

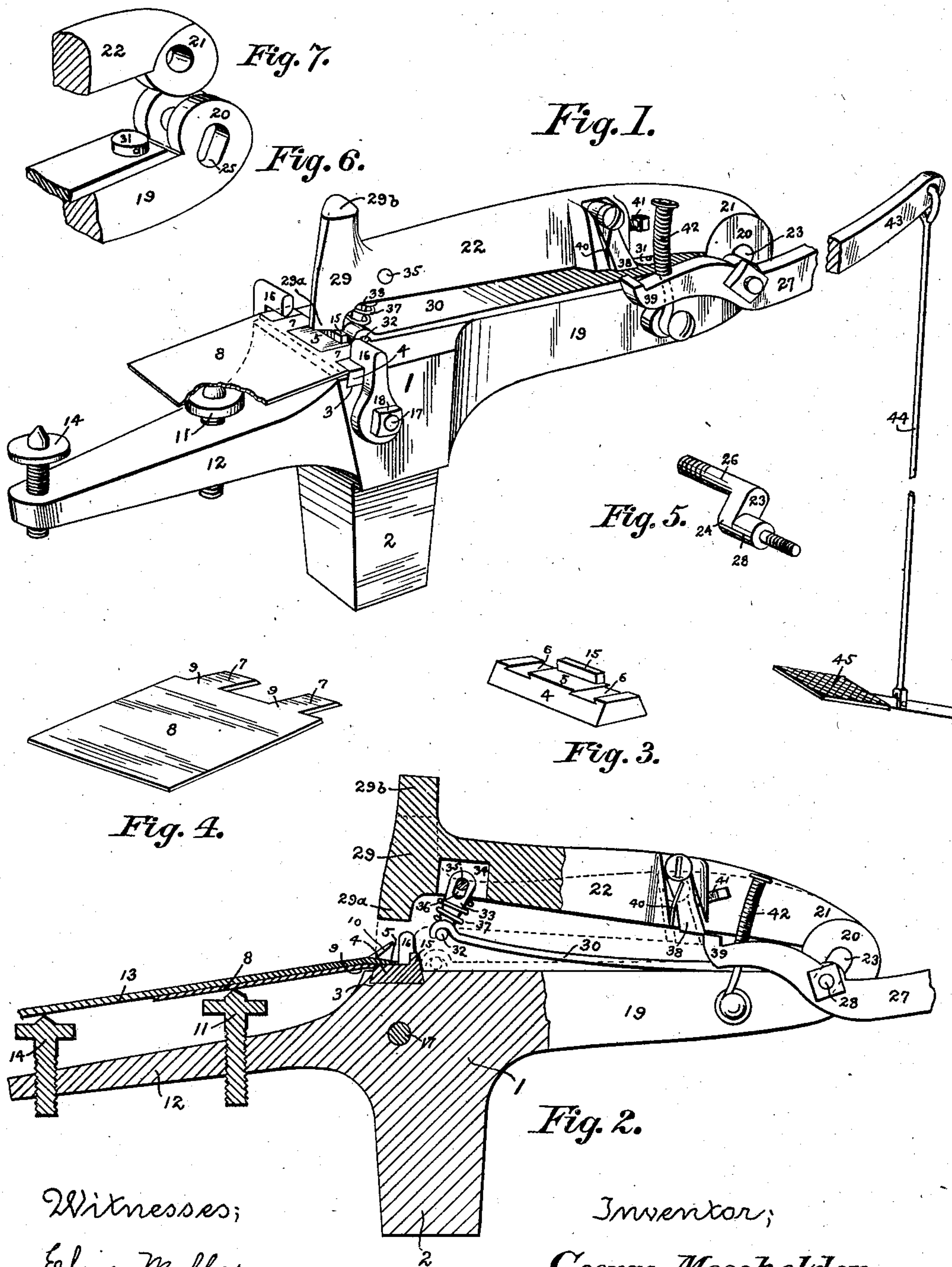
No. 720,172.

PATENTED FEB. 10, 1903.

G. MOSSHOLDER.
SAW SET.

APPLICATION FILED AUG. 22, 1902.

