

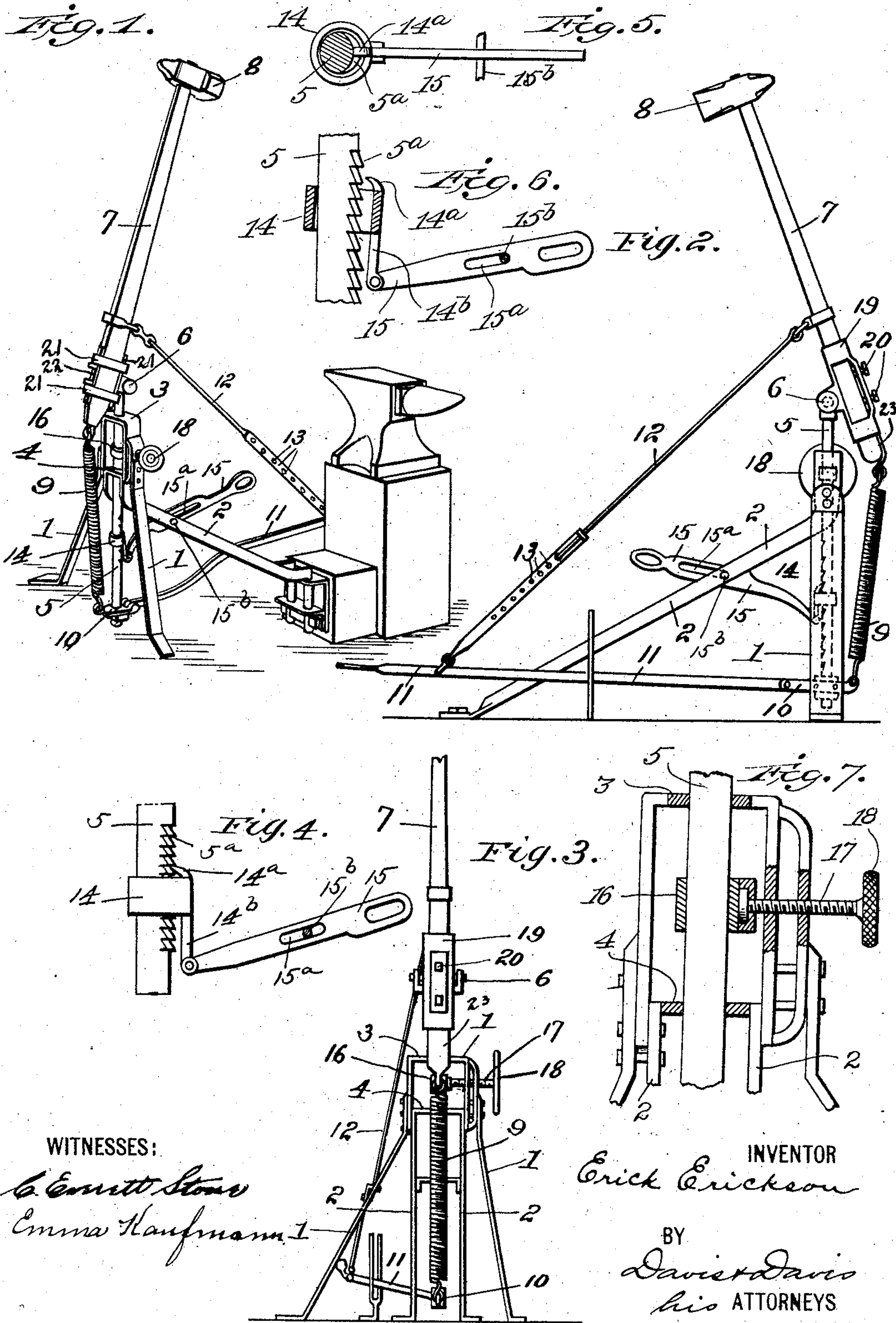
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PATENTED JAN. 24, 1905.

E. ERICKSON.

FOOT POWER HAMMER.

APPLICATION FILED JUNE 4, 1904.



UNITED STATES PATENT OFFICE.

ERICK ERICKSON, OF NANTUCKET, MASSACHUSETTS.

FOOT-POWER HAMMER.

