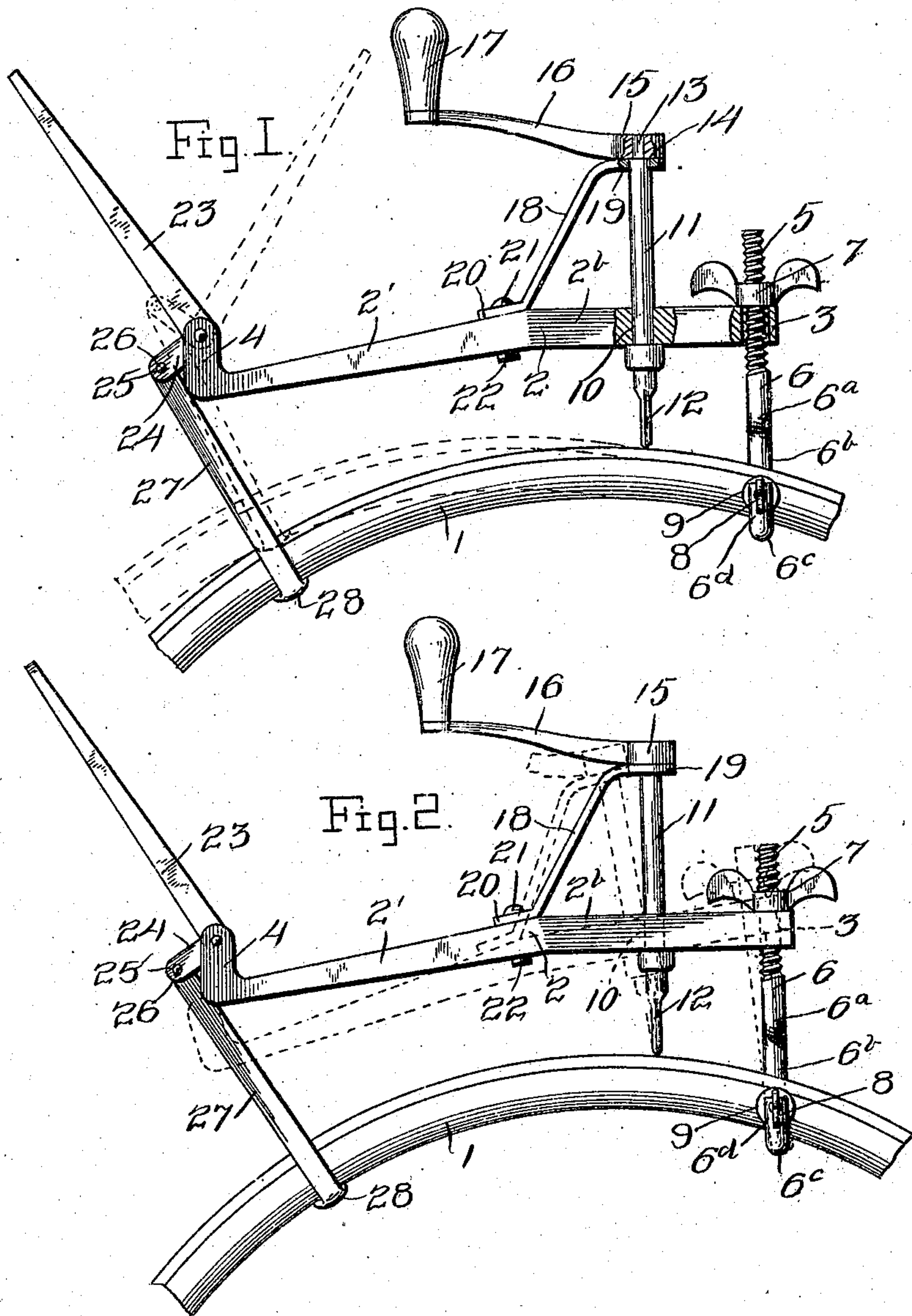


No. 847,908.

PATENTED MAR. 19, 1907.

