

No. 822,655.

PATENTED JUNE 5, 1906.

J. F. DORMAN.
SAW SET.

APPLICATION FILED JULY 14, 1904.

3 SHEETS—SHEET 1.

FIG. 1.

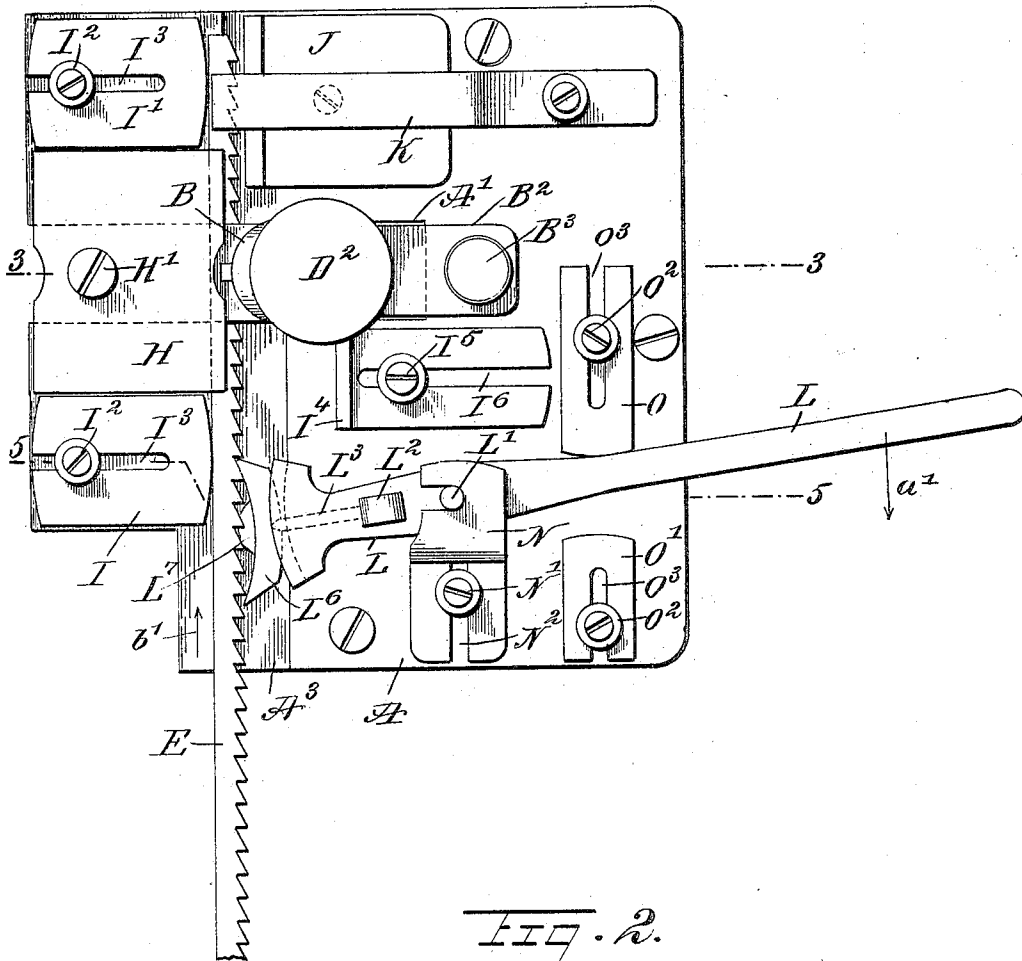
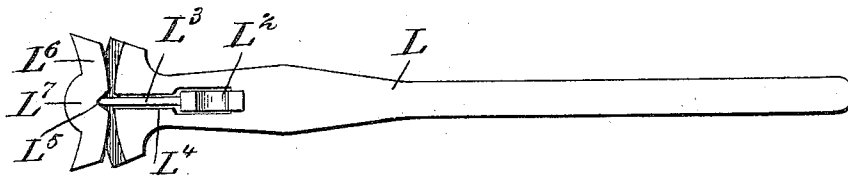


FIG. 2.