SPECIFICATION forming part of Letters Patent No. 780,558, dated January 24, 1905.

Application filed June 4, 1904. Serial No. 211,072.

To all whom it may concern:

Be it known that I, ERICK ERICKSON, a citizen of the United States, residing at Nantucket, in the county of Nantucket, State of Massachusetts, have invented certain new and useful Improvements in Foot-Power Hammers, of which the following is a specification, reference being had therein to the accompanying drawings, in which—

10 Figure 1 is a perspective view of the hammer arranged for use in connection with an anvil. Fig. 2 is a side elevation of the hammer, showing slight modifications; Fig. 3, a rear elevation thereof; Fig. 4, a detail view.
 15 Fig. 5 is a plan view of the clutch-sleeve and its operating-lever, showing the sleeve in position on the handle-carrying post; Fig. 6, a vertical sectional view of the clutch-sleeve, showing its dog released from the teeth of
 20 the handle-carrying post; and Fig. 7, a detail vertical sectional view showing the frictional gripping device for adjustably securing the handle-carrying post.

The main object of the invention is to provide a foot-power hammer of simple construction adapted especially for the use of blacksmiths and which may be conveniently arranged for anvil-work.

Another object of the invention is to provide means for vertically adjusting the hammer mechanism in order that the blows thereof may be properly delivered on the material being worked upon and, further, to permit the hammer to be swung from side to side in order
 35 that the point of impact may be varied.

Referring to the various parts by numerals, 1 designates a vertical stand or support, to which near its upper end is secured the upper end of a forward-extending brace-frame
 40 2. The forward end of this frame may be secured to the anvil-base, as shown in Fig. 1, or it may be bolted to the floor, as shown in Fig. 2. Slidably mounted in the upper cross-bar 3 of the main frame or support 1 and the
 45 upper cross-bar 4 of the brace-frame is a vertically-adjustable hammer-supporting rod 5. The upper end of the rod or post 5 is formed with a bearing, on which is pivoted a projecting part 6, secured to the under side of the hammer-handle 7, near the rear end thereof, said

handle carrying the hammer 8 at its forward end, the greater portion of the hammer-handle being forward of the rod or post 5. To the rear end of this hammer-handle in the rear of the bearing 6 is secured one end of a
 55 long coil-spring 9, the lower end of which is connected to a plate 10, secured on the lower end of the hammer-supporting rod 5. This spring yieldingly maintains the hammer in its raised position, as shown in Figs. 1 and 2.
 60 To the forward end of this plate 10 is pivoted the rear end of a forward-extending foot-lever 11, and to this foot-lever near its forward end is connected the adjustable pull-rod 12, whose
 65 upper rear end is connected to the hammer-handle at a point forward of its pivot. It will be readily seen that when the forward end of the foot-lever is depressed the hammer will be drawn forward and down on the
 70 anvil. The pull-rod 12 is made in two sections, which are adjustably connected together by means of the series of holes 13, formed in one section and into which the bent end of the other section is adapted to be
 75 engaged.

To support the hammer at the desired height and also in order that the point of impact of the hammer on the work-support may be varied laterally, I provide a frictional clamping means to engage the hammer-supporting post
 80 in order that the rod may be turned on its bearings in cross-bars 3 and 4 and then clamped in the desired position. This frictional clamping means, as shown, consists of a sleeve 16, which surrounds the hammer-
 85 supporting rod 5 between the bearings in cross-bars 3 and 4 of the supporting-frame. Connected to this sleeve by any suitable form of swivel is a screw 17, carrying at its outer end a small disk 18, by which it may be turned.
 90 By manipulating the screw 17 the rod 5 may be jammed in its bearings to such an extent as to not only support but also hold it against rotation during the manipulation of the hammer. It is clear, however, that this rod may
 95 be turned in its bearings by grasping the head of the hammer and swinging it from side to side. It is obvious, therefore, that by first jamming the hammer-supporting rod in its bearings in bars 3 and 4 by means of the
 100

screw 17 and then lowering the hammer to the work-support it may be grasped and swung from side to side to the point on the work-support at which it is desired to deliver the
 5 blow and that then the hammer may be operated in the usual way, the blows being delivered at the desired point.

