No. 747,925. PATENTED DEC. 29, 1903.

W. BAKER & S. HORN.

FOOT POWER HAMMER.

APPLICATION FILED MAY 19, 1903.

NO MODEL. 2 SHEETS—SHEET 1.

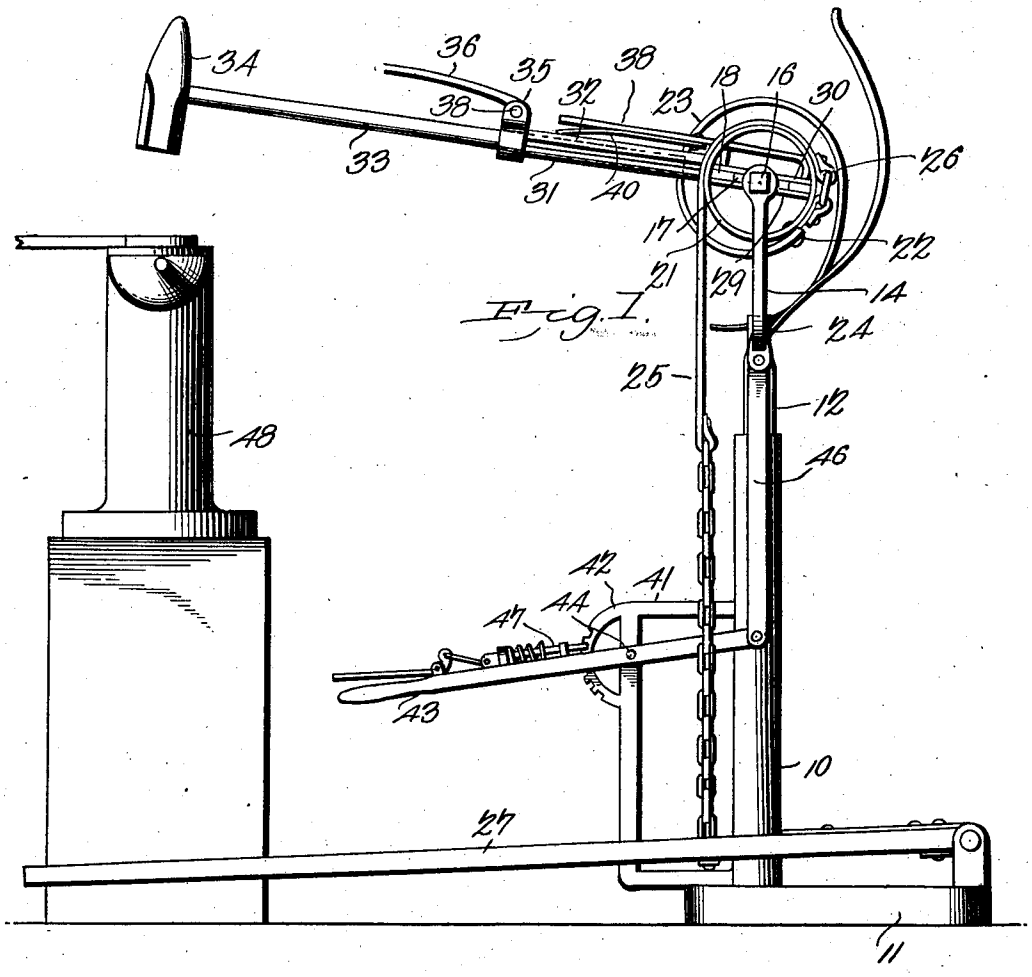


Fig. 1.

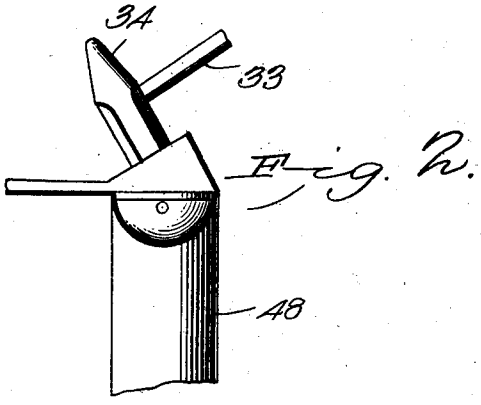
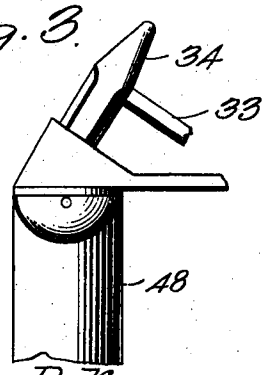


Fig. 2.

Fig. 3.



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NO MODEL. 2 SHEETS—SHEET 2.

Fig. 4.