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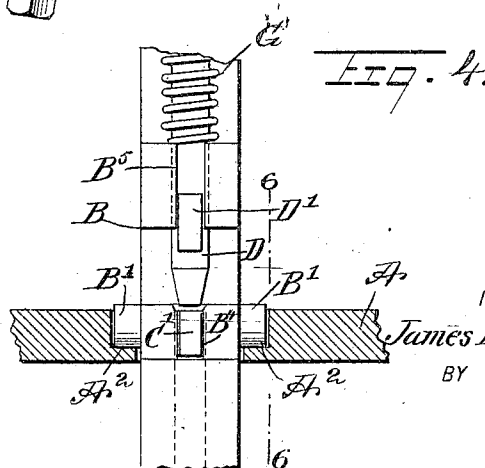
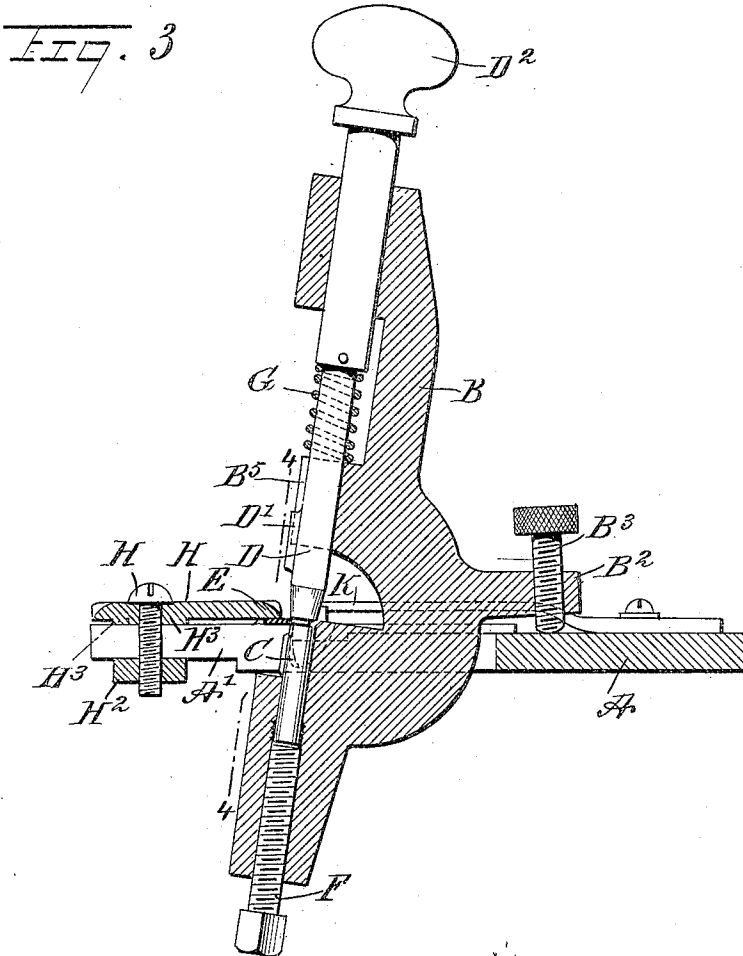
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3 SHEETS—SHEET 2.