N. A. COLLINS.
BORING MACHINE.
APPLICATION FILED MAY 10, 1905.

2 SHEETS—SHEET 1.



Witnesses
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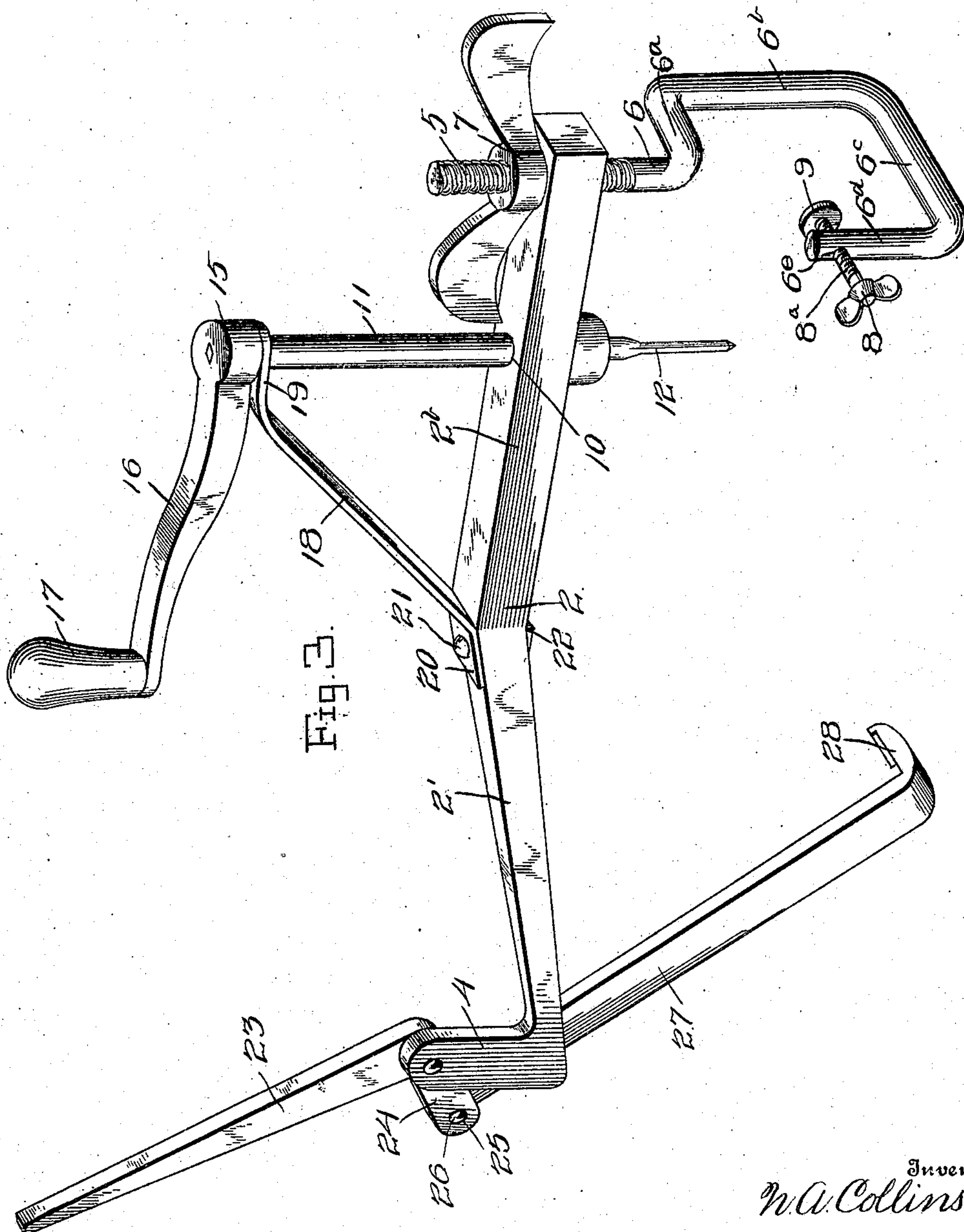


Fig. 3.

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UNITED STATES PATENT OFFICE.

NATHANIEL A. COLLINS, OF LELA, OKLAHOMA TERRITORY.

BORING-MACHINE.

No. 847,908.

Specification of Letters Patent.

Patented March 19, 1907.

Application filed May 10, 1905. Serial No. 259,779.

To all whom it may concern:

Be it known that I, NATHANIEL A. COLLINS, a citizen of the United States, residing at Lela, in the county of Noble, Territory of Oklahoma, have invented certain new and useful Improvements in Boring-Machines; and I do hereby declare the following to be a full, clear, and exact description of the invention, such as will enable others skilled in the art to which it appertains to make and use the same.

This invention relates to a combined drilling or boring and bolt-holder machine, and more particularly to that class of devices or machines for drilling or boring holes in tires or for holding the bolts passed through the tires and fellys of a vehicle or other wheel.

One object of the invention is to provide an exceedingly simple, comparatively inexpensive, durable, and efficient device or machine for the purpose named above.

Another object of the invention resides in the provision of a machine or device of the character stated wherein an adjustment is arranged for the accommodation of the device or machine for different size wheels.

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 present invention.

In the accompanying drawings, Figure 1 is a side elevation, partly in section, illustrating a machine or device applied to a wheel, the dotted lines indicating the position of the tension-lever 23 and the position of the felly and its rim when the tension-lever is in the position shown in dotted lines. Fig. 2 is a view similar to Fig. 1, illustrating by dotted lines the position of the beam in an adjusted position. Fig. 3 is a perspective view of the device or machine detached from a wheel.

Referring more particularly to the accompanying drawings, the reference character 1 designates a portion of a vehicle or other wheel and the reference character 2 a beam having a perforation 3 in one end and an upwardly-turned perforated arm 4 at its opposite end, the portion 2' of the beam being ar-

ranged downwardly upon an incline with respect to the portion 2^b thereof, as shown.

