

No. 620,108.

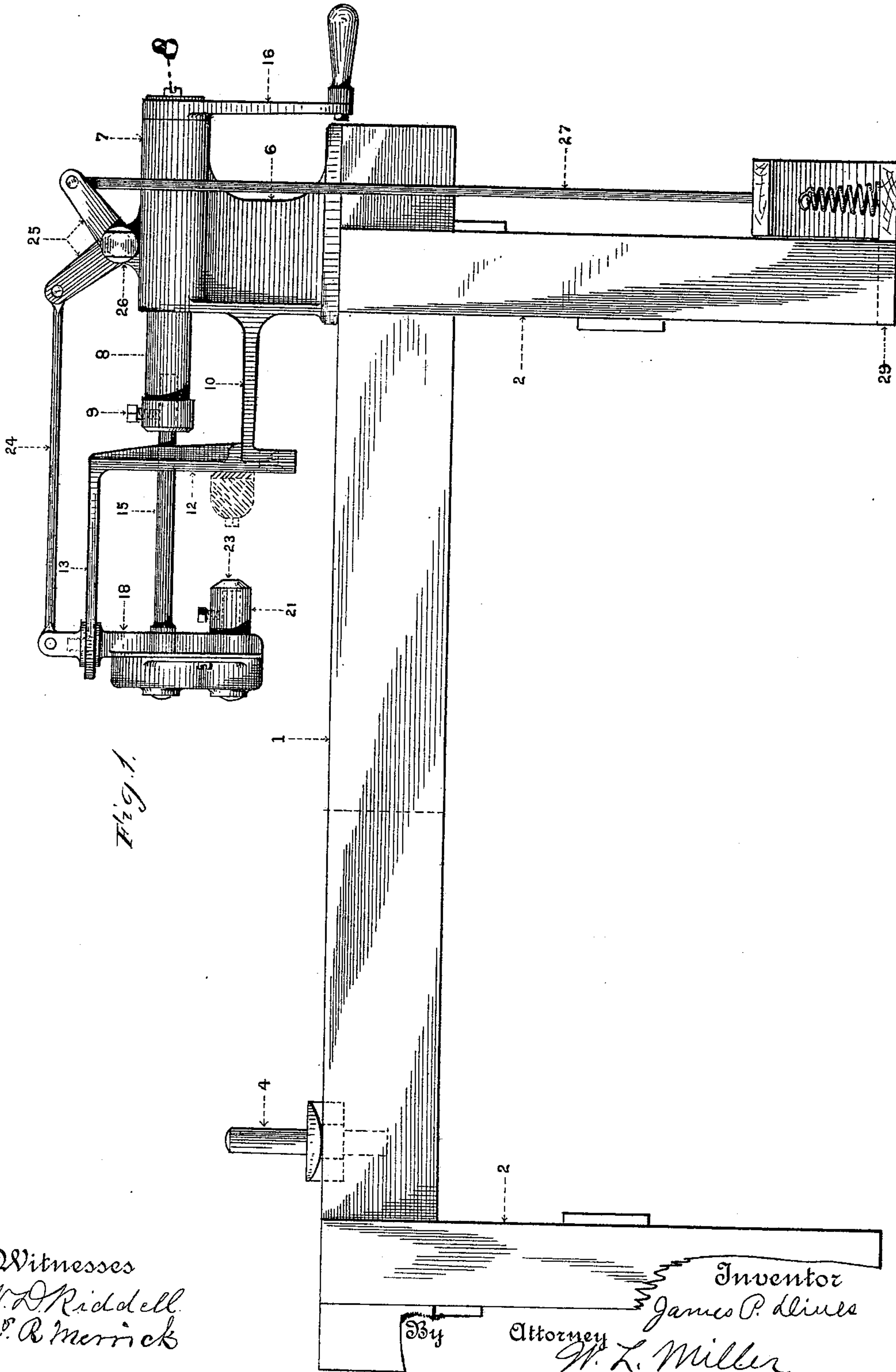
Patented Feb. 28, 1899.

J. P. DINES.
WHEELWRIGHT MACHINE.

(Application filed June 11, 1897.)

(No Model.)

