

No. 665,944.

Patented Jan. 15, 1901.

W. VAN GIST.  
TIRE SHRINKER.

(Application filed Sept. 5, 1900.)

(No Model.)

Fig. 1.

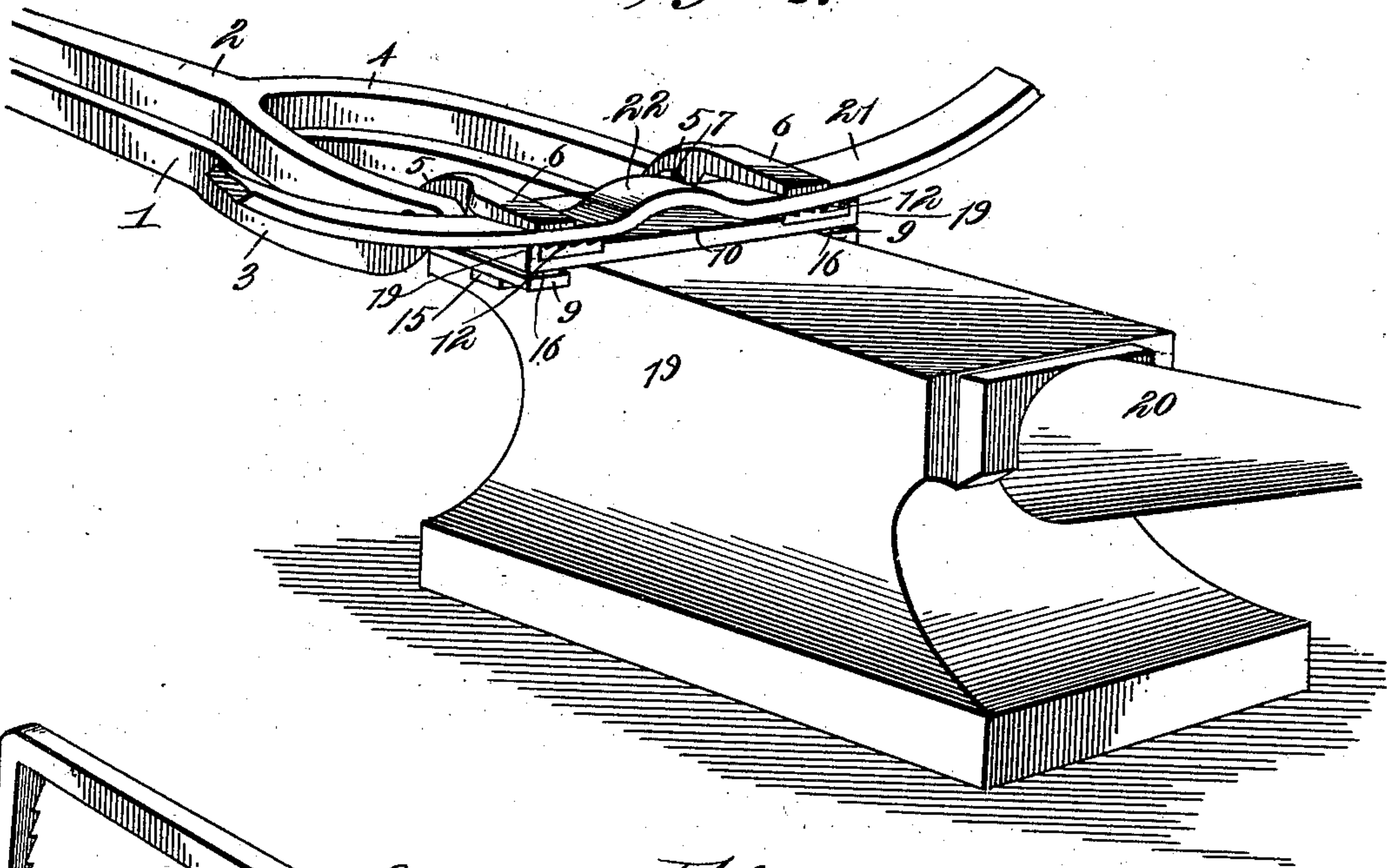


Fig. 2.

