

No. 637,241.

Patented Nov. 21, 1899.

H. W. DYER.
ANVIL ATTACHMENT.

(Application filed Feb. 25, 1899.)

(No Model.)

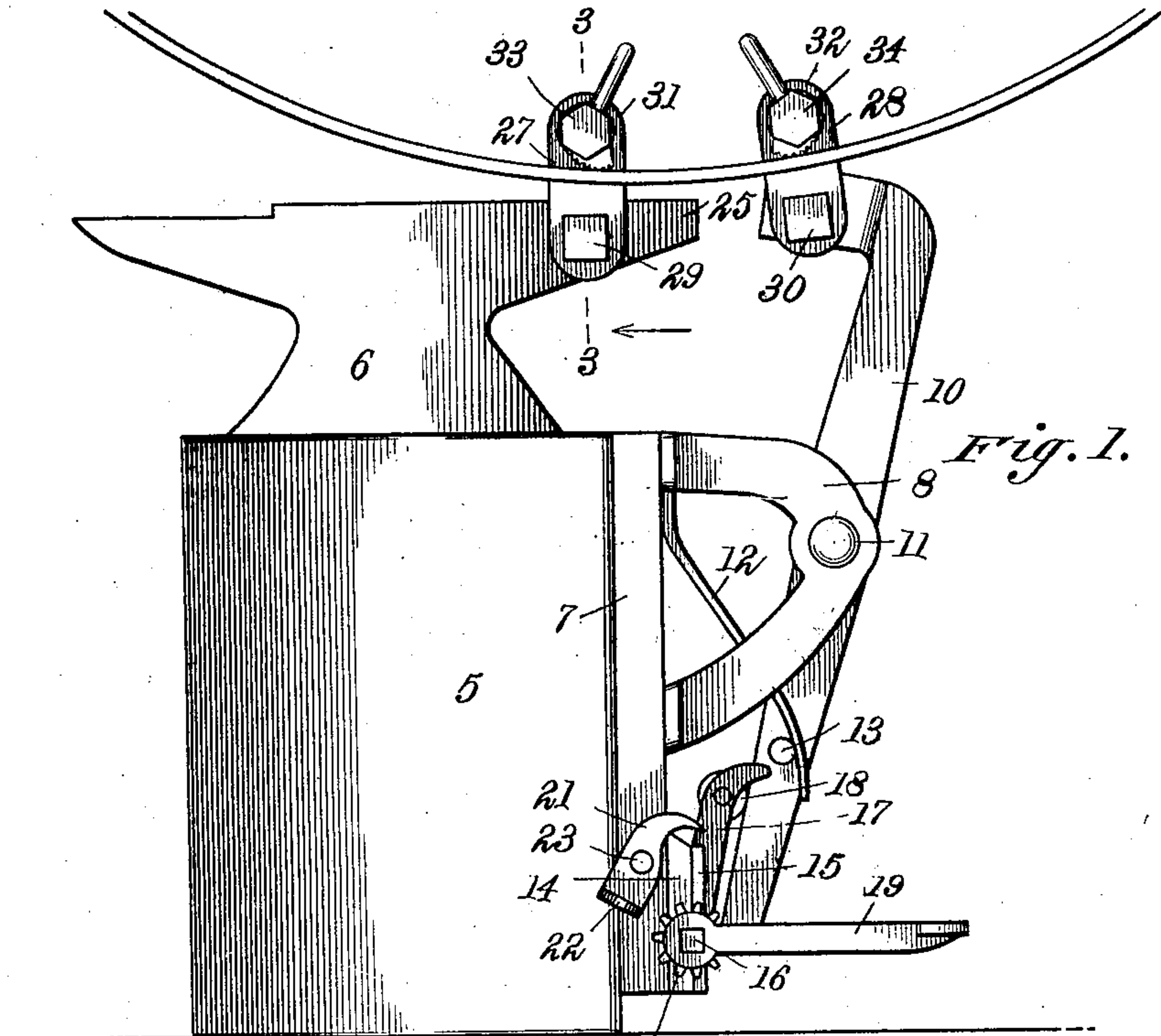


Fig. 2.

