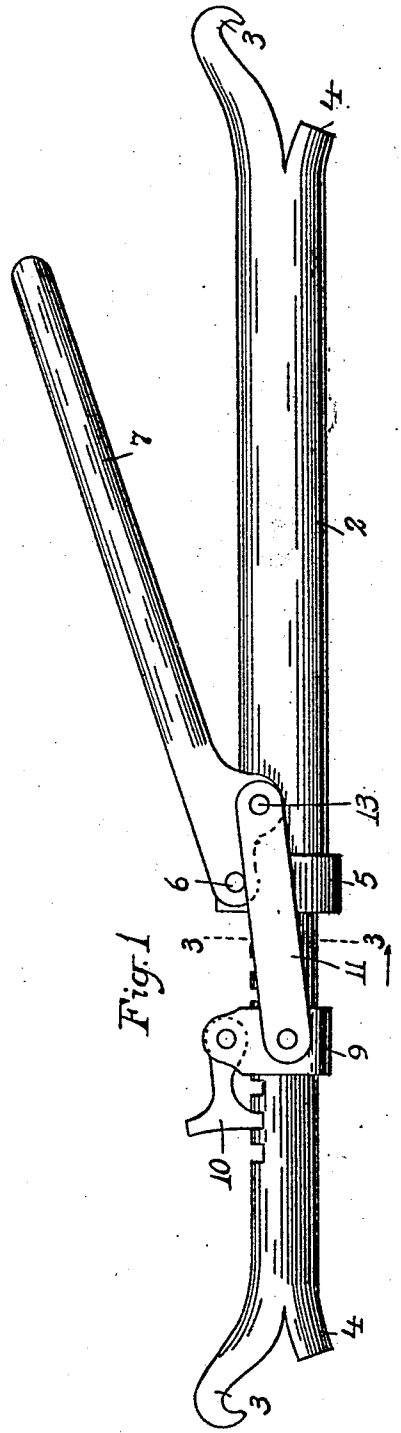


Fig. 1

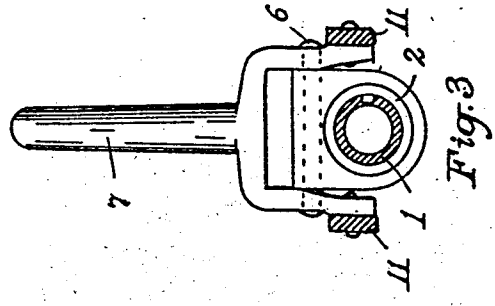


Fig. 3

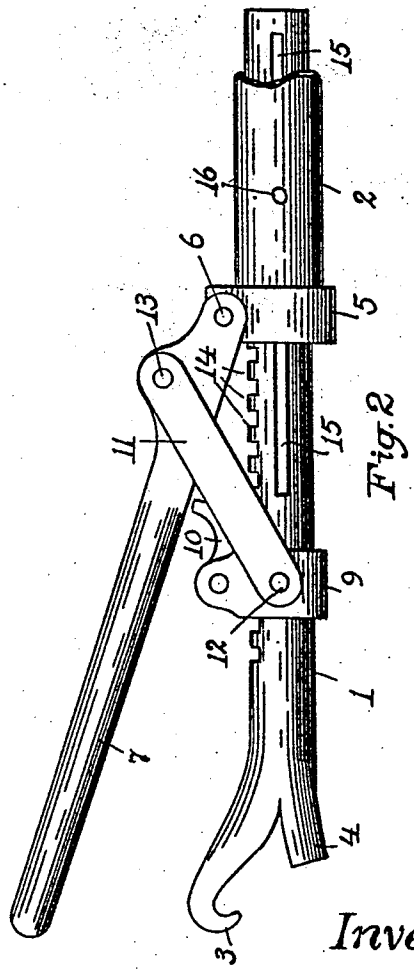


Fig. 2

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UNITED STATES PATENT OFFICE.

MARTIN T. PETERSON, OF BELMONT, MASSACHUSETTS.

RIM TOOL.

Application filed December 2, 1925. Serial No. 72,822.

This invention has for its object the construction of a simplified, inexpensive and efficient tool for contracting and expanding split rims of automobile tires.

In carrying my invention into effect I provide two telescopically disposed tubes with push and pull jaws at their opposite ends, and a hand lever for forcibly moving them with respect to each other.

In the drawings forming part of this specification, Fig. 1 is a side view of a rim tool embodying my invention, the same being shown in its expanding condition. Fig. 2 is a similar view showing it in its contracting condition. Fig. 3 is a cross section on the line 3—3 in Fig. 1.

The rod or tube 1 is telescopically slidable within the tubular member 2, and each is formed with a hook 3 for contracting the rim, and a pushing shoulder 4 for expanding the same.

Around the end of the tube 2 opposite its end 3, 4 is fastened a collar 5, and to the latter is pivoted at 6 an operating handle 7. Slidable upon the rod 1 is a collar 9 carrying a double-edged pawl 10; the handle 7 being connected with the collar 9 by means of two bars 11 pivoted thereto at 12 and 13. It should be observed that the pivotal point 13 is offset with respect to the handle 7, so that when the latter has swung down to its nearest approach to the tube 2, the pivot 13 will be below the level of the pivot 6, and is thereby locked against any possible strength of pull upon the collar 9 away from the tube 2.

Upon the top surface of the rod 1 is cut a series of square teeth 14 adapted to be engaged by the pawl 10; and along one side of the rod is a groove 15 which, by means of a pin 16 projecting into it from the tube 2, keeps the rod 1 from turning in the tube 2; and, by having this groove closed near its inner end, the pin prevents the rod from being entirely withdrawn from the tube.

For contracting a rim, the pawl is thrown over into the position shown in Fig. 2, and the hooks 3 caught upon the edge of the rim, with the handle swung over toward the rod 1. The pawl being in engagement with a tooth 14, the handle is forced over to the position illustrated in Fig. 1, with the pivot 13 below the pivot 6; thus contracting the rim to the required extent. Thus locked in position, the tool and contracted rim can be freely handled without danger of the tool's releasing the rim.

For expanding the rim, the handle 7 is in the position shown in Fig. 1, and the pawl 10 likewise. Then the push shoulders 4 are brought against the rim, and the handle is forced over until the desired result is accomplished.

The part 1 may be solid or tubular, but I prefer the latter for the sake of lightness and strength. I also prefer to have the parts 1 and 2 tubular because of the ease thereby given for the formation of the parts 3 and 4; since all I need to do is to split the ends of the tubes thereat; cut off the excess and bend slightly to make the push shoulder 4; and to suitably bend the other part into a hook 3.

What I claim as my invention is:

1. A rim tool comprising two telescopically disposed members having push and pull elements at their extremities, a lever handle pivoted to one thereof, a collar slidable upon the other member, bars pivoted to said collar and handle, and a reversible pawl pivoted to said collar, the member having the collar being provided with square teeth for the engagement of said pawl.

2. A rim tool comprising two tubes, one slidable within the other and each having a push and pull element at its farther end, the smaller tube having a series of teeth along its upper surface and a collar slidable therealong, the larger tube having a lever handle pivoted thereto, bars pivoted to said collar and to said handle at an offset point, and a reversible pawl carried by said collar for engagement with said teeth, the smaller tube having a longitudinal groove, and the larger tube having a pin reaching into said groove, both for preventing the entire separation of the tubes and their relative rotation.

In testimony that I claim the foregoing invention, I have hereunto set my hand this 1st day of December, 1925.

MARTIN T. PETERSON.