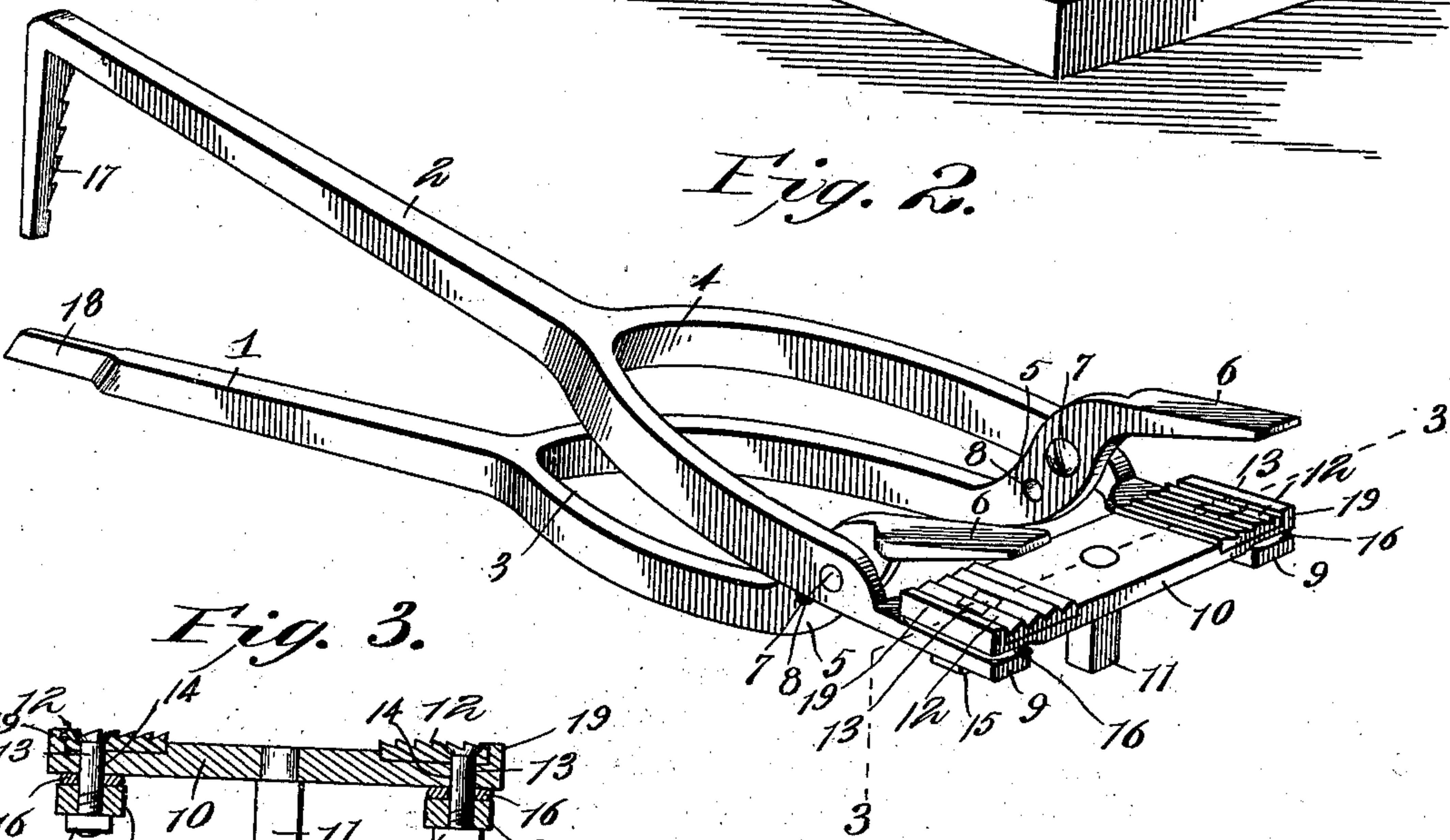
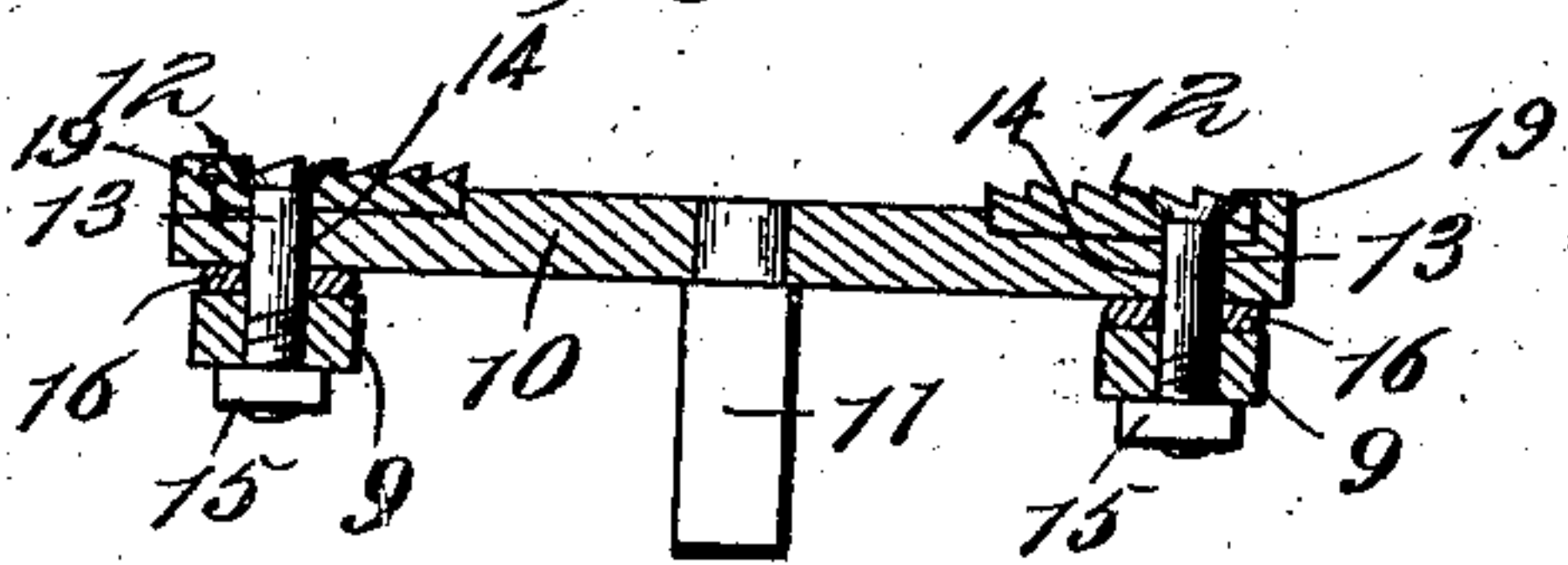