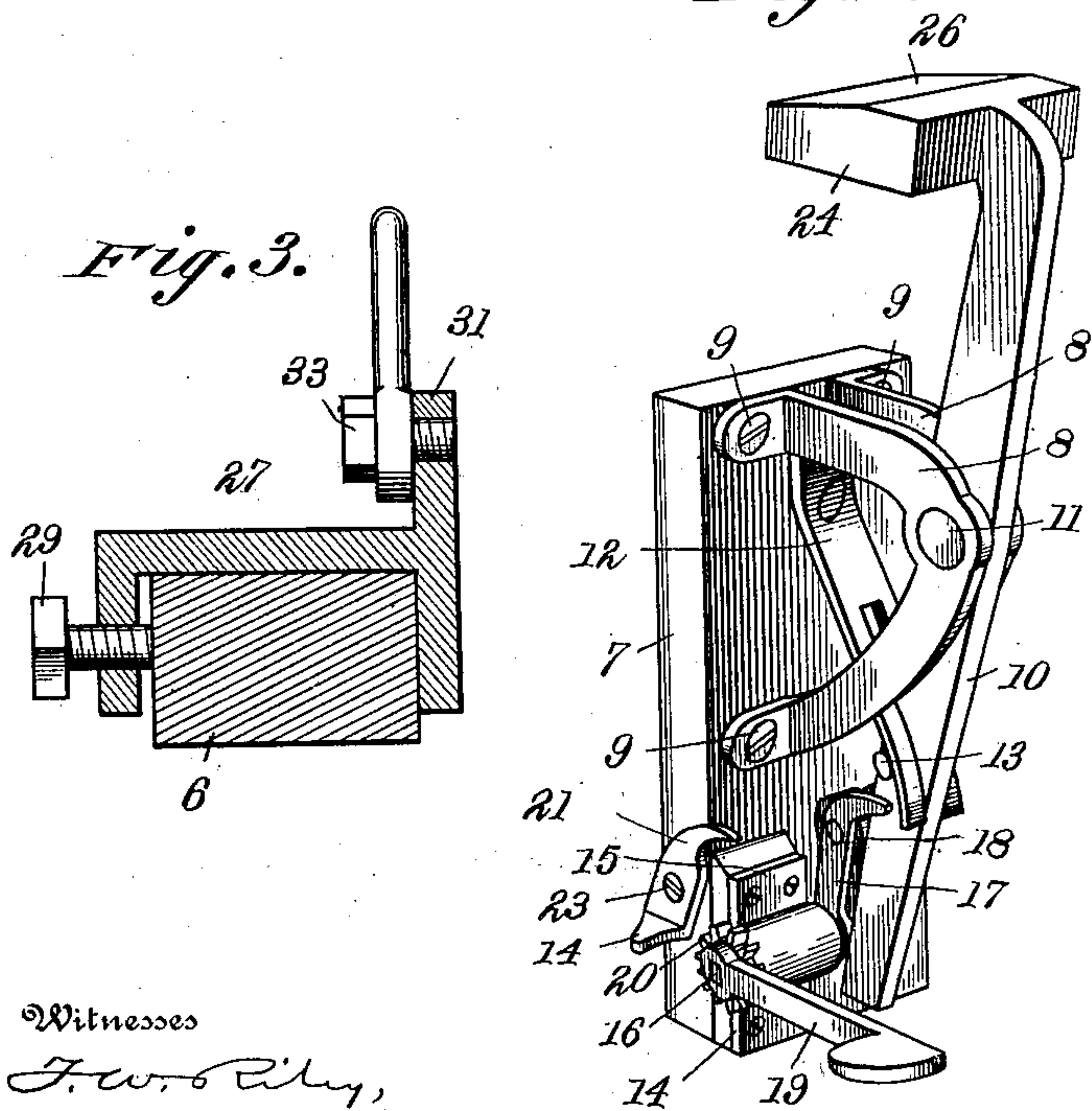
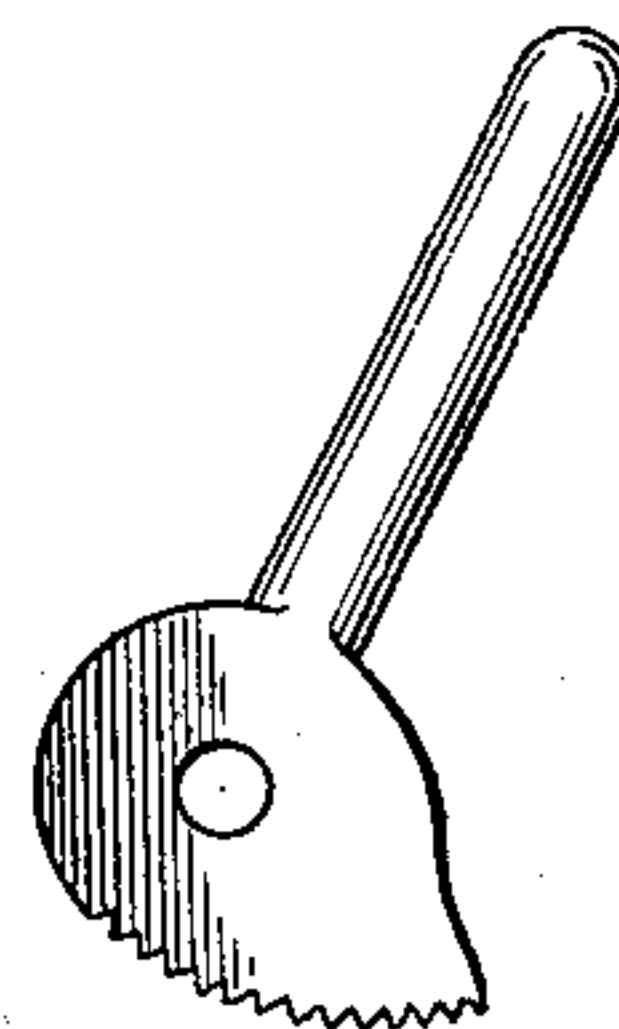