2 Sheets—Sheet 1.



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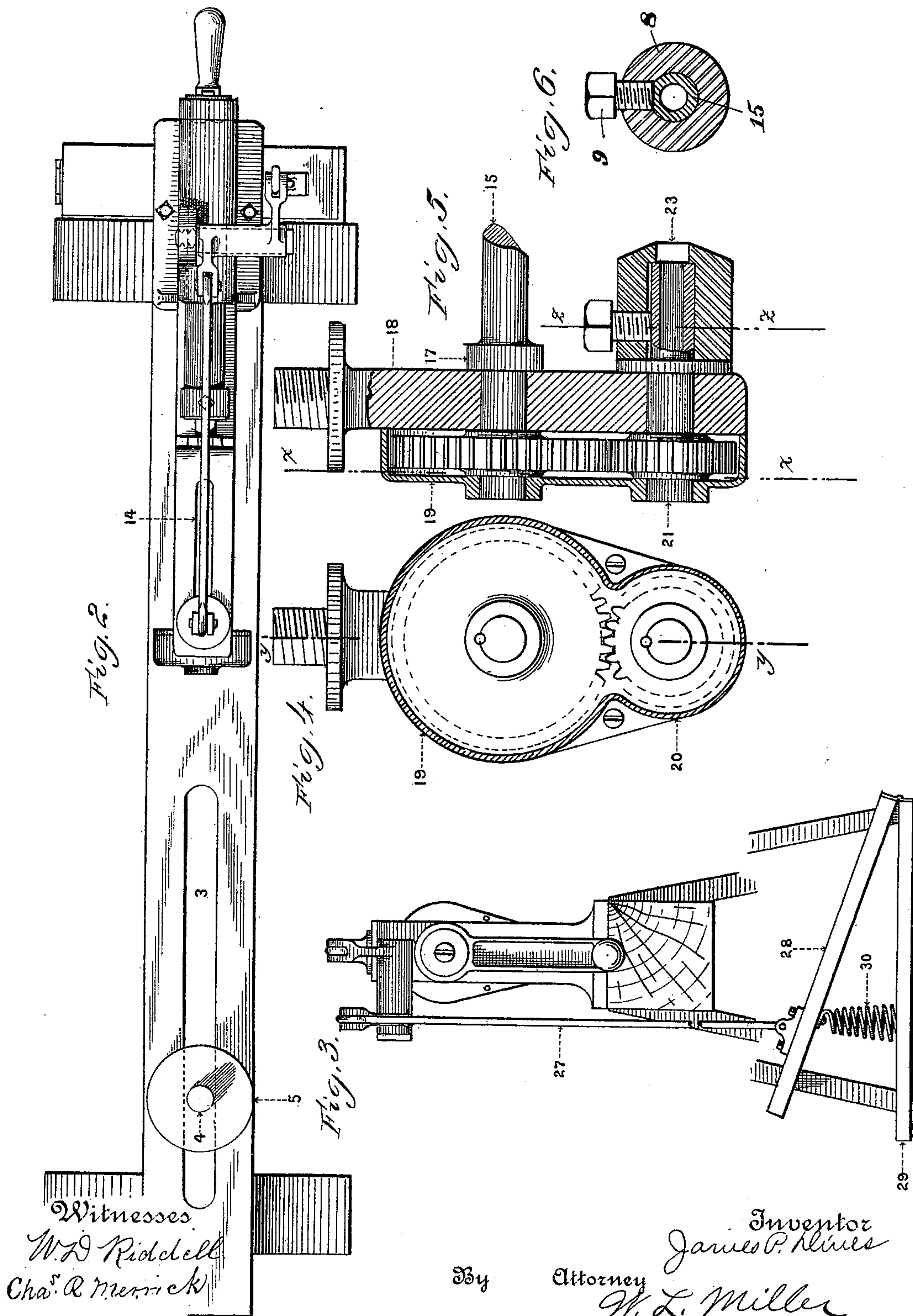
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UNITED STATES PATENT OFFICE.

JAMES P. DINES, OF XENIA, OHIO.

WHEELWRIGHT-MACHINE.

SPECIFICATION forming part of Letters Patent No. 620,108, dated February 28, 1899.

Application filed June 11, 1897. Serial No. 640,302. (No model.)

To all whom it may concern:

Be it known that I, JAMES P. DINES, a citizen of the United States, and a resident of Xenia, in the county of Greene and State of Ohio, have invented certain new and useful Improvements in Wheelwright-Machines; and I do hereby declare that the following is a full, clear, and exact description of the invention, which will enable others skilled in the art to which it appertains to make and use the same, reference being had to the accompanying drawings, which form a part of this specification.