Fig. 3.



Witnesses

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# UNITED STATES PATENT OFFICE.

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## TIRE-SHRINKER.

SPECIFICATION forming part of Letters Patent No. 665,944, dated January 15, 1901.

Application filed September 5, 1900. Serial No. 29,100. (No model.)

*To all whom it may concern:*

Be it known that I, WILLIAM VAN GIST, a citizen of the United States, residing at Sparta, in the county of White and State of Tennessee, have invented a new and useful Tire-Shrinker, of which the following is a specification.

This invention relates to tire-shrinkers, and has for its object to provide an improved holding device for clamping the tire upon an anvil while the former is being shrunk. It is furthermore designed to facilitate the application of the device to an anvil and to arrange the same so that it may be conveniently manipulated by one hand to grip the tire and also to render the device adjustable for application to tires of different thicknesses.

With these and other objects in view the present invention consists in the combination and arrangement of parts, as will be hereinafter more fully described, shown in the accompanying drawings, and particularly pointed out in the appended claim, it being understood that changes in the form, proportion, size, and minor details may be made within the scope of the claim without departing from the spirit or sacrificing any of the advantages of the invention.

In the drawings, Figure 1 is a perspective view illustrating the application of the present invention. Fig. 2 is a detail perspective view of the implement. Fig. 3 is a detail transverse sectional view taken on the line 3 3 of Fig. 2.

Corresponding parts are designated by like characters of reference in all of the figures of the drawings.