The screw-threaded end 5 of the peculiar-shaped clamping-arm 6 passes through the perforation 3 in the arm 2, there being a cap-nut or other suitable element 7 arranged upon the screw-threaded portion 5 of the clamping-arm 6 and designed to rest upon the upper face of the beam 2, and through the instrumentality of which the clamping-arm may be raised or lowered as desired. It has been stated that the clamping-arm 6 is of peculiar shape or formation, and it will be observed that immediately beneath the beam 2 the arm is bent outwardly, as at 6^a, and then perpendicularly, as at 6^d, thence horizontally, as at 6^c, and then upwardly, as at 6^d, the latter portion being in direct alinement with the portion 6^b and perforated, as at 6^e, for the reception of the thumb-screw 8, having its inner end provided with a bearing-plate or the like 9. It will be therefore understood that this peculiar formation or shape of the clamping-arm is for the purpose of permitting the portion 6^b thereof to lie flush with one side of the felly, with the opposite side 6^e thereof flush with the opposite side of the felly, the said screw 8 having its shank portion 8^a screw-threaded for working fit with the screw-threaded perforation 6^e of the clamping-arm, with its inner end provided with a plate 9, so that the clamping-arm may be tightly and detachably engaged with one portion of the felly of the wheel.

Revolubly mounted in the opening 10 in the beam 2, in close proximity to the clamping-arm 6, is a drill-shank 11, having a drill-point 12, fitted in its lower end with its upper end reduced, as at 13, to form the shoulder 14, upon which latter rests the perforated end 15 of the crank or operating element 16, the latter being provided with a handle 17. In order to firmly support the drill-shank in proper position with relation to the beam 2, a stay-brace 18 is provided, the latter having its upper portion 19 bent at an angle to its body portion and provided with a perforation or opening designed to embrace the upper end of the drill-shank 11, the lower end 20 of the stay-brace being bent upon the opposite side of the body portion 18, from which the portion 19 thereof is bent and arranged upon such an incline as to be fitted upon the upper face of the inclined portion 2' of the beam 2, the portion 20 being

perforated for the reception of a bolt 21, which passes therethrough and through the beam 2, having a nut 22 secured upon its lower end. It will thus be seen that by reason of the stay-brace 18 the drill-shank is held rigidly in working position.

Pivotally disposed, by means of a pivot-pin *a* at its angle in the upper perforated end of the arm 4, is an angular lever 23, whose shorter angular portion 24 is provided with a perforation 25 for the reception of a pivot-pin 26, which latter also pierces the hooked arm 27, whose hooked portion 28 is designed to fit under the felly of the wheel when the device is in operation. It will now be understood that the lever 23 is pivoted to the short arm 4 of the beam 2 and that the hooked arm 26 is in turn pivotally engaged in the free end of the short angular portion 24 of the lever 23.

When it is desired to drill a hole in a metallic or other tire through the wheel, the clamping-arm 6 is, by means of the set-screw 8, clamped to the felly of the wheel, the clamping action of the arm taking place at such point along the felly as to have the drill-point 12 disposed at the proper point for drilling. When the aforesaid elements have been disposed in the manner set forth, the hooked end 28 of the hook-arm 26 is disposed beneath the felly of the wheel at a distant point, as clearly shown in the drawings, and the lever 23 is then turned toward the right, as shown in dotted lines in Fig. 1, causing the felly and tire to be drawn toward the beam, as also shown in dotted lines.

When these manipulations have all been accomplished, the drill-shank is manipulated by means of its crank or crank-handle for

drilling purposes. If it be desired to hold a bolt instead of drilling a hole, the device is set up in the manner already set forth, the only differences residing in the changing of a bolt-holding tool in lieu of the drill-point 12.

There may be times when it is desired to adjust the beam 2 to different positions, the inclined portion 2' of the beam 2 aiding greatly in the adjustment of the beam toward the wheel, the principal adjusting feature, however, residing in the manipulation of the cap-nut 7 along the threaded stem or shank portion 5 of the clamping-arm 6.

What is claimed is—

A boring-machine comprising a beam having a perforation therein at one end and having an upwardly-turned arm at its opposite end, an angle-lever pivoted at its angle to said arm, a hooked arm carried by the angle-lever, a clamp-arm having a threaded stem engaged in the opening of the beam, a nut engaged with the stem above the beam, a drill-shank revolvably engaged in the beam between its ends, a drill carried by the lower end of the shank, and an operating-handle carried by the upper end of the shank, said clamp and hooked arms extending below the beam, and being adapted for engagement with a body to be bored, said angle-lever and nut being operable to move the beam downwardly.

In testimony whereof I affix my signature in presence of two witnesses.

NATHANIEL A. COLLINS.

Witnesses:

R. D. FLUKE,
M. L. COLLINS.