My invention relates to wheelwright-machines for the use of carriage-makers, blacksmiths, and others for putting on and off the nuts from the bolts which fasten the tires to the wheels of buggies, carriages, and other vehicles.

The invention consists in the novel construction and combination of parts fully described and claimed hereinafter.

In the accompanying drawings like figures represent like parts.

Figure 1 is a side view of my invention. Fig. 2 is a plan view. Figs. 3, 4, 5, and 6 are detail views of parts of the machine.

In the said drawings the reference-numeral 1 designates a horizontal beam provided near each end with legs 2 and formed near one end with a slot 3, (shown in Fig. 2,) in which is located a movable or adjustable pin 4, provided with a circular flange 5. Secured to the opposite end of said beam is a bracket 6, formed with a sleeve 7. This bracket is also formed with a horizontal portion 10, a vertical portion 12, and an inwardly-extending horizontal portion 13, formed with a slot 14. (Shown in Fig. 2.) Journaled in said sleeve 7 is a shaft 8, provided at its outer end with an operating-crank 16. The inner end of the said shaft 8 is hollow, permitting a longitudinal movement of the detachable shaft 15 within the said shaft 8. The top of the shaft 15 is flattened, so that it engages the set-screw 9, causing the shaft 15 to turn with the shaft 8, as is shown in Fig. 6. The shaft 15 passes through the vertical portion 12, and its inner end is journaled in a socket 17 of a vertical arm 18, as shown in Fig. 5. The upper end of said arm passes through the slot 14. Secured to the end of the said shaft 15

is a gear 19, (shown in Figs. 4 and 5,) which meshes with a gear 20 on the end of a stud-shaft 21, the opposite end of which is formed with an angular opening 23, which engages with a nut, as hereinafter described, and serves as a wrench for turning the nut.

The connection of the sliding splined shaft between the parts 8 and 18 is fully shown in Fig. 6, the numerals 9, 8, and 15 showing the parts designated by the same numerals in Fig. 1.

Pivoted to the upper end of the arm 18 is a bar 24, which is connected with a bell-crank lever 25, pivoted to a lug 26 on the sleeve 7. Also connected with the lever 25 is a bar 27, the lower end of which is pivotally connected with a footboard 28, hinged to a base-board 29. The numeral 30 in Fig. 3 designates a coiled spring between the said foot and base boards for returning the footboard to normal position after having been depressed.

The operation of the machine is as follows: The wheel the nuts of which are to be taken on or off the bolts which connect the tire with the fellies is placed on the pin 4, which passes through the hub-opening. The wheel is then pushed outwardly, so that the tires will abut against the vertical portion 12, as is seen in dotted lines, Fig. 1. The footboard is then depressed, which through its connections will move the arm 18 toward the wheel-tire, so that the wrench will engage with one of the nuts of the bolts which connect the tires with the fellies. By now turning the shafts 8 and 15 by means of the crank 16 the nut will be turned so as to screw it home or take it off, as the case may be.

The purpose of the connection between 15 and 8 is to allow the sliding of 15 when the arm carrying it is moved toward the bracket.

By the above means the nuts can be readily screwed on the bolts or taken off the same, and after one has been so taken off or put on the wheel is turned on the pin 4, which serves as a pivot to bring the wrench in line with a new bolt. This pin is adjustable in the slot in the beam 1, so as to allow wheels of varying sizes to be operated upon.

Having thus fully described my invention, what I claim is—

In a wheelwright-machine of the character described, the combination of a bed-frame

comprising a beam slotted to receive a flanged
pin for supporting a wheel-hub, and permit-
ting the adjustment of said pin toward and
from a bracket on said beam in combination
5 with said bracket which supports a shaft hav-
ing means to rotate the same, said bracket
having a slotted extension projecting toward
the pin in which extension slides an arm sup-
porting an extension of said shaft having a
10 sleeve connection to permit it to slide longi-
tudinally, but to be rotated by the shaft; said
extension of the shaft being geared to a stub-

shaft carrying a wrench-socket projecting to-
ward the bracket and means for moving the
arm toward and from the bracket substan- 15
tially as described and shown.

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

JAMES P. DINES.

Witnesses:

I. S. DINES,
W. L. MILLER.