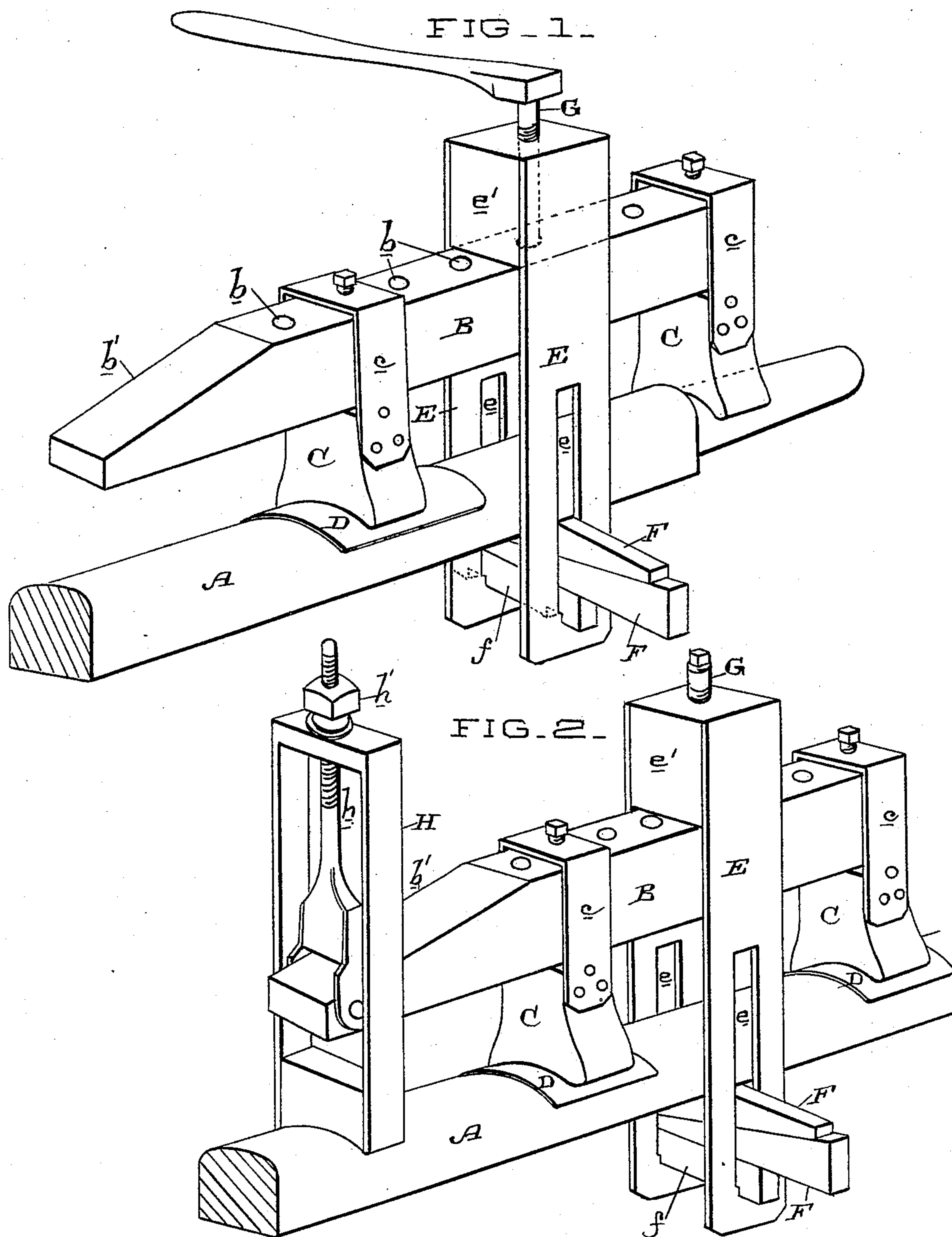


(No Model.)

G. W. HUNTER.
AXLE SETTING MACHINE.

No. 454,213.

Patented June 16, 1891.



Witnesses,
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UNITED STATES PATENT OFFICE.

GEORGE W. HUNTER, OF FRESNO, CALIFORNIA.

AXLE-SETTING MACHINE.

SPECIFICATION forming part of Letters Patent No. 454,213, dated June 16, 1891.

Application filed November 21, 1890. Serial No. 372,242. (No model.)

To all whom it may concern:

Be it known that I, GEORGE W. HUNTER, a citizen of the United States, residing at Fresno, Fresno county, State of California, have invented an Improvement in Axle-Setting Machines; and I hereby declare the following to be a full, clear, and exact description of the same.

My invention relates, generally, to the class of machines for manipulating metal bars of all kinds to bend or straighten them, as may be desired, and especially to those devices used for taking the bends out of vehicle-axles.

My invention consists in the novel construction of parts hereinafter fully described, and specifically pointed out in the claims.

The object of my invention is to provide a machine for bending or straightening any iron bars, but especially for properly setting and readily adjusting vehicle-axles without having to remove them from their connections with the vehicle.

Referring to the accompanying drawings for a more complete explanation of my invention, Figure 1 is a perspective view of my machine. Fig. 2 is a view showing the addition of the screw-standard H.

A is the bar to be manipulated. In this case I have shown it as a portion of a vehicle-axle.