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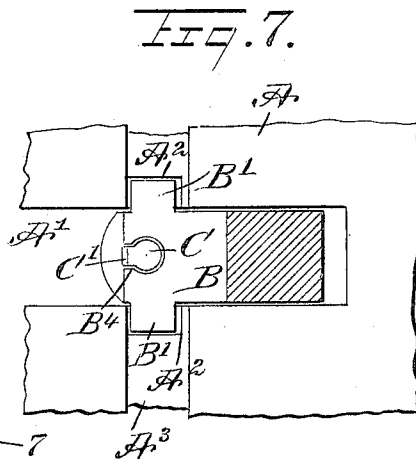
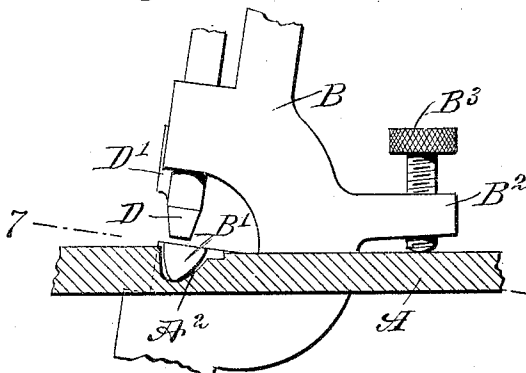
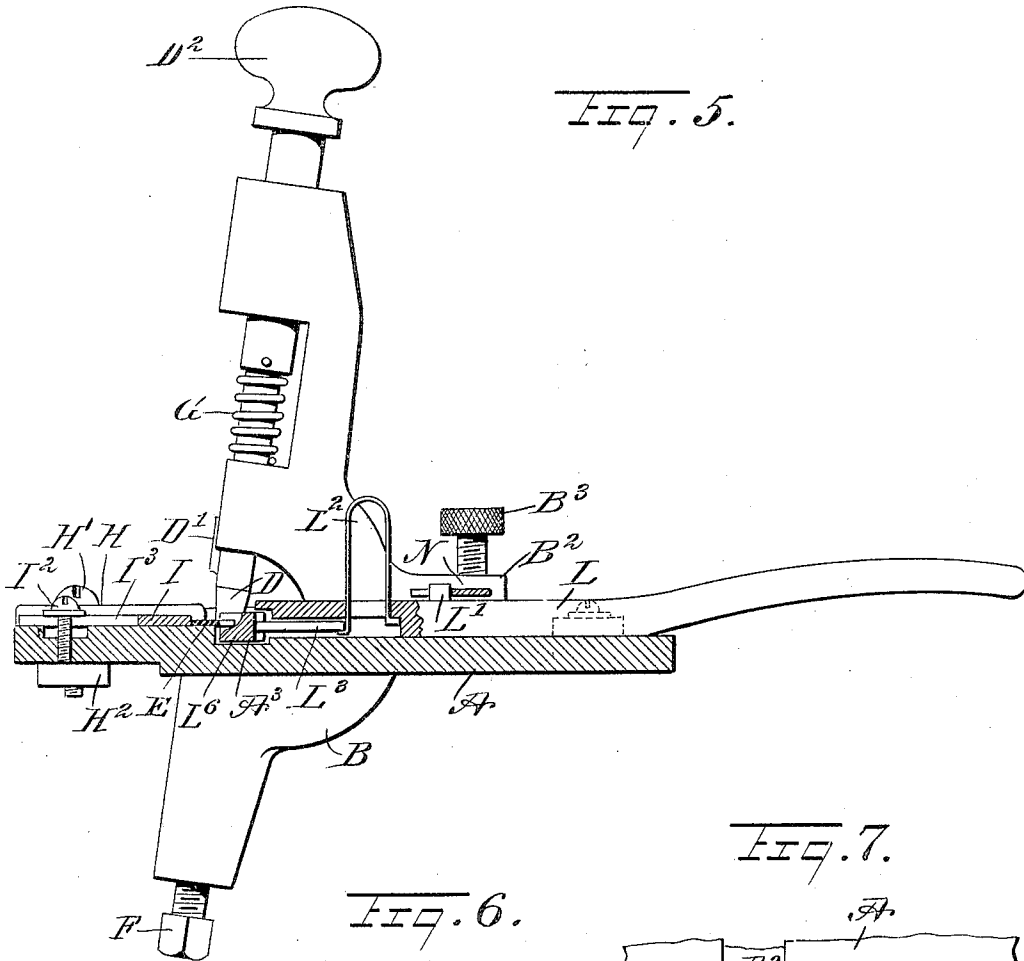
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3 SHEETS—SHEET 3.



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UNITED STATES PATENT OFFICE.

JAMES FLETCHER DORMAN, OF EAST TALLASSEE, ALABAMA.

