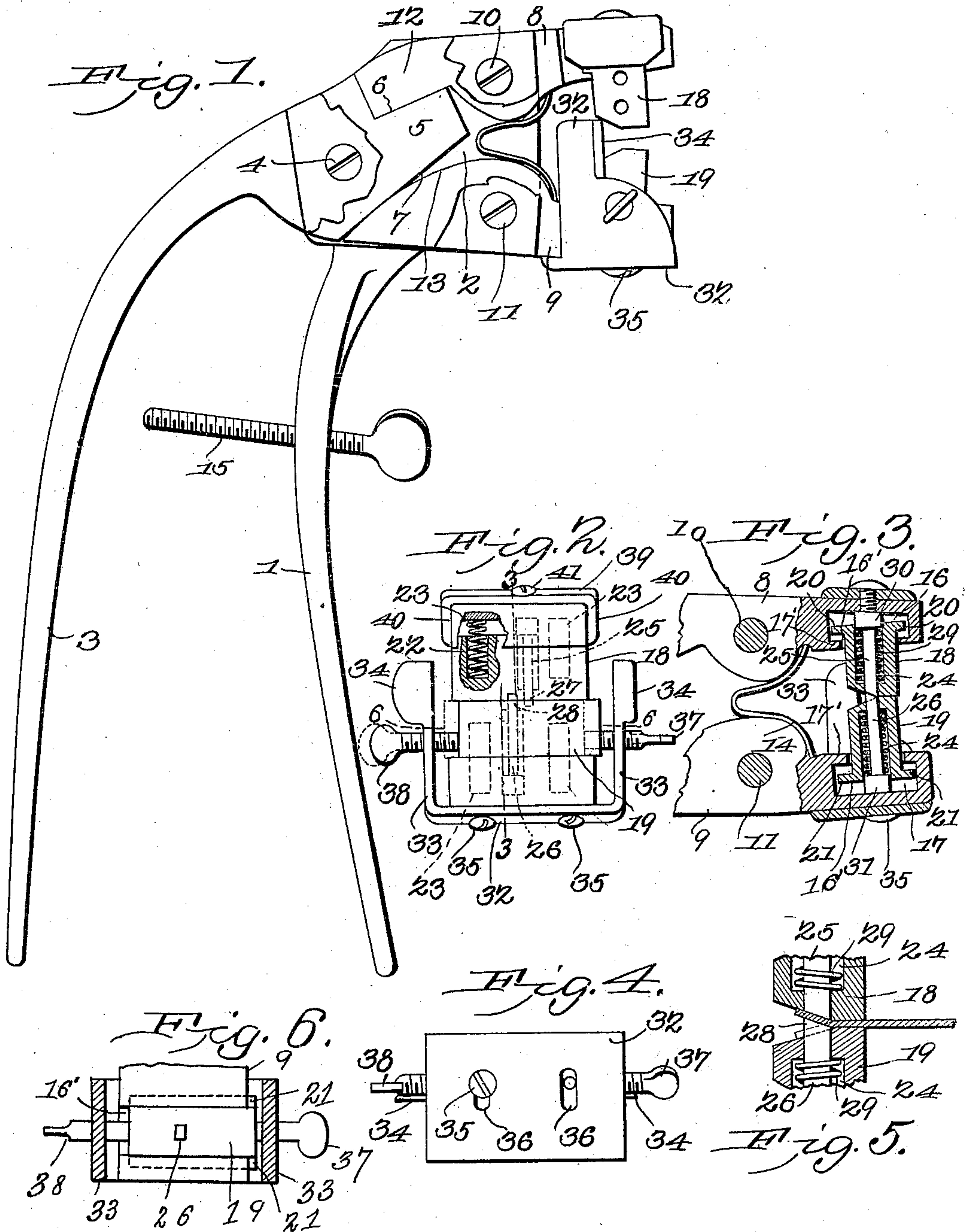


No. 820,161.

PATENTED MAY 8, 1906.