NO MODEL.



Witnesses;
Elie Mallory
R. H. Hornbrook.

Inventor;
George Mossholder,
By Harry Freese, Attorney

UNITED STATES PATENT OFFICE.

GEORGE MOSSHOLDER, OF MASSILLON, OHIO, ASSIGNOR OF ONE-HALF TO
MORT GILLILAND, OF MASSILLON, OHIO.

SAW-SET.

SPECIFICATION forming part of Letters Patent No. 720,172, dated February 10, 1903

Application filed August 22, 1902; Serial No. 120,626. (No model.)

To all whom it may concern:

Be it known that I, GEORGE MOSSHOLDER, a citizen of the United States, residing at Massillon, in the county of Stark and State of Ohio, have invented a new and useful Saw-Set, of which the following is a specification.

My invention relates to a hammer-set in which the stroke is actuated by a spring; and the objects of my improvements are to operate the set by a foot-pedal; to regulate the height, and thereby the force of the stroke; to cushion the stroke, so there is a slight rebound to leave the saw free; to provide an anvil and a plate extension thereof which can readily be removed and replaced, and to provide guides for the saw-teeth, so that any size or shape of saw can be set with one tool. I attain these objects by the construction and mechanism illustrated in the accompanying drawings, in which—

Figure 1 is a perspective view of the saw-set; Fig. 2, a side elevation with part in section, showing the mode of action; Fig. 3, a detached perspective view of the anvil; Fig. 4, a detached perspective view of the anvil-plate; Fig. 5, a detached perspective view of the eccentric pivot; Fig. 6, a detached perspective view of the pivot-head, and Fig. 7 a detached perspective view of the rear end of the hammer-arm.

Similar numerals refer to similar parts throughout the drawings.

The body 1 of the set is provided with a downwardly-projecting wedge-shaped post 2, which is adapted to fit in a similarly-shaped socket formed in the work-bench, which manner of connection is usual in tools of this type. Into the dovetailed recess 3 across the forward part of the upper side of the body is inserted the correspondingly-shaped anvil 4. The recess and anvil are preferably formed slightly wedge shape from end to end to insure a neat fit. The upper side of the anvil projects a short distance above the body of the set, and on either side of the middle part or bed-plate proper, 5, are provided the dovetailed recesses 6, into which are inserted the similarly-shaped tongues 7, projecting from the rear edge of the anvil-plate 8. When the tongues are inserted in the recesses, a slight tap of a hammer on the edges of the recesses

will serve to hold the plate in place; but at the same time this form of connection will readily permit the plate to be removed and replaced. The anvil-plate is slightly bent downward at or near the place it joins the tongues, as at 9, to the inclination with which it is desired to set the saw-teeth 10, and the forward end of the plate is adjustably supported on the ordinary thumb-screw 11, turning in the arm 12, projecting forward from the body of the set. The saw-blade 13 is rested on the anvil-plate when the saw is being set, and by turning the thumb-screw up the forward end of the plate is sprung upward, thus lessening the angle of the bend, and thereby the set of the saw, or if there is considerable variation desired in the set of various saws different plates can be used. An additional thumb-screw 14 can be used at the forward end of the arm 12, with which to support and steady a wide saw-blade.

The guide-flange 15 projects upward on the rear side of the anvil or bed-plate proper, against which flange the points of the saw-teeth rest and are guided, and for setting a saw having smaller teeth the guide-arms 16 are pivoted on either side of the body of the set and can be adjusted to properly guide a saw with teeth of any size. The guide-arms are preferably securely attached on a common pivot 17, so they will operate in unison, and the joint is preferably tightened, as by the nut 18, so the arms will retain a given position as against ordinary pressure.

The pivot-arm 19 projects rearward from the body of the set, and at its rear end is formed the pivot-head 20, in which head is pivoted the rear end 21 of the hammer-arm 22, preferably by means of the eccentric pivot 23. In the construction as illustrated the eccentric pivot is held from rotation by its shoulder 24 entering the slotted recess 25 in one side of the pivot-head. Thus the hammer is pivoted on the bolt 26, which extends through the pivot-head, and the operating-lever 27 is pivoted on the bolt 28, which projects from the side of the head. The bolt 28 is located below and slightly forward from the bolt 26, thus forming the eccentric pivot.