Fig. 4.



Witnesses

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UNITED STATES PATENT OFFICE.

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ANVIL ATTACHMENT.

SPECIFICATION forming part of Letters Patent No. 637,241, dated November 21, 1899.

Application filed February 25, 1899. Serial No. 706,866. (No model.)

To all whom it may concern:

Be it known that I, HENRY W. DYER, a citizen of the United States, residing at Fincastle, in the county of Putnam and State of Indiana, have invented a new and useful Anvil Attachment for Blacksmiths, of which the following is a specification.

My invention is in the nature of an attachment for blacksmiths' anvils, the object being to furnish blacksmiths with a cheap, simple, and effective foot-operated attachment for anvils which may be used as a vise to hold horseshoes or other articles upon which work is being done, to upset or shrink wheel-tires, and for many other purposes.

With this object in view my invention consists in the attachment for anvils hereinafter fully described, the points of novelty of which are specifically set forth in the claims.

In order to enable others skilled in the art to which my invention most nearly appertains to make and use the same, I shall now proceed to describe its construction and operation, having reference to the accompanying drawings, forming part hereof, in which—

Figure 1 is a view in elevation of an anvil attachment constructed in accordance with my invention arranged for use as a tire up-setter or shrinker. Fig. 2 is a perspective view illustrating my improved attachment detached from the anvil, the construction being that necessary to form, in connection with the anvil when attached thereto, a vise for articles being forged. Fig. 3 is a detail sectional view on the broken line 3 3 of Fig. 1 looking in the direction of the arrow, the tire being omitted. Fig. 4 is a detail view, in side elevation, of one of the cam-clamping levers detached.

Like numerals of reference mark the same parts wherever they occur in the various figures of the drawings.

Referring to the drawings by numerals, 5 indicates the anvil-block, and 6 the anvil, which may be of any well-known size, weight, or style desired, no alteration whatever being required in the construction of either in order to attach my invention.

7 indicates a block of wood of about the height of the anvil-block and the width of its end upon which to secure brackets 8 8 by

means of screws 9, said brackets being arranged vertically at a distance from each other sufficient to admit of a lever 10, which is pivotally secured at the angle of the brackets 8 upon a pin or bolt 11.

12 indicates a spring which has its outer portion forked to straddle the lever 10, the forked ends of the spring bearing inwardly against a pin 13, secured in and projecting laterally from said lever below its pivot, the normal tendency of said spring being to force the lower end of lever 10 inward toward the block.

