

A. HOLECEK.
SAW SET.

No. 548,197.

Patented Oct. 22, 1895.

Fig. 1.

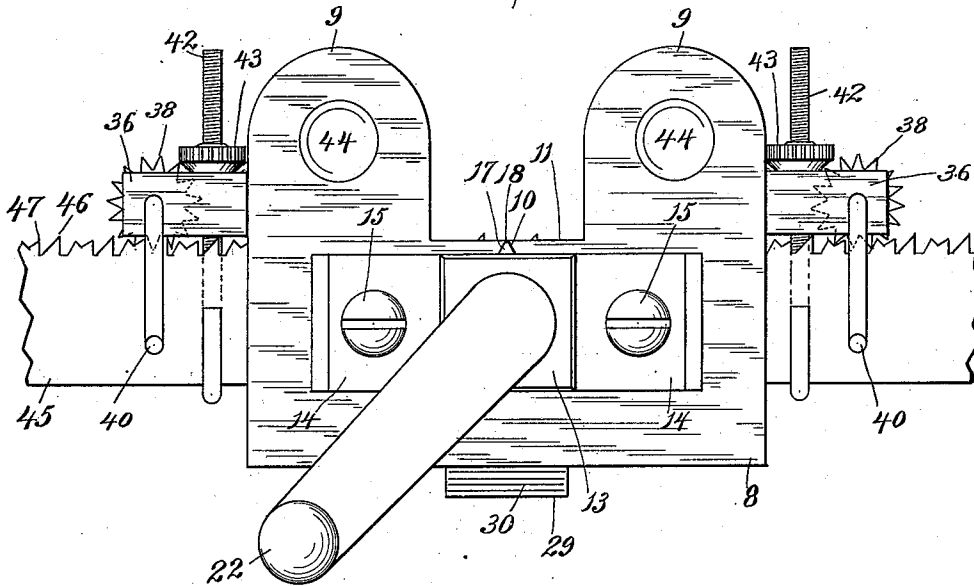
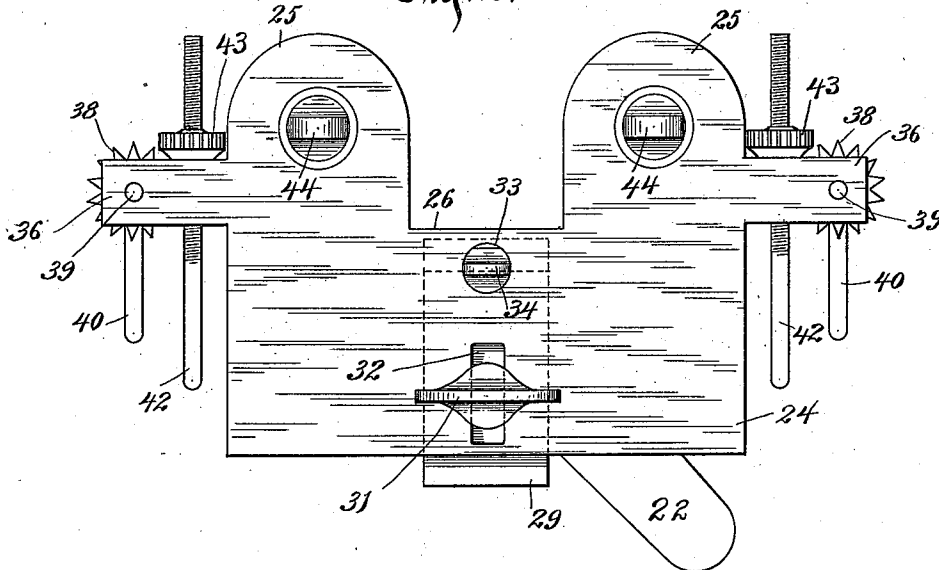


Fig. 2.



Witnesses.

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Fig. 3.