The hammer-head 29 is formed on the forward end of the hammer-arm over the anvil

or bed-plate. The hammer proper, 29^a, projects downward from the hammer-head and is preferably formed V-shaped in cross-section, with the acute angle forward, as is usual in hammer-sets, and the hammer-post 29^b projects upward from the hammer-head, which post can be used to receive the blow of an ordinary hammer if it is desired to use the set without utilizing an operating-lever.

10 The preferably-flat mainspring 30 is attached on the upper side to the rear part of the pivot-arm 19, as by the capstan-headed screw 31. At its forward end the mainspring engages the cross-bar 32 on the lower end of the hammer-link 33, which link is attached in the recess 34 in the hammer-arm by means of the bolt 35, passing through the slotted aperture 36 in the upper end of the link. The cushion-spring 37 is preferably spiral and acts 20 between the mainspring and the hammer-arm around the hammer-link and is relatively weak compared with the mainspring.

The trip-dog 38 is pivoted on the side of the hammer-arm, and its lower end is normally opposite to engage the trigger 39 on the forward end of the operating-lever when the hammer-arm is naturally depressed, as shown in Fig. 1. The trip-dog is normally held back to engage the trigger by the dog-spring 40, and the extent of its normal contact with the trigger is regulated by the adjusting-screw 41. The trigger is normally depressed by the trigger-spring 42, and it is 30 raised by depressing the rear end 43 of the operating-lever by the link 44 and the pedal 45 or other suitable means.

To operate the hammer, the trigger is raised, as stated, and coming in contact with the trip-dog the trigger elevates the hammer-arm on its pivot. By reason of the location of the pivot of the operating-lever below the pivot of the hammer-arm the trigger will finally slip past the rear edge of the dog, thereby tripping the hammer-arm and permitting it to respond to the action of the mainspring and descend with considerable force. The force of the blow of course depends upon the height to which the hammer has been elevated, and this is regulated by 50 the point at which the trigger trips the dog, which in turn is regulated by the set of the adjusting-screw 41. When the hammer descends to a point near the anvil bed-plate,

the lower end of the hammer-link strikes the body of the set, whereupon the hammer continues downward by its own momentum to complete its stroke against the anvil bed-plate or an intervening saw-tooth, which it is enabled to do by reason of the slotted aperture in the upper end of the hammer-link. 60 In thus completing its stroke the hammer-arm compresses the cushion-spring, which rebounds after the stroke is completed and holds the hammer in its normal position a short distance above the anvil bed-plate. 65 The relatively weak cushion-spring does not materially check the force of the hammer-stroke, but merely acts to raise the hammer off the anvil after the stroke is made.

What I claim as my invention, and desire 70 to secure by Letters Patent, is—

1. In a saw-set, a body, a hammer-arm pivoted to said body, a spring acting to depress said arm, a trip-dog pivoted on said arm, and an operating-lever pivoted to said body eccentric to the arm-pivot, there being a trigger on the lever normally engaging said dog, but tripping it when elevated by reason of the eccentric pivot. 75

2. In a saw-set, a body having an anvil thereon, a hammer operating on said body to strike the anvil, a mainspring acting to impinge the hammer on the anvil, a link contractibly connecting the mainspring with the hammer, and a relatively weak cushion-spring expansively acting between the mainspring and the hammer, the parts being arranged so the mainspring end of the link butts the body of the set before the hammer strikes the anvil. 80 85 90

3. In a saw-set, an anvil having dovetailed recesses on each side of its upper face, and an anvil-plate having tongues fitting in said recesses.

4. In a saw-set, an anvil having dovetailed recesses on each side of its upper face, an anvil-plate having tongues fitting in said recesses, and an adjusting-screw to support and to vary the angle of said plate. 95

In testimony whereof I have signed my name to this specification in the presence of two subscribing witnesses.

GEORGE MOSSHOLDER.

Witnesses:

HARRY FREASE,
ELSIE MALLORY.