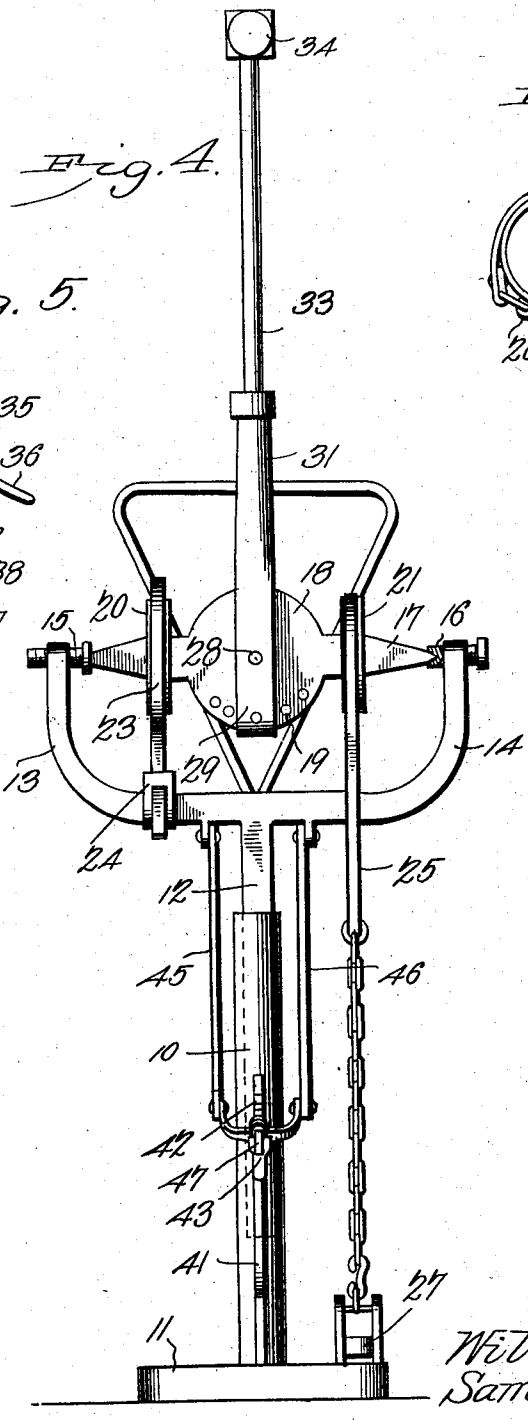


Fig. 5.

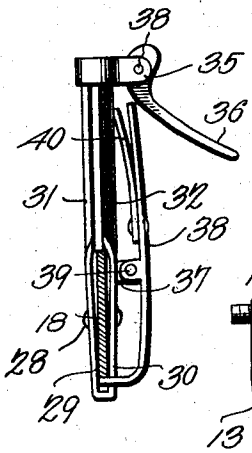
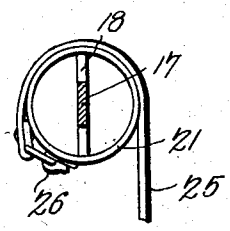


Fig. 6.



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UNITED STATES PATENT OFFICE.

WILLIS BAKER AND SAMUEL HORN, OF AUGUSTA, OKLAHOMA TERRITORY, ASSIGNORS OF ONE-FIFTH TO J. R. MILLER, OF LAKE, OKLAHOMA TERRITORY.

FOOT-POWER HAMMER.

SPECIFICATION forming part of Letters Patent No. 747,925, dated December 29, 1903.

Application filed May 19, 1903. Serial No. 157,848. (No model.)

To all whom it may concern:

Be it known that we, WILLIS BAKER and SAMUEL HORN, citizens of the United States, residing at Augusta, in the county of Woods, Oklahoma Territory, have invented a new and useful Foot-Power Hammer, of which the following is a specification.

This invention relates to foot-power hammers, and has for its object to simplify and improve devices of this character and to produce a device which may be cheaply constructed, easily installed and operated, and which may be readily moved from place to place and adjusted to the work for which it is required; and the invention consists in certain novel features of construction, as hereinafter shown and described, and specified in the claims.

In the drawings illustrative of the invention, in which corresponding parts are denoted by like designating characters, Figure 1 is a side elevation. Figs. 2 and 3 are detached details illustrating different adjustments of the sledge. Fig. 4 is a front elevation. Fig. 5 is a detached sectional detail of the sledge-adjusting mechanism. Fig. 6 is a detached sectional detail of the oscillating frame and operating-belt.

The improved device consists of a supporting-standard 10, having an extended base 11 to impart stability thereto and which may be further supported by an additional base, if required. The standard supports a stock 12, which is adjustable vertically therein, but is held against rotation, preferably by forming the stock angular in cross-section and providing the standard with a corresponding-shaped aperture, as indicated. The upper end of the stock 12 is extended into laterally-branching arms 13 14, having horizontally-alined threaded rods 15 16 in their upper ends, the inner ends of the rods having countersunk cavities to form bearings for an oscillating shaft 17, as shown. The extremities of the shaft 17 are formed conical, as shown, so that they will engage the cavities in the bolts and operate therein with the minimum of friction. This forms an easily-operated and delicately-adjustable shaft which may be rotated with a comparatively small amount of power.