SAW-SET.

No. 822,655.

Specification of Letters Patent.

Patented June 5, 1906.

Application filed July 14, 1904. Serial No. 216,519.

To all whom it may concern:

Be it known that I, JAMES FLETCHER DORMAN, a citizen of the United States, and a resident of East Tallassee, in the county of Tallapoosa and State of Alabama, have invented a new and Improved Saw-Set, of which the following is a full, clear, and exact description.

The object of the invention is to provide a new and improved saw-set arranged to permit of accurately setting a large number of teeth in a comparatively short time without the aid of skilled labor and insuring long life to each saw-tooth, as the latter are hammered while being set, and hence are not liable to break off or spring back to former position.

The invention consists of novel features and parts and combinations of the same, as will be more fully described hereinafter and then pointed out in the claims.

A practical embodiment of the invention is represented in the accompanying drawings, forming a part of this specification, in which similar characters of reference indicate corresponding parts in all the views.

Figure 1 is a plan view of the improvement. Fig. 2 is an inverted plan view of the saw-feed. Fig. 3 is a cross-section of the improvement on the line 3 3 of Fig. 1. Fig. 4 is a sectional front view of the same on the line 4 4 of Fig. 3. Fig. 5 is a cross-section of the improvement on the line 5 5 of Fig. 1. Fig. 6 is a cross-section of part of the improvement on the line 6 6 of Fig. 4, and Fig. 7 is a sectional plan view of the same on the line 7 7 of Fig. 6.

The bed-plate A of the saw-set is fastened with screws or other suitable means to a table or like support, and the said bed-plate A is formed with a slot A', through which extends a stock B, provided at its sides with trunnions B', mounted to rock in suitable bearings A², formed on the bed-plate A, as plainly illustrated in Fig. 4.

In the lower portion of the stock B is fitted an anvil C, arranged in alinement with a plunger D, mounted to slide in the upper part of the stock B. The saw E to be set rests on the top of the bed-plate A and its teeth project across the top of the anvil C, but stand at an angle thereto, and when the plunger D is forced downward by the hand of the operator or by the use of a mallet, in this way the tooth is hammered down onto the top of the anvil C and is consequently set to the desired angle.

In order to give any desired angle to the anvil C and its alined plunger D, it is necessary to set the stock B at a corresponding angle to the bed-plate A, and for this purpose the rear end of the stock B is provided with an offset B², into which screws a set-screw B³, abutting against the top of the bed-plate A. By screwing the set-screw B³ outward the angle between the bed-plate A and the stock B is increased, and by screwing the set-screw B³ downward the angle is decreased—that is, more inclination is given to the stock B, its anvil C, and plunger D relative to the bed-plate A and the saw E.

The anvil C is held against turning in the stock B by being provided near its upper end with an offset C', fitting a corresponding slot B⁴ in the stock B, and the lower end of the said anvil C rests on a set-screw F, screwing in the bottom of the stock B to allow of adjusting the anvil C up and down in the stock, according to the thickness of the saw under treatment. The plunger D is also held against turning in the stock B and for this purpose is provided with an offset D', fitting a slot B⁵, (see Figs. 3 and 4,) and the said plunger D is normally held in an uppermost position by a spring G, and on the upper outer end of the plunger D is arranged a knob D², adapted to be either pressed by the hand of the operator or struck by a mallet whenever it is desired to set a tooth, as previously explained.

The blade of the saw E is engaged on its top directly opposite the anvil C by a holding-down plate H, resting on top of the bed-plate A and extending across the slot A', the said holding-down plate H being connected by a screw H' with a bar H², engaging the under side of the bed-plate A and likewise extending across the slot A', so that by loosening the screw H' the plate H can be shifted according to the width of the blade of the saw, and as soon as the desired adjustment is made the screw H' is screwed up to securely clamp the plate H in place on top of the bed-plate A. The under side of the holding-down plate H is provided with an offset or shoulder H³, against which may abut the back of the saw-blade, especially when the latter is very broad. On opposite sides of the holding-down plate H are arranged guides I and I', against which abut the back of the saw E to guide the latter along in its movement over the bed-plate A. Each of the guides I and I' is in the form of a

