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SAW-SET.

964,417.

Specification of Letters Patent.

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To all whom it may concern:

Be it known that I, JOHN WESLEY GAEDE, a citizen of the United States, residing at Cleveland, in the county of Cuyahoga and State of Ohio, have invented certain new and useful Improvements in Saw-Sets, of which the following is a specification, reference being had therein to the accompanying drawing.

My invention relates to improvements in saw sets.

The object of my invention is to provide a saw set of the trip hammer type in which the hammer is raised by a foot treadle and automatically released when it has been raised a determined distance and caused to travel downwardly by spring tension.

Another object of my invention is to provide a more simple, cheap and effective set of this character having certain details of structure and advantages hereinafter more fully set forth.

In the accompanying drawing—Figure 1 is a side elevation of my improved saw set applied to a bench or table. Fig. 2 is a side elevation partly in section. Fig. 3 is an enlarged side view of the trigger mechanism showing the pawl raised to allow the trigger to pass the same.

Referring now to the drawings, 1 represents the base of my improved saw set which is preferably of a broad flat form having openings by means of which the same can be screwed or bolted to a bench or table 2, and the other end of the base having the downwardly turned end 3 engaging the end of the bench or table. The outer end of the base is provided with an upwardly extending anvil 4, having a broad flat upper end 5, provided with an opening 6. Within the opening 6 is a block 7, having the beveled face 8 arranged at the proper angle to set the tooth of the saw at the proper angle. The outer end of the enlarged upper end 5 of the anvil 4, is provided with a screw 9, which is vertically adjustable and upon the head of said screw the saw 10 rests and whereby the angle of the saw is readily changed. Carried by the opposite end of the broad upper end of the anvil is an adjustable guide and stop 11, having a vertical elongated slot 12 through which passes a screw 13, which is screwed into the anvil and by means of which the inward movement of the saw is limited. The guide is also provided at the inner end

with a vertical recess 14, into which the punch 15 extends as clearly shown in Fig. 1.

The hammer 16 is pivoted at 17 between ears 18 carried by the base 1 and carries at its outer end the punch 15. The ears 18 are provided with upwardly extending ears 19, connected by a pivot 20, upon which is mounted a spring 21. The said spring extends forwardly and bears upon the upper face of the hammer 16 and normally holds the same in a downward position, as shown in Fig. 1. In order to vary the tension of the spring 21, I provide the upwardly extending ears 22, which are either carried by the ears 18 or may be carried directly by the base 1. These ears are arranged on opposite sides of the spring 21 and are connected by a horizontal bar 23, through which passes the thumb-screw 24, which bears against the upper face of the spring 21 and whereby the tension of the spring can be varied.

The hammer 16 is provided intermediate its ends on its lower face with a downwardly extending arm 25, which forms a catch for the trigger, as I will now proceed to describe. The trigger 26 consists of a bifurcated portion 27 straddling the anvil and pivoted at 28 to the anvil 4. The outer end of the trigger is provided with an eye 29, in which is secured a cable or rod 30, extending downwardly and secured to the treadle 31, which may be secured to the floor or mounted upon the table or bench in any desired manner. A spring 32 is preferably employed to hold the outer end of the treadle in any upward position. The inner end of the trigger has pivoted between the bifurcated portion an ear 33, carried by a pawl 34. The said pawl has its outer end resting upon the upper face of the bifurcated end and whereby the down movement of the pawl is limited. The pawl is so arranged that it engages the lower horizontal face 25', of the arm 25, and by pulling down upon the cable 30, the hammer is raised. The continued upward movement of the trigger carries the hammer upwardly until the outer end of the pawl has passed the outer end of the arm 25 and the spring 21 forces the trigger downwardly and causes the punch 15 to set the tooth. The downward movement of the trigger causes the pawl to engage the curved surface 25² of the arm and rocks the pawl upon its pivot so

that the trigger can move downwardly past the arm 25, as shown in Fig. 2. In order to cause the automatic return of the trigger when the cable 30 has been released, I provide a spring 35 which surrounds the pivot 28 of the trigger and has its outer end bearing against the base and its inner end bearing against the pawl 34, beyond the pivot thereof. This spring, as will be seen, holds the pawl in its normal position and also holds the trigger in the position shown in Fig. 1.

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

1. A saw set comprising a pivoted hammer, a spring for holding said hammer in its downward position, a trigger for raising the said hammer, a pivoted pawl carried by the trigger and engaging the hammer, and a spring for holding the pawl in its normal position and also holding the trigger in its downward position.

2. A saw set, comprising a hammer, means for normally holding the hammer in a downward position, a trigger for raising said hammer, a pawl carried by the trigger and engaging the hammer, and a spring normally holding the pawl in its downward position and the trigger in its downward position.

3. A saw set, comprising a base, a hammer pivoted at one end, an anvil at the opposite end and upon which the hammer strikes, a trigger intermediately pivoted to the anvil, an operating means carried by one end of the trigger and a pivoted pawl carried by the opposite end and adapted to engage the hammer and raise the same, and said pawl engaging the hammer on the downward movement of the trigger and moves upwardly and allows the trigger to return below the hammer and a single spring holding the pawl and the trigger in their normal position.

4. A saw set comprising a base, a hammer pivoted at one end, an anvil at the opposite end and upon which the hammer strikes, a trigger intermediately pivoted to the anvil, an operating means carried by one end of the trigger, a pivoted pawl carried by the opposite end and adapted to engage the hammer and raise the same, a spring for normally holding the pawl in its downward position and also holding the trigger in its downward position, said pawl engaging the hammer on the downward movement of the trigger and moves upwardly and allows the trigger to return below the hammer.

5. A saw set, comprising a base, a hammer pivoted at one end, a leaf spring above the hammer and bearing on the free outer end, a set-screw bearing on the spring for increasing the tension on the hammer, a bifurcated trigger straddling the anvil and pivoted thereto, an ear pivoted between the inner end of the bifurcated trigger, a pawl carried by the ear and resting upon the upper face of the trigger and held against downward movement thereby, a spring surrounding the pivot of the trigger and bearing against the pawl and holding the pawl in its downward position and also the trigger, said pawl engaging the hammer and raising the same, means connected to the outer end of the trigger for operating the same, and a saw gage and support carried by the anvil.

6. A saw set comprising a hammer, means for normally holding the hammer in a downward position, a pivoted trigger for raising said hammer, a pawl carried by the outer end of said trigger, a spring surrounding the pivot of the trigger and having one end engaging the pawl and holding it down in its normal position on the trigger and holding the trigger in its normal downward position.

7. A saw set, comprising a base, an anvil at one end, a hammer pivoted at the opposite end and extending over the anvil, a spring carried by the base and normally holding the hammer in a downward position on the anvil, a trigger pivoted to the anvil, a pawl pivoted to the inner end of the trigger, a spring carried by the trigger pivot and having one end engaging the pawl and the opposite end the base, and means for operating said trigger.

8. A saw-set, comprising a base, an anvil at one end, a hammer pivoted at the opposite end and extending over the anvil, a spring carried by the base and normally holding the hammer in a downward position on the anvil, a trigger intermediately pivoted to the anvil, a pawl pivoted to the inner end of the trigger, a spring surrounding the trigger pivot and having one end engaging the pawl and the opposite end the base, means for operating said trigger, and a movable block in the anvil for setting the teeth.

In testimony whereof I hereunto affix my signature in the presence of two witnesses.

JOHN WESLEY GAEDE.

Witnesses:

LOUIS LOEGLER,
ARTHUR LOEGLER.