14 indicates a bracket secured to the block 7 to one side of the vertical plane of the lever 10, in which bracket, by means of a cap 15, is journaled a short shaft 16, to the inner end of which is rigidly secured an arm 17, carrying a friction-roller 18 near its outer end, which bears against the inner face of the lower end of the lever 10. On the outer end of shaft 16 are rigidly secured a foot-lever 19 and a ratchet-wheel 20. A pawl 21, having a treadle projection 22, is pivoted by a screw to the edge of block 7 in position to engage the teeth of ratchet-wheel 20 when desired.

When my attachment is to be used as a vise to hold horseshoes, &c., the upper end of lever 10 is provided with a head 24, which will serve as the movable jaw of the vise, while the end 25 of the anvil serves as the stationary jaw. The head may be so shaped as to serve also as an anvil upon which to forge parts of articles which project over it when held in position, such as the calks or other parts of horseshoes, the form illustrated being provided with an inclined upper surface 26 for such purposes.

When the attachment is intended for use as a tire up-setter or shrinker, brackets, such as illustrated at 27 and 28 in Fig. 1 and in detail in Fig. 3, are placed over the anvil 6 and head 24, respectively, and secured thereon by clamp screws or bolts 29 30. On the projecting ends 31 and 32 of these brackets are cam-clamping jaws provided with the usual serrated faces set to face toward each other and pivotally secured by bolts 33 34. When the jaws 24 and 25 are apart, a heated tire may be clamped, as shown in Fig. 1, and upset by bringing the jaws together.

In all operations the device is operated to bring the upper end of lever 10 toward the anvil by the smith pressing his foot on foot-lever or treadle 19, which rocks shaft 16 and causes arm 17 to move outward, with roller 18 bearing against the inner face of lever 10 below its pivot, thus forcing the lever outward at the bottom and inward at the top, in which position it may be held by engaging pawl 23 with the teeth of ratchet-wheel 20. This construction enables the smith to force head 24 inwardly with great power, due to the leverage obtained by the difference in length between foot-lever 19 and arm 17 and to the toggle action of arm 17 on lever 10, especially near the end of the stroke. To release the jaw, it is only necessary for the smith to press his foot on projection 22 of pawl 21, which will force its point out of engagement with the teeth of ratchet-wheel 20, permitting the spring 12 to move the parts to their normal position, as shown in Figs. 1 and 2.

My attachment will be made and sold independent of the anvil and can readily be set up for operation by attaching the block 7 to the ordinary anvil-block by the screws 9, which secure the brackets 8, or by any other suitable means.

The advantages attending the use of my invention will be obvious from the foregoing, and while I have specifically described the various parts I desire it to be understood that many changes and variations might be made without departing from the spirit and scope of my invention.

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

1. An attachment for anvils comprising two parallel brackets, a lever pivoted centrally in

said brackets and carrying a head at its upper end a spring for normally keeping the head away from the anvil, a foot-lever having a right-angular pivotal extension carrying an arm for forcing the first-named lever toward the anvil and a foot-operated ratchet-and-pawl mechanism for securing the lever in position, substantially as described.

2. An attachment for anvils comprising a block of a size suitable for attachment to the anvil-block, parallel vertical brackets secured thereto, a lever pivoted between said brackets and having a suitable head at its upper end, a spring secured to the block and acting upon the lever to force the head away from the anvil, and a foot-lever journaled to a rock-shaft carrying an arm acting upon the lever to force the head toward the block and a ratchet-and-pawl mechanism to secure the lever in any adjustment, substantially as described.

3. An attachment for anvils consisting of a block suitable for attachment to the anvil-block, outwardly-extending parallel brackets thereon, a lever, carrying a head at its upper end and pivoted to said bracket, a bifurcated spring to hold the lower end of the lever inward, a rock-shaft pivoted to the block in a suitable sleeve, an arm on one end of the shaft bearing outward against the lever below its pivot, a ratchet-wheel and a foot-lever on the opposite end of the rock-shaft and a pawl, pivoted to the block and engaging the teeth of the ratchet-wheel, substantially as described.

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