H. C. HUGHES.

TIRE TOOL FOR AUTOMOBILES.

APPLICATION FILED AUG. 4, 1917.

1,250,180.

Patented Dec. 18, 1917.

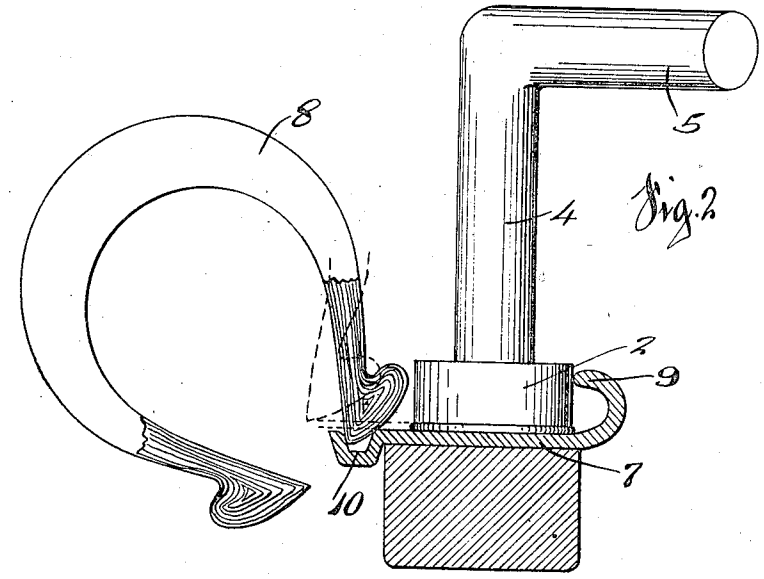


Fig. 2

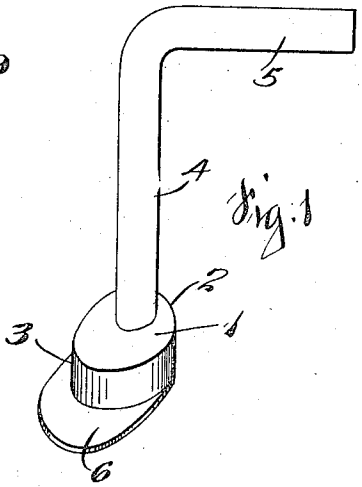


Fig. 1

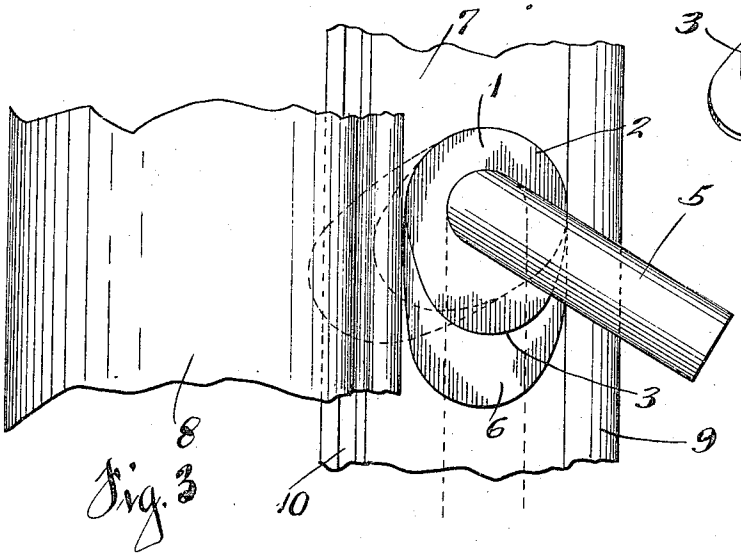


Fig. 3

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TIRE-TOOL FOR AUTOMOBILES.

1,250,180. Specification of Letters Patent. **Patented Dec. 18, 1917.**

Application filed August 4, 1917. Serial No. 184,389.

To all whom it may concern:

Be it known that I, HARRY C. HUGHES, a citizen of the United States, and a resident of the city of Cincinnati, in the county of Hamilton and State of Ohio, have invented certain new and useful Improvements in Tire-Tools for Automobiles, of which the following is a full, clear, and exact description, reference being had to the accompanying drawing, forming part of this specification.

My invention relates to tools designed for the removal of tire casings from rims, and more particularly for the removal of quick detachable tires.

In most constructions of quick detachable tires, in which the tires are secured to the rims by locking rings, the outside ring is usually seated in an annular groove formed in the outer edge of the rim, or the latter ring is held in place by some construction of split ring to engage in the groove in the permanent rim.

In order to remove the casing, it is necessary to release and remove the outer locking ring, and then the casing is pulled off of the rim. Inasmuch as the casing, of course, is resilient, while it is comparatively easy to slide off of the rim the front portion of the casing, the rear portion of the casing is apt to catch in the retaining groove which is provided for the locking ring, and inasmuch as the casing itself is resilient, when this inner portion catches, it is quite a difficult task to dislodge the rim, as the pressure brought to bear merely stretches the loose portion of the casing without freeing the back portion.

It is the object of my invention to provide a simple, cheap and effective tool for removing the casing, notwithstanding the above conditions.

This is accomplished by that certain novel construction of tool to be hereinafter more particularly pointed out and claimed.

In the drawing,

Figure 1 is a perspective view of my improved tool.

Fig. 2 is a cross section of a tire showing the tool in use.

Fig. 3 is a plan view of the same.

My improved tool comprises the metal block 1, provided with cam surfaces 2 and 3 at front and rear, and furnished with a vertical shank 4, to which the cam block 1 is eccentrically secured. The shank 4 is provided with a handle 5 for operating the tool. The base of the cam block is provided with a forwardly projecting flange plate or lip 6, which provides a broad flat base for the cam block.

The operator having released the outer locking ring and drawn the casing partially from the rim 7, places the tool on the rim with the narrower portion of the cam block lengthwise of the periphery. Then by rotating the shank of the tool by the handle, the flange or lip is brought under the bead of the casing 8 and the two cam surfaces of the block bear between the inner retaining flange of the rim 9 and the inner edge of the bead of the casing, and the casing is easily forced from the rim. The flange of the tool raises the bead of the casing out of the groove 10, and the casing is pushed readily from the rim.

In some cases it will be advisable to use two of the tools at different portions of the rim. Moreover, it will be obvious that different sized tools will be required for rims of various sizes. The tool will be effective also for various constructions of quick detachable tires, and in fact for all constructions in which the casing when being removed has a tendency to fasten itself in some depression or groove in the rim.

Having thus described my invention, what I claim as new and desire to secure by Letters Patent, is:—

In a tire tool for automobiles, a block having camming surfaces at front and rear, a flange projecting beyond the front cam surface at the base of the block, and a shank with handle for rotating the same to bring the cam block and flange into operation.

HARRY C. HUGHES.

Copies of this patent may be obtained for five cents each, by addressing the "Commissioner of Patents, Washington, D. C."