Referring to the drawings, 1 and 2 designate the opposite handles of the implement, which have their forward ends forked, as indicated at 3 and 4, respectively. These handles are located one above the other, and the outer ends of the forked portions of the lower handle are received between the forked portions of the other handle and are bent upwardly, as at 5, the extremities of the forked portions being flattened and formed into horizontal jaws 6. The transverse arms 5 are pivotally connected to the adjacent forked portions of the other handle by means of suitable pivot-pins 7, and the arms are provided

with two or more perforations 8, so as to afford an adjustable hinged connection between the handles or members of the implement. The outer or free ends of the forked portions of the member 2 are also flattened and formed into jaws 9, and supported upon the inner sides of these jaws is a plate 10, having an intermediate and outwardly-directed lateral pin or projection 11. At the opposite ends of the inner face of this plate are provided the toothed or serrated portions 12 to cooperate with the jaws of the other member when applied to a tire. This plate is removably connected to the jaws 9 by means of the opposite screw-threaded fastenings 13, carried by the plate and projecting through the corresponding perforations 14 in the jaws, and the nuts 15, fitted to the projecting ends of the fastenings and binding against the outer sides of the jaws. Also substantially U-shaped adjusting-wedges 16 are inserted between the plate and the respective jaws 9 and embrace the respective fastenings 13, so that by removing the wedges and tightening the nuts the plate may be brought closer to the jaws 9, and thereby permit of the implement receiving a tire of greater thickness. For instance, should a thicker tire be held between the jaws of the implement said tire would lie flat upon the lower jaws thereof, while the upper jaws would engage the inner edge of the tire and incline upwardly across the same, whereby the upper jaws would not fit flat against the inner side of the tire, as they should to firmly hold said tire from slipping under the blows of a hammer. To obviate this difficulty, the gripping-faces of the lower jaws have been made adjustable toward and away from the jaws, so that by removing the wedge-shaped washers the plate 10 may be lowered or brought against the jaws, whereby the upper jaws have greater play and will lie flat against a thicker tire. The rear free end of the upper member 2 is provided with a transverse latch-bar 17, that has ratchet-teeth upon one side thereof to engage with the reduced outer extremity 18 of the other member, so as to hold the members when clamped together.

In using the implement, as shown in Fig. 1 of the drawings, the pin or projection 11 is



fitted into the usual hardy-hole in the top of the quarter of an ordinary anvil 19, so that the handles of the implement extend in opposite directions to the horn 20. When thus applied to the anvil, the rear end of the lower member is permitted to swing downwardly, so as to open the jaws of the implement. The tire 21 is then heated and kinked, as at 22, by engagement with the horn of the anvil, after which it is placed between the jaws of the implement with the kinked portion extending upwardly and located between the forked portions of the members. The lower handle is then swung upwardly and engaged with the latch-bar 17, so as to bind the jaws upon the tire, and thus hold the latter to the anvil. The kinked portion is then hammered out flat, thereby taking up the kinked portion as the jaws firmly clamp the tire at opposite sides thereof. To release the tire, it is merely necessary to give the latch-bar a lateral blow with a hammer or other implement, and the lower handle will immediately drop downwardly by gravity, and thereby separate the jaws.

The latch feature of the present device is highly important, for the reason that after the handles have been connected by the latch it is not necessary for the operator to grasp said handles, as the implement may be steadied by the body of the operator, thereby leaving his hands free for manipulating the tire and the hammer.

In order that the serrated portions of the plate 10 may be renewed when worn, they are formed upon separate plates, as best shown in Fig. 3 of the drawings, and held in place by means of the fastenings 13. The opposite ends of the plate 10 are provided with upstanding end flanges 19, against which the removable plates 12 abut. By this arrangement the plate 10 may be formed of iron and the removable serrated plates of steel, so as to withstand wear.

What is claimed is—

An implement of the class described, comprising a pair of crossed and pivotally-connected members, having handles at corresponding ends, and spaced jaws at the opposite corresponding ends thereof, a removable plate extending transversely across the inner sides of a pair of the jaws, a lateral stud projecting outwardly from an intermediate portion of the plate, opposite adjustable fastenings connecting the respective ends of the plate to the adjacent jaws, and removable adjusting substantially U-shaped washers embracing the respective fastenings and interposed between the jaws and the plate.

In testimony that I claim the foregoing as my own I have hereto affixed my signature in the presence of two witnesses.

WILLIAM VAN GIST.

Witnesses:

W. L. DITRELL,  
S. E. CUNNINGHAM.