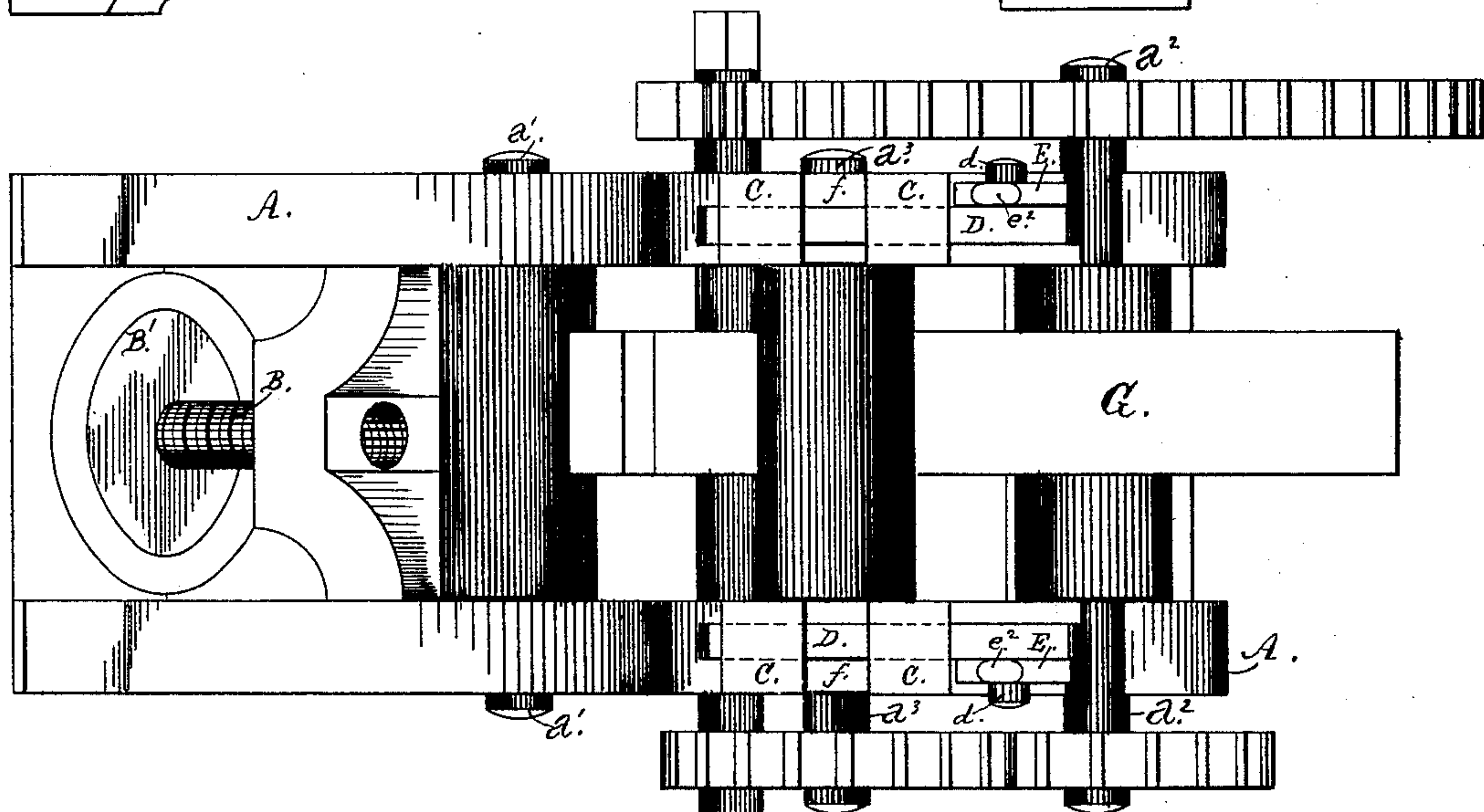