flat plate resting on top of the bed-plate A, and each is clamped to the bed-plate by a screw I², passing through an elongated slot I³ in the corresponding guide I or I', the screw
 5 screwing in the bed-plate A. By loosening the screw I² the guide I or I' can be shifted, according to the width of the saw E under treatment. A similar guide J is arranged opposite the guide I' and is similarly held
 10 adjustable on the bed-plate A; but this guide J is adapted to abut against the points of the saw-teeth, so as to prevent the saw from leaving the guide I'.

A spring-arm K is secured on the bed-plate A and extends over the guide J to rest with its free end on top of the saw adjacent to the guide I', so as to prevent the saw from being fed too far forward at a time and when
 20 manipulating the manually-controlled saw-feed, presently to be described in detail.

A hand-lever L has its fulcrum L' journaled in a bearing N, adjustably secured on top of the bed-plate A by a screw N' screwing in the bed-plate and extending
 25 through an elongated slot N² in the said bearing. On the hand-lever L is held a U-shaped spring L², (see Fig. 5,) engaging with its free end a rod L³, fitted loosely in a groove L⁴, formed on the under side of the lever L, as plainly shown in Fig. 2, said spring extending
 30 downwardly through and having a member thereon working in an opening in the hand-lever. The free or outer end of the rod L³ engages a notch L⁵, formed in a double pawl L⁶, provided with an offset L⁷, abutting
 35 against a shoulder in a groove A³, in which the pawl L⁶ is mounted to slide in the direction of the length of the saw E. When the lever L is in the position shown in Fig. 1, the
 40 forward end of the pawl L⁶ is in engagement with a saw-tooth, and when the lever L is now swung in the direction of the arrow a' then the pawl L⁶ is carried along to feed the saw E over the bed-plate A in the direction
 45 of the arrow b' the distance of two teeth, so as to bring an alternate tooth over the anvil C. The lever L is now swung in the inverse direction of the arrow a', so that the pawl L⁶ is caused to rock to disengage its forward end
 50 from the saw-tooth, and at the same time the pawl L⁶ is carried along with the lever in the inverse direction of the arrow b', so that the saw E remains at a standstill during this return movement of the hand-lever L and its
 55 pawl L⁶.

The movement of the lever L is limited by stops O and O', adjustably held on the top of the bed-plate A by screws O² screwing in the bed-plate and extending through elongated
 60 slots O³ in the said stops. By adjusting the stops O and O' farther apart more movement can be given to the lever L, so as to feed a saw having longer saw-teeth, or the stops O and O' can be set nearer together to reduce

the stroke of the lever in case a saw having 65 shorter teeth is to be fed.

By making the bearing N adjustable the lever L can always be set at a preferred angle to the saw E to permit of feeding the same irrespective of the shape of the teeth thereof. 70 It is understood that by the arrangement described the saw when in the position shown in Fig. 1 is fed in the direction of the arrow b' to set every alternate tooth at the anvil C and plunger D, and when the teeth mentioned 75 have been set then the saw is reversed for setting the remaining teeth, it being understood that the double pawl L⁶ when manipulated by the lever L, as described, feeds the saw E in the inverse direction of the arrow b'. 80

A guide I⁴ is arranged to one side of the stock B, and this guide is used only for setting handsaws—that is, is employed at the time the guides I and I', as well as the holding-down plate H, are removed from the bed-plate A, as these parts are not necessary, as the handsaw is moved over the bed-plate by hand and is held in such position that the proper tooth is in position at the time for the anvil C to be struck by the plunger D. The
 85 guide I⁴ is adjustable on the bed-plate A by means of a screw I⁵ entering a slot I⁶ in the guide-plate. 90

The device is very simple and durable in construction, and the several parts can be 95 readily adjusted to permit of setting saws of different width, thickness, shape of teeth, &c., and by using a plunger or hammer the tooth is gradually hammered down onto the anvil, so as to remain perfectly set without 100 danger of springing back to its former position.