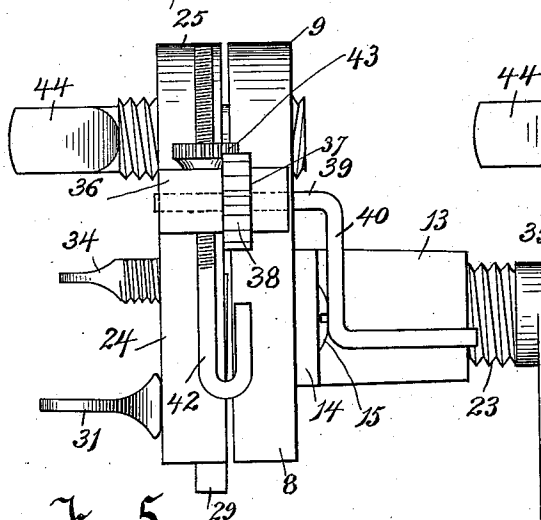


Fig. 4.

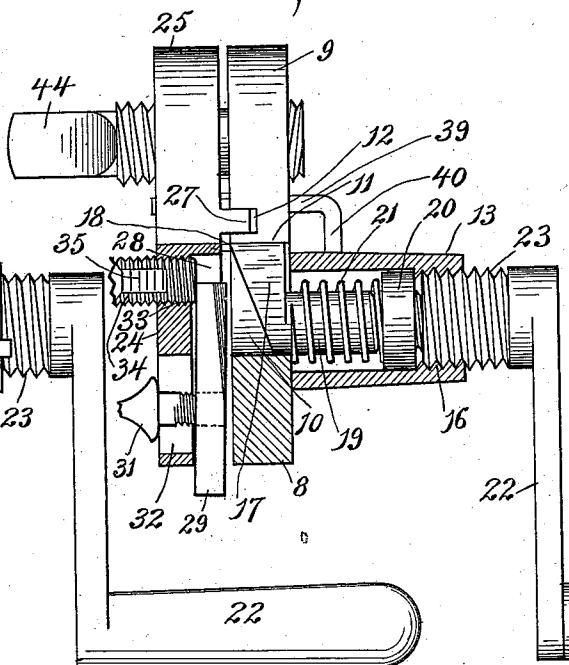


Fig. 5.

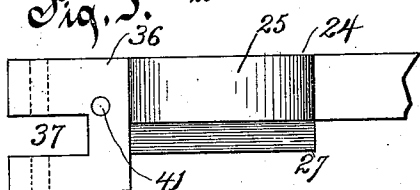


Fig. 6.

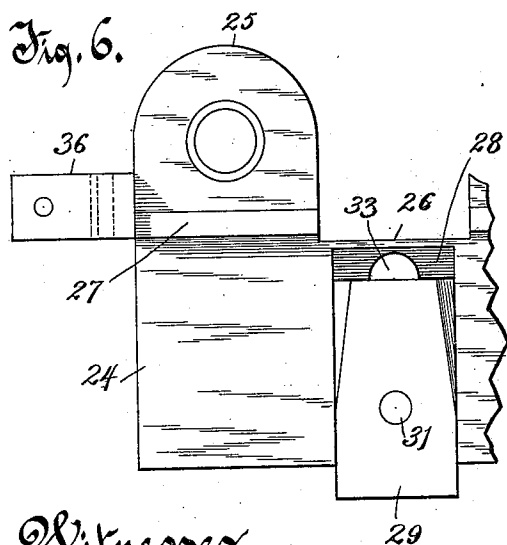
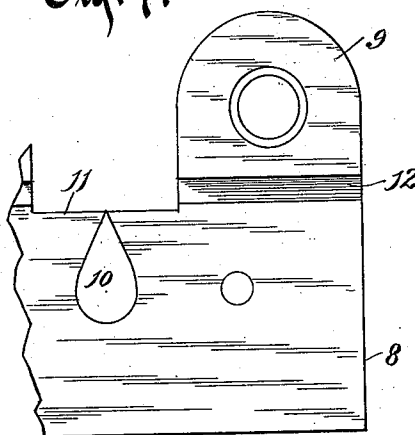


Fig. 7.