Centrally disposed upon the shaft 17 or integral therewith is a disk 18, having a plurality of spaced concentrically-disposed apertures 19, and connected to the shaft are circular bands 20 21, spaced apart upon each side of the disk. Attached by one end at 22 to the band 20 is a spring 23, while the other end is connected adjustably to the yoke-frame by passing through apertures in the upper ends of the legs of a U-shaped clip 24, embracing the arm 13 of the yoke-frame, as shown. By this means the shaft 17 and its attachments will be yieldably maintained in its withdrawn position. The bands 20 21 are connected in any suitable manner to the shaft and are concentric therewith and partake of its oscillatory motion, the motion being imparted, through the medium of a flexible strap 25, connected to the band 21 at 26 and leading in the opposite direction to the spring 23, to a treadle 27, extending to a point convenient to the foot of the operator, as hereinafter more fully explained.

Attached to the disk 18, as by pivot-bolt 28, is an arm formed with spaced sides 29 30 and extended into semitubular members 31 32, forming a socket in which the handle 33 of the hammer 34 is supported, as shown. The socket member 31 is formed with spaced ears 35, extending over the socket member 32 and supporting a cam-lever 36 by a transverse rivet 38, the cam-lever serving to clamp the members 31 32 tightly upon the hammer-handle, as will be obvious. By this simple means the hammer may be quickly adjusted in the socket, as required.

Extending from the member 30 are spaced ears 37, between which a lock-lever 38 is pivoted, as at 39, one end of the lock-lever adapted to consecutively engage the apertures 19 in the disk 18 and the other end extended into a handle and held yieldably in operative position by a spring 40, as shown. By this arrangement it will be obvious the hammer-

handle may be adjusted about the pivot-pin 28 as a center, the object to be hereinafter more fully explained.

Connected to the standard 10 is a bracket 41, having a notched segment 42 and affording a support to a forked lever 43 by a pivot-bolt 44, as shown. The inner ends of the lever are connected by links 45 46 to the yoke-frame 13 14 upon opposite sides of the standard 10 and stock 12, while a spring-actuated pawl 47 is arranged to engage the notches in the segment at the opposite side of the pivot 44, as shown. By this arrangement the stock 12 and yoke-frame 13 14 and their attachments may be adjusted vertically and held at any desired point of elevation.

The standard 10 will be located in the rear of the anvil, (indicated at 48,) with the treadle 27 extending alongside the anvil-block to a position convenient to the foot of the operator standing in his usual place in front of the anvil, while the lever 43 is disposed in the rear of the anvil and below its upper surface, so that it will not interfere with the work thereon. The hammer will then be adjusted so that when operated it will strike above the exact center of the anvil. Then for ordinary operations the stock 12 will be adjusted to cause the face of the hammer to strike squarely upon the work on the anvil and the adjustments will be made to adapt the vertical position of the shaft to the thickness of the metal on the anvil. If it is desired to cause the hammer to strike a blow at an angle to the anvil, this can be readily accomplished through the adjustments possible by means of the lever 43, and if it is desired that blows shall be delivered at points other than centrally of the anvil this can be secured by the adjustments possible by means of the graduations 19 in the disk 18 and the lock-lever 38, as before described. By these simple arrangements it will be noted the hammer may be caused to strike at any desired point above the anvil and with any desired force of blow, as the operator can regulate to a nicety with a little practice the degree of force necessary to impart to the treadle. When striking rapid repeated blows, the rebound against the yieldable stop 50 greatly aids in the action, while at the same time the stop which is secured to the yoke-frame receives the impact of the return stroke and prevents the hammer from swinging too far back.

The material employed will be, preferably, cast metal and steel, and the parts may be modified in minor particulars without departing from the principle of the invention or sacrificing any of its advantages.

Having thus described the invention, what we claim is—

1. In a device of the class described, a supporting-standard, a stock mounted for vertical movement in said standard and carrying a yoke-frame on its free end, a shaft mounted for oscillation in said yoke-frame, and provided intermediately with a disk having concentric apertures, an arm formed with spaced sides embracing the opposite faces of said disk and pivoted centrally thereto and extended to one side of the disk and having a socket, a hammer having its handle disposed in said socket, a cam-lever for clamping said hammer-handle in said socket, a pawl carried by said arm and operating in said spaced apertures, and means for rotating said shaft, substantially as described.

2. In a device of the class described, a supporting-standard, a stock mounted in said standard, a shaft carried by said stock and provided intermediately of its ends with a disk, an arm formed with spaced sides embracing the opposite faces of said disk and pivoted centrally thereto and extended to one side of the disk and having semitubular opposing socket members, one of said members having spaced ears, and a cam-lever pivoted between said ears and operating to firmly clamp said socket members upon the hammer-handle.

3. In a device of the class described a supporting-standard, a stock mounted in said standard, a shaft carried by said stock and provided intermediately of its ends with a disk having a peripheral row of spaced perforations, a handle-receiving socket pivotally connected with said disk and having pivotally mounted thereon a spring-actuated lever having a depending end for engaging the perforations of said disk to adjust said socket laterally, and means for oscillating said shaft.

In testimony that we claim the foregoing as our own we have hereto affixed our signatures in the presence of two witnesses.

WILLIS BAKER.
SAMUEL HORN.

Witnesses:
H. A. LIVICK,
W. C. CLYMER.