B is a heavy metal bar provided in its upper surface with shallow sockets or counter-sunk holes *b*, said bar having one end *b'* made on a bevel or slope, as shown.

C are standards or knees secured by metal straps *c* to the bar B, said standards having their lower ends concaved, whereby they are enabled to rest firmly upon the axle, and in order to prevent them from marring the varnish or paint of the axle strips D, of leather, may be placed under them. These standards or knees are movable, as their straps *c* permit them to be slipped along the bar to any desired position on the axle.

E is a forked clip or stirrup, which fits down over the metal bar B and passes down on each side of the axle, extending below it, and is readily movable to the point desired. In the sides of this clip or stirrup are made elongated vertical slots *e*, in which, under the axle, are seated the keys or wedges F. In the lower portion of the slots, under the wedges, is the

notched locking-piece *f*, which keeps the arms of the clip or stirrup from spreading. In the top of this clip or stirrup is a fixed nut *e'*, in which is seated the operating-screw G, the lower end of which is adapted to fit into any of the sockets or holes *b* in the top of the bar B.

In operation the device is placed upon the axle, the beveled end of the bar B allowing it to be slipped under the elliptic spring on the axle as far as possible. The wedges or keys are driven to place, so as to primarily adjust the clip or stirrup E, and the screw G is turned down by means of a suitable wrench or handle until its point enters the holes or sockets in the top of the bar, whereby any slip is prevented. The clip or stirrup and the knees or standards are of course located at proper points on the axle. Now, all being in readiness, the screw is turned down farther, whereby the clip or stirrup pulls up and the knees or standards press down, and thus the necessary force is applied to properly adjust the axle. For heavy work I have at one end of the bar B the screw-standard H, fitting freely over the bar and its lower end bearing upon the axle. In the upper end of this standard, which extends above the bar B, is fitted a screw *h*, which is pivoted in a suitable manner at its lower end to the end of the bar B. The upper end of the screw receives a nut *h'*, by which it is operated. Now by turning on this nut the screw-standard lifts up on the bar B, and as said bar is held to the axle by the clip or stirrup it acts as a lever on the knees or standards C to straighten the axle. For extra-heavy work I may use two heavy bars, such as B, one on top of the other.

This machine has power enough to straighten or adjust any axle, and an ordinary wrench or lever may be used to turn the screws and nuts. The work does not have to be heated nor the axle taken off the vehicle. The whole machine is a simple and durable one for the purpose.

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

1. In an axle-setting machine, the combination of the bar B, the knees or standards resting on the axle and on which said bar rests, the stirrup or clip fitting over and con-

necting said bar and axle, and the screw seated in the top of the stirrup or clip and bearing on the bar, substantially as herein described.

2. In an axle-setting machine, the combination of the bar B, the knees or standards resting on the axle and on which said bar rests, the stirrup or clip fitting over the bar and axle and having vertical side slots, the keys or wedges in the lower ends of the slots under the axle, the nut in the upper end of the stirrup or clip, and the screw seated in said nut and bearing on top of the bar B, substantially as herein described.

3. In an axle-setting machine, the combination of the bar B, having in its top the series of sockets or holes *b*, the standards or knees between the bar and axle, the stirrup or clip fitting over the bar and axle and having the vertical side slots, the keys or wedges in the lower ends of the slots under the axle, the locking-piece *f*, the nut in the top of the stirrup or clip, and the screw seated in said nut and having its lower end adapted to fit in any of the sockets or holes in the upper side of the bar B, substantially as herein described.

4. In an axle-setting machine, the combination of the bar B, the knees or standards resting on the axle and having straps passing over the bar, whereby they are secured to and are movable on said bar, the movable stirrup or clip fitting over the bar and axle and having the vertical side slots, the keys or wedges in the lower ends of the slots under the axle, the nut in the top of the stirrup or clip, and the screw seated in said nut and having its lower end adapted to bear on the bar B, substantially as herein described.

5. In an axle-setting machine, the combination of the bar B, the knees or standards between said bar and axle, and a connection

for holding said bar and axle together, the standard H, resting on the axle, the screw having its lower end connected with the end of the bar B and its upper end passing through the standard H, and the nut on the top of the screw, substantially as herein described.

6. In an axle-setting machine, the combination of the bar B, the knees or standards carried thereby and resting on the axle, the standard H, resting on the axle, the screw pivoted to the bar B and passing through the top of the standard, the nut on top of the screw, the stirrup or clip passing down over the bar and axle and having vertical side slots, the keys or wedges in the lower ends of said slots under the axle, the nut in the top of the stirrup or clip, and the screw seated in said nut and having its lower end acting against the upper surface of the bar B, substantially as herein described.

7. An axle-setting machine comprising the bar B with holes and sockets in its upper surface, the movable knees or standards carried by the bar and resting on the axle, the movable stirrup or clip passing over the bar and axle and carrying keys or wedges and a locking-piece *f* in its lower end under the axle and a nut in its upper end, a screw seated in said nut and having its lower end bearing in the holes or sockets of the bar, the standard H, fitting on the axle and pivoted to the end of bar B, and a nut on the top of said screw, substantially as herein described.

In witness whereof I have hereunto set my hand.

GEORGE W. HUNTER.

Witnesses:

W. DARDEN,
F. H. SINCLAIR.