Witnesses.

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UNITED STATES PATENT OFFICE.

ALBERT HOLECEK, OF REEDSVILLE, WISCONSIN.

SAW-SET.

SPECIFICATION forming part of Letters Patent No. 548,197, dated October 22, 1895.

Application filed December 29, 1894. Serial No. 533,237. (No model.)

To all whom it may concern:

Be it known that I, ALBERT HOLECEK, of Reedsville, in the county of Manitowoc and State of Wisconsin, have invented a new and useful Improvement in Saw-Sets, of which the following is a description, reference being had to the accompanying drawings, which are a part of this specification.

My invention has relation to improvements in saw-sets.

The invention has for its primary object the production of an efficient saw-set of simple construction involving improved adjusting means whereby the set of all the teeth at the same angle is insured, and also improved means whereby the device is adaptable for saws having teeth of varying lengths.

The device furthermore contemplates as objects an improved means for adjusting the saw-set to saw-blades of different widths and improved feeding mechanism, whereby after a tooth has been set the next tooth of the series is brought into line.

With the above and other objects in view the invention consists of the devices and parts or their equivalents, as hereinafter more fully set forth and claimed.

In the accompanying drawings, Figure 1 is a front elevation of the device, showing a saw in proper position with relation thereto, said saw being one in which the blade is of reduced width. Fig. 2 is a rear elevation. Fig. 3 is an end view. Fig. 4 is a transverse vertical sectional view. Fig. 5 is a plan view of a fragment of the rear plate of the device. Fig. 6 is an elevation of Fig. 5, and Fig. 7 is an inner face view of the front plate.

Like numerals of reference denote like parts throughout the several views.

Referring to the drawings, the numeral 8 indicates the front plate, which is provided with the apertured extensions or ears 9 9, which form a central depression or space therebetween. The plate is provided with a central oval-shaped opening 10, the upper end or apex thereof extending through the edge 11. Upon the inner face of plate 8, near the lower ends of the extensions or ears 9, on a plane slightly above the edge 11, are grooves 12 12.

The numeral 13 indicates a tube provided at its inner end with laterally-extending

flanges 14 14, which are secured to the outer face of the front plate 8 by means of screws 15 15. The bore of the tube registers with the oval-shaped opening 10, and at its outer end the tube is interiorly threaded for a short distance, as indicated at 16. Fitting in the oval-shaped opening 10 of the front plate is a tooth-setting device 17. The inner face of this set presents a downwardly-beveled surface, as shown clearly in Fig. 4, so as to leave at the upper end a point or apex 18. Projecting from the outer face of the set at the lower end thereof is a shank 19. This shank extends into the tube 13, and is formed or provided at its end with a collar or enlargement 20. Encircling this shank and confined between said collar 20 and the part 17 is a coiled spring 21.

The numeral 22 indicates a crank-handle, which is formed at its upper end with a threaded extension 23, which is adapted to enter the outer end of the tube 13 and to engage the threads 16 thereof, serving, when screwed inwardly, as a means for actuating the saw-setting device by reason of contact with the collar or enlargement 20 of the shank 19.

The numeral 24 indicates the back plate of the device. This plate is also provided with the upward-extending apertured ears or lugs 25 25, which form an opening or recess therebetween, the bottom of said recess being indicated by the numeral 26. At the ends of the ears or lugs 25, a slight distance above the bottom 26 of the recess, are tongues 27 27, which, when the front and back plates are adjusted together, are adapted to engage the grooves 12 12 of the front plate 8. When the saw is inserted in place between the plates, the teeth are brought to bear against the under edges of these tongues, which tongues therefore act as stops for limiting the vertical upward adjustment of the saw between the plates.