In its normal position the hammer is pivoted at such a height as to deliver a blow squarely
 10 on the upper surface of the anvil or other work-support. If it be desired to deliver a blow squarely upon the material being worked upon when said material is rested on the work-support, means are provided whereby
 15 the hammer-supporting rod may be vertically adjusted. To accomplish this vertical adjustment, the rod 5 is formed with the teeth 5^a and a clutch-sleeve 14 is mounted on said rod. This clutch-sleeve is provided at its upper end
 20 with a dog or pawl 14^a, which is adapted to be engaged in the teeth of the rod or post 5. A depending rigid arm 14^b is secured to the lower end of the clutch-sleeve directly below the dog 14^a, and to the lower end of this arm
 25 is pivoted an operating-lever 15. This lever is slotted at 15^a to receive a pin 15^b, which pivotally and slidably secures the lever to the brace-frame 2. When it is desired to lower the hammer, the free end of the lever 15 is
 30 pulled up. To raise the hammer, the dog 14^a is released from the teeth 5^a by forcing the lever 15 toward the post 5, as shown in Fig. 6. The free end of the lever is then raised to slide the clutch-sleeve down on the rod.
 35 An outward pull on the lever 15 causes the dog 14^a to again engage the teeth on bar 5, and a downward movement of the outer end thereof will lift the hammer-carrying post. The teeth 5^a extend part way around rod 5,
 40 so that the dog 14^a will not be disengaged therefrom when the rod is turned in the frame to vary the point of impact of the hammer.

In order that the length of the hammer-handle between its point of support and the
 45 hammer-head may be varied, it may be mounted in sleeve 19, as shown in Figs. 2 and 3, and have the bearing 6 formed on said sleeve, clamping-screws 20 being provided, by means of which the hammer-handle may be rigidly
 50 clamped within the sleeve. It is obvious that by loosening the screws 20 and shifting the handle in the sleeve the head 5 may be moved toward or from the point of support and the spring 9 extended or collapsed. When this
 55 sleeve 19 is employed, the spring 9 instead of being connected directly to the end of the handle will preferably be connected to a rearward projection 23 of this sleeve, as shown in Figs. 2 and 3. In Fig. 1 this same adjustment
 60 is secured by attaching part 6 to a plate 22,

which, together with another similar plate 22, is clamped adjustably to the hammer-handle by a pair of links 21.

It will be noted that the foot-lever and the spring 9 are carried by the hammer-support-
 65 ing rod and that therefore the entire mechanism may be raised or lowered by means of the handle 15 and the clutch 14. Because of this arrangement the vertical adjustment of the hammer does not alter the relations of the
 70 parts of the apparatus.

From the foregoing it will be seen that I provide a foot-power hammer of exceedingly simple construction and which is capable of various adjustments to adapt it to a great va-
 75 riety of work.

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

1. In a foot-power hammer the combination
 80 of a supporting-frame, a vertically-movable and rotatably-adjustable post mounted in said frame, adjustable means for binding said post in its bearings to hold it against free rotation,
 85 a series of teeth formed on said post, a clutch-sleeve loosely mounted on said post and provided at its upper end with a dog adapted to engage said teeth and at its lower end with a de-
 90 pending arm, a lever pivotally and slidably mounted in the supporting-frame and connected at its rear end to the lower end of the depending arm of the clutch-sleeve, a hammer-
 95 handle pivoted on the upper end of said post, a spring connected to the rear end of said handle and to the lower end of the handle-car-
 100 rying rod, a foot-lever connected to the lower end of said rod, and means connecting said lever to the handle above and forward of its pivot.

2. In a foot-power hammer the combination
 100 of a supporting-frame, a vertically adjustably rotatable post mounted in bearings therein and carrying on its upper end a pivotally-sup-
 105 ported hammer, means for vertically adjusting said post, means for locking the post in its adjusted position, a foot-lever swivelly
 110 mounted on the lower end of said post and means connecting the outer end of this foot-lever to the hammer-handle at a point forward of its pivot and a contractile spring connect-
 115 ing the rear end of the hammer-handle to the lower end of the post, substantially as described.

In testimony whereof I hereunto affix my signature, in the presence of two witnesses,
 this 18th day of May, 1904.

ERICK ERICKSON.

Witnesses:

ANDREW J. SWAIN,
 LEON A. ROYAL.