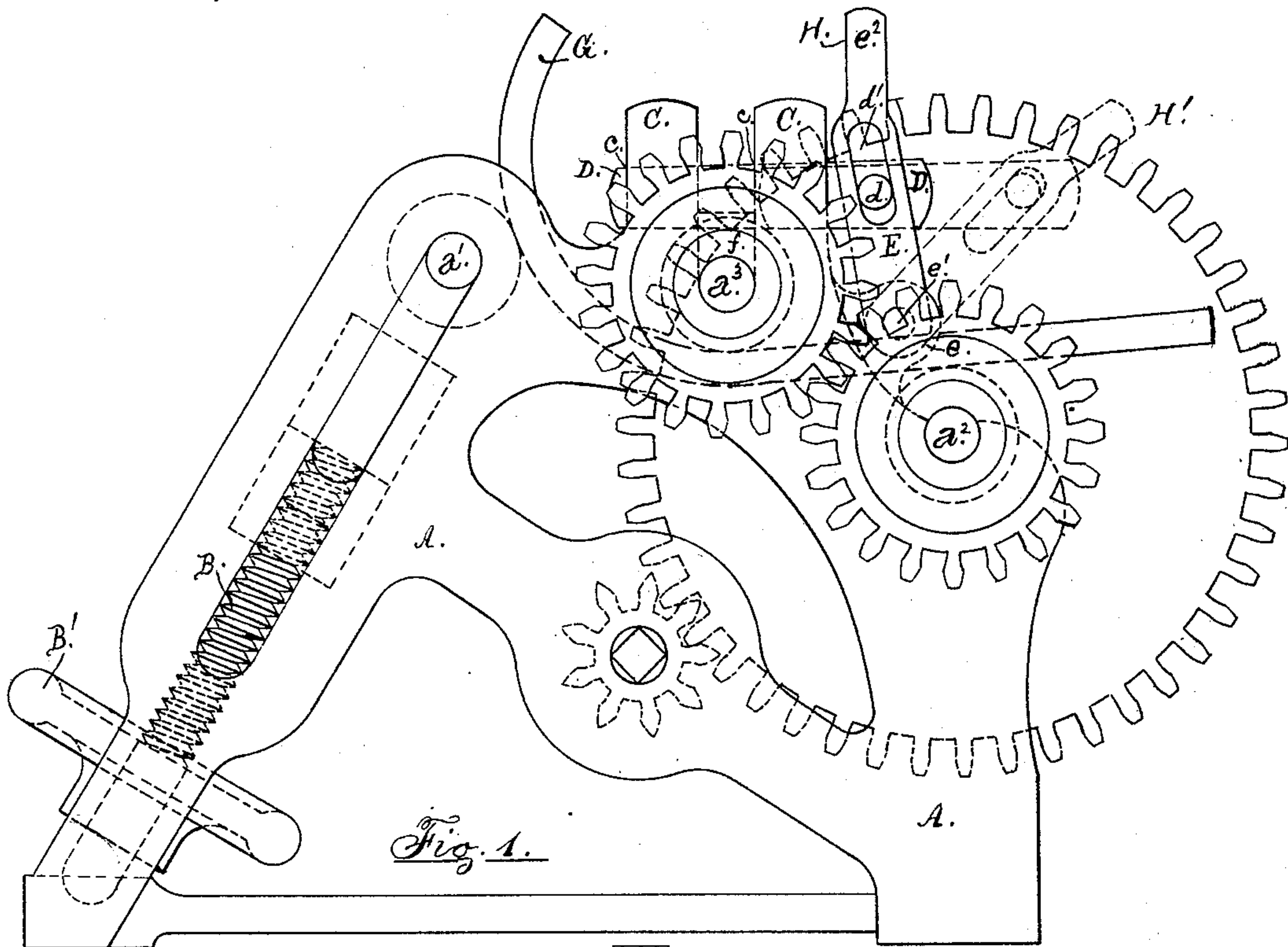