It will be noted that in addition to being an adjusting device for the stock B the set-screw B³ also forms an abutment for the 105 stock to the resistance offered by the teeth of the saw in the working operations of the plunger.

Having thus described my invention, I claim as new and desire to secure by Letters 110 Patent—

1. The combination in a saw-set, of a stationary bed-plate formed with a slot having opposite recessed bearings at the edges thereof, a stock having opposite trunnions loosely 115 seated in said bearings, and provided with a rearwardly-extending offset, an anvil supported by the stock beneath the bed-plate, a spring-controlled plunger supported by the stock above the bed-plate, in alinement with 120 the anvil, and means supported by said offset of the stock for adjusting the latter relatively to the bed-plate.

2. The combination in a saw-set, of a stationary bed-plate formed with a slot, a stock 125 pivoted in the slot of the bed-plate, and provided with a rearwardly-extending offset, an anvil supported by the stock beneath the

bed-plate, a spring-controlled plunger supported by the stock above the bed-plate, in alinement with the anvil, and a screw carried by said offset of the stock and engaging the bed-plate for adjusting the stock relatively to the bed-plate, said means also forming an abutment for the stock to the resistance offered by the teeth of the saw in the working operations of the plunger.

3. The combination in a saw-set, of a bed-plate, formed with a groove, a feed for the saw, comprising an operating-lever fulcrumed on the bed-plate, a rocking pawl for engaging the teeth of the saw, having its bearing against one side of the groove, and a yieldable rod connecting the lever with said pawl.

4. The combination in a saw-set, of a bed-plate provided with a groove, a feed for the saw, comprising an operating-lever fulcrumed on the bed-plate, and formed with an opening through the shorter arm thereof, a rocking pawl for engaging the teeth of the saw, having its bearing against one side of the groove, a slidable rod working on the under side of said arm, and an inverted-U-shaped spring extending upwardly from the lever with a member thereof working through said opening and in engagement with an end of said rod.

5. The combination in a saw-set, of a bed-plate formed with a groove, a feed for the saw, comprising an operating-lever fulcrumed on the bed-plate, provided with an opening through the shorter arm thereof, and having a longitudinal groove in the under side of said arm, a double pawl for engaging the teeth of the saw, provided with an offset having a rocking bearing against one side of said first-named groove, a movable rod working in the said longitudinal groove, and an inverted-U-shaped spring standing upwardly from the lever, with a member thereof working through said opening and in engagement with an end of the rod.

6. The combination in a saw-set, of a bed-plate having bearings, a stock loosely supported in said bearings, an anvil and a cooperating plunger supported by the stock, and adjusting means for the stock, forming an abutment therefor to the resistance offered by the teeth of the saw in the working operations of the plunger.

7. In a saw-set, a bed-plate, a lever fulcrumed on the bed-plate, a pawl mounted to rock and slide laterally on the bed-plate, and means carried by the lever for yieldingly engaging the pawl intermediate of its ends to slide and rock the same.

8. In a saw-set, a bed-plate, a lever fulcrumed on the bed-plate, a double pawl mounted to rock and slide laterally on the bed-plate, and means carried by the lever for yieldingly engaging the pawl intermediate of its ends to slide and rock the same.

9. In a saw-set, a grooved bed-plate, a pawl mounted to rock and slide laterally in the groove of the bed-plate, a lever fulcrumed on the bed-plate and having its inner end projecting partly over the pawl, and a spring-pressed member carried by the lever and engaging the pawl to slide and rock the same.

10. In a saw-set, a grooved bed-plate, a double pawl in the groove of the bed-plate and having a central offset on its front face and a notch in its rear face, a lever pivoted to the bed-plate and having its inner end projecting partly over the pawl, and a spring-pressed rod carried by the lever and having its forward end engaging the notch of the pawl.

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

JAMES FLETCHER DORMAN.

Witnesses:

W. P. REEVES.

J. E. Cox.