Immediately below the edge 26 the inner face of the back plate is provided with a rectangular recess 28, which extends downwardly to the lower edge of the plate. Within this recess is adapted to fit an adjusting-block 29, the outer face of said block, at its lower end, being provided with a series of graduated marks 30. A thumb-screw 31 passes through

an elongated slot 32 in the back plate and engages a threaded opening in said adjusting-block. Above the elongated slot 32 the back plate is provided with a threaded opening 33, through which a set-screw 34 passes, the inner end of said set-screw bearing against the upper end of the adjusting-block. A portion of this screw is faced or planed smooth for a distance longitudinally, and on this smooth surface is arranged a series of graduated marks 35, as clearly shown in Fig. 4. The back plate 24 is further provided at opposite ends with lateral extensions 36 36, the under edges of which are on a plane and continuous with the under edges or surfaces of the tongues 27 27. These extensions are slotted inwardly, as indicated at 37, (see Fig. 5,) and within these slots are arranged toothed wheels or pinions 38 38, mounted rigidly upon transverse shafts 39 39, each shaft having an end extended and formed into a crank-handle 40. Passing through vertical openings 41 in the extensions 36 are rods 42 42, said rods being threaded for the greater portion of their lengths and having their lower ends bent into hook form. Above the extensions 36 the threads of the rods are engaged by annular nuts 43 43, said nuts having milled edges to facilitate turning the same.

The upward extensions 9 9 and 25 25 of the respective front and back plates are provided with registering threaded apertures, through which screws 44 44 pass, whereby the two plates may be adjusted together.

In Fig. 1 of the drawings a saw 45 is shown as inserted between the plates, said plates being adjusted together as closely as possible. The cutting-teeth of this saw are indicated by the numeral 46 and the clearing-teeth thereof by the numeral 47.

In the practical application of my device in the case of a saw with a wide blade it is inserted between the front and rear plates, the points of the teeth bearing against the under edges of the tongues 27 27 and the lower edge of the blade clamped or secured to any suitable support. In the case of a saw with a narrower blade, such as the saw shown in Fig. 1, the lower edge of the saw-blade rests in the hooked lower ends of the rods 42, said rods being adjusted up vertically by means of the nuts 43 until the teeth-points contact with the limiting-tongues 27 27. The plates 8 and 24, after the saw-blade is inserted therebetween, are brought together as closely as possible by means of the screws 44. The next step is to adjust the block 29 upwardly until its upper edge is on a line with the base of the saw-teeth. The proper adjustment may be readily secured by means of the graduated marks 30 at the lower end of the block. The upper end of the block is now forced inwardly by means of the set-screw 34. The graduated marks 35 on the set-screw are so arranged that upon one complete revolution of said screw the upper end of the adjusting-plate is forced inwardly a certain distance—as, for instance, one-six-

teenth of an inch for every complete turn. It is therefore obvious that the extent to which the teeth are set or bent may be readily regulated, the bend beginning at the base of the tooth against which the upper edge of the adjusting-block bears and continuing until the point of a tooth is brought into contact with the metal immediately beneath the edge 26, said metal acting as a stop against the further movement of the saw-setting device 17. This bending or setting is accomplished by said part 17, which is actuated by turning the crank-handle 22, so that the threaded extension 23 thereof bears against the outer end of the shank 19. As the saw-setting device 17 is thus forced inwardly, its point or apex 18 will contact with the point of the tooth and bend the same over to the extent and in the manner described. On the turning of the crank-handle 22 in the reverse direction pressure by the end of the threaded extension 23 on the shank of the tooth-setting device is removed, and by the action of the coiled spring 21, the inner end of which bears against the outer face of the front plate, the tooth-setting device is returned to its normal position.