(No Model.)

I. L. ANWERTER.
TIRE BENDER.

No. 406,984.

Patented July 16, 1889.



Witnesses

J. Stauffer
H. H. Kutz

Fig. 2.

Inventor

J. L. Anwerter

By

Attorney

H. H. Kutz

UNITED STATES PATENT OFFICE.

ISAAC L. ANWERTER, OF COLUMBIA, PENNSYLVANIA.

TIRE-BENDER.

SPECIFICATION forming part of Letters Patent No. 406,984, dated July 16, 1889.

Application filed October 18, 1887. Renewed January 15, 1889. Serial No. 296,468. (No model.)

To all whom it may concern:

Be it known that I, ISAAC L. ANWERTER, of Columbia, in the county of Lancaster and State of Pennsylvania, have invented certain
5 new and useful Improvements in Tire-Benders; 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
10 use the same.

My invention relates to certain improvements in tire-bending machines, the object of the invention being to provide a simple yet durable method by which the central or upper
15 roll of a tire-bender may be removed vertically from its position in the frame in order to release the tire after the bending process.

Heretofore in so-called "tire-bending machines" various devices have been used for
20 the purpose of allowing the aforesaid central roll's removal laterally from its position in the frame, the necessity of these several devices being caused mainly by the difference in diameter between the body and the journals on
25 each end of said roll. One case in particular which I have noticed had the bearing in the frame as large as the diameter of the body of the roll, thus causing excessive friction, which I desire to obviate, and at the same time al-
30 low the journals of the roll to be of any desired diameter. In order to do this I propose to remove the aforesaid central roll from the frame in a vertical direction, as fully set forth in the following specification and illus-
35 trated in the accompanying drawings, similar letters referring to similar parts throughout the several views.

Figure 1 is a full vertical side elevation of a tire-bending machine. Fig. 2 is a top plan
40 view of the same.

In Fig. 1, A is the frame, a' the journals of the front roll, and a^2 the rear and a^3 the central or upper roll journals which I desire to operate
45 on. The front-roll journals a' have an angular vertical adjustment by means of the screw B, operated by the hand-wheel B', as in common use for that purpose. On both sides of the central-roll journal a^3 are upwardly-projecting lugs C C. These lugs are bifurcated
50 by slots $c c$, in which the wedge-key D is

adapted to work, said wedge being provided in its rear end with an outwardly-projecting pin d , adapted to fit, but work loosely, in an oblong slot d' through the shifting-lever E. The lower end of this lever is attached to the
55 frame A at e by a suitable pin e' , and its upper end provided with a hand-hold e^2 . Over the journal a^3 and under the wedge D is a box-cap f , and though I show this cap f in use it is not absolutely necessary, as the wedge
60 D itself may be adapted to come in direct contact with the journal a^3 , thus avoiding any liability of the loss of the loose cap f by not using it at all.

It will be understood that the lugs C C, 65 wedge D, and lever E, as described, are intended to be attached to both sides of the frame of the machine, as shown in Fig. 2, in order to control both journals a^3 of the central roll. 70

Having thus described the general arrangements of the several parts, the operation is as follows: The tire G having been placed in the machine and wholly or partly bent, as shown in Fig. 1, I desire to remove the same. The
75 lever E is now drawn from the position H by its hand-hold e^2 to the position indicated by the dotted line H'. This movement draws the wedge-key D back through the slots $c c$ in the lugs C C of the frame A, as also indicated by
80 the dotted line aforesaid. The journals a^3 of the central roll now have nothing to retain them in the frame A, and so said roll may be removed vertically from said frame and the tire taken out. While in this position another
85 straight piece of iron may be put in the machine, the central roll replaced in the frame A, and the lever E returned to its normal position H, thus forcing the wedge-key D over the journal a^3 . The tire is now bent as desired, 90 and in the same manner as in all machines of this class for the like purpose.

Having thus described my invention, what I claim as new, and desire to secure by Letters Patent, is— 95

1. In a tire-bending machine, the combination, with the frame A and central-roll journal a^3 , of the wedge-key D and shifting-lever E, said lever E adapted to operate said key D for the purpose of retaining said jour- 100

nals a^3 in position in the frame A, substantially as set forth, and for the purpose described.

5 2. In a tire-bending machine, the combination of the following elements: the wedge-key D, the lugs C C in the frame A, and the journals a^3 of the central roller, said key D being adapted to pass through slots $c c$ in the lugs C C, retaining said journals a^3 in position in

the frame A, as set forth, and for the purpose so described.

In testimony whereof I have hereunto subscribed my name in the presence of two subscribing witnesses.

ISAAC L. ANWERTER.

Witnesses:

N. J. BLACKWOOD,
D. H. KULP.