H. WISE.  
SAW SET.

APPLICATION FILED JUNE 29, 1905.



Witnesses  
*E. J. Howard*  
*L. B. Merrill*

*Harry Wise,*  
Inventor  
by *C. A. Snow & Co.*  
Attorneys



# UNITED STATES PATENT OFFICE.

HARRY WISE, OF HOUSTON, TEXAS, ASSIGNOR OF ONE-HALF TO ANDREW H. GEMBLER, OF HOUSTON, TEXAS.

## SAW-SET.

No. 820,161.

Specification of Letters Patent.

Patented May 8, 1906.

Application filed June 29, 1905. Serial No. 267,609.

*To all whom it may concern:*

Be it known that I, HARRY WISE, a citizen of the United States, residing at Houston, in the county of Harris and State of Texas, have  
5 invented a new and useful Saw-Set, of which the following is a specification.

This invention relates to saw-sets, and especially to those saw-sets adapted and arranged to set two or more teeth at the same  
10 time and from opposite sides.

The object of this invention is to provide a saw-set having movable anvils arranged to clamp the saw-blade therebetween and to hold the blade in such position while the teeth  
15 are being given the desired curvature.

A further object of the invention is to provide a saw-set the setting-plungers of which may be moved longitudinally relative to each other to adapt the set for use in connection  
20 with saws of different gage.

A further object of the invention is to provide a saw-set having a movable guide adapted for use in connection with the plungers operating from opposite sides and by the use of  
25 which the point of contact between the plungers and the teeth may be accurately adjusted.

With these and other objects in view the present invention consists in the combination and arrangement of parts, as will be hereinafter more fully described, shown in the accompanying drawings, and particularly pointed out in the appended claims, it being understood that changes in the form, proportion, size, and minor details may be made  
30 within the scope of the claims without departing from the spirit or sacrificing any of the advantages of the invention.

In the accompanying drawings, Figure 1 is a view in side elevation of the improved saw-set forming the subject-matter of this invention and with the side covering-plate broken away to show the mounting of the several levers. Fig. 2 is a view in end elevation of the  
40 saw-set with a portion of the upper jaw broken away to show the manner of mounting the springs. Fig. 3 is a transverse sectional view of the jaws and head of the saw-set, taken on line 3 3 of Fig. 2. Fig. 4 is a bottom plan view of the lower jaw and saw-guide, exhibiting the manner of adjusting the guide. Fig. 5 is an enlarged detail sectional  
50 view of the anvils and plungers, showing a saw-blade therebetween and two teeth set in

opposite directions. Fig. 6 is a longitudinal  
sectional view taken on the line 6 6 of Fig. 2, showing the manner of mounting the anvil on the lower jaw.

Like characters of reference designate corresponding parts in each and every figure of  
60 the drawings.

In its preferred embodiment this invention comprises a handle 1 and a head 2, rigid therewith. Upon the head 2 is pivotally mounted a handle 3 by the pin 4 and having an end 5  
65 extending beyond the pivot 4 and provided upon opposite sides with cam-faces 6 and 7. Upon the head 1 are mounted the jaws 8 and 9 by the pins 10 and 11, respectively. The jaw 8 is provided with a lever extension 12  
70 engaging the cam-face 6 of the handle extension 5, and the jaw 9 has a cam-face 13 engaging the cam-face 7. To hold the jaws normally open, a spring 14 is disposed between the jaws, and to limit the closing movement  
75 of the jaws a screw 15 is mounted in the handle 1 and for engagement with the handle 3.

The jaws 8 and 9 are provided, respectively, with transverse openings 16 and 17, which open through the adjacent faces of the jaws,  
80 as indicated at 16', and within which are mounted anvils 18 and 19, respectively, the latter being provided with flanges 20 and 21, which engage the inwardly-extending lips 17' and prevent accidental displacement of the  
85 anvils, but permit a limited vertical movement of the latter within the openings 16. The anvils are provided with transverse openings 22, formed in the backs thereof and extending throughout a portion