It is obvious from the preceding description that by properly adjusting the block 29 vertically in the recess 28 the device is readily made adaptable for saw-teeth of varying lengths. It is also obvious that by a proper manipulation of the set-screw 34 the degree of the bend may be conveniently and accurately regulated. In the case of saws provided with wide blades which are clamped to a supporting medium, in order to bring the successive teeth in alignment with the saw-setting device, one of the crank-handles 40 is operated to turn its toothed wheel 38. This toothed wheel being in engagement with the teeth of the saw, and as said saw-blade is tightly clamped against movement, the entire device is moved along over the saw. In case, however, of saws in which the blades are not of sufficient width to be clamped to a supporting medium and which are therefore held up to position by means of the rods 42, the turning of a toothed wheel 38 in this instance will have the effect of moving the saw along, so as to bring the successive teeth into proper alignment.

As previously stated, the tongues 27 27 of the back plate 24 are on a plane slightly above the edge 26. It will therefore be seen that the teeth 47 when they reach the edge 26 will extend slightly above the same. This edge 26 therefore serves as a guiding line or mark down to which the points of the clearing-teeth are jointed by means of a file working transversely over the edges 11 and 26 of the spaces between the respective extensions or ears 9 and 25.

Before inserting the saw between the side pieces, however, I prefer, also, to plane or joint the cutting-teeth. To accomplish this a file is clamped lengthwise between the two side pieces at the bottom thereof, projecting be-

yond said side piece about one-fourth of an inch. The saw is fastened in a vise, teeth upward. The saw-set with the file therein is now run over the entire length of the saw-teeth in order to plane them down to even length.

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

10 1. In a saw set, the combination, of a frame consisting of side pieces having a space there-
between for the insertion of the saw blade,
one of said side pieces provided with a recess,
15 a block within the recess, a screw passing
through an elongated slot in one of the side
pieces and engaging the block, whereby said
block is adapted to be adjusted vertically in
the recess, a set-screw bearing against the up-
per end of the block, said screw adapted for
20 adjusting the upper end of the block, in-
wardly, and a tooth setting device adapted to
bend the teeth from the upper end of the ad-
justing block laterally until the points of the
teeth contact with the frame, substantially as
25 set forth.

2. In a saw set, the combination, with a
frame consisting of front and back plates ad-
justable toward and from each other, one
of said plates provided upon its inner face
30 with a tongue or tongues against the under
edge or edges of which the points of the teeth
are adapted to bear, and the other plate pro-
vided with a groove or grooves adapted to re-
ceive the tongue or tongues of a tooth setting
35 device, substantially as set forth.

3. In a saw set, the combination, with a
frame consisting of front and back plates ad-
justable toward and from each other, said
plates provided with registering recesses, and
40 one of the plates provided upon its inner face
with a tongue or tongues on a line slightly

above the plane of the lower edges of the re-
cesses, of a tooth setting device, substantially
as set forth.

4. In a saw set, the combination, of a frame 45
consisting of side pieces having a space there-
between for the insertion of the saw blade, one
of said side pieces provided with an opening,
a tube fitting against the latter side piece,
and provided with projecting flanges, the in- 50
ner end of the bore of said tube registering
with the opening of the side piece, and the
outer end provided with screw threads, screws
passing through the flanges of the tube and
engaging the side piece, a tooth setting device 55
working in the opening of the side piece and
provided with a shank extending into the
tube, said shank provided at its outer end
with a collar or enlargement, a coiled spring
encircling the shank and confined between 60
the collar or enlargement and the frame, and
a crank handle provided with a threaded ex-
tension engaging the threads of the tube, and
adapted to contact with the end of the shank
for forcing the tooth set inwardly, substan- 65
tially as set forth.

5. In a saw set, the combination of a frame
provided with a space for the insertion of the
saw blade, a vertical rod passing through an
extension at the end of the frame, provided 70
with threads for the greater portion of its
length, and having at its lower end a hook,
said hook adapted to engage the untoothed
edge of the saw, and thereby support said saw,
and a nut engaging the threads of the rod, 75
substantially as set forth.

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

ALBERT HOLECEK.

Witnesses:

EMMA ETZLER,
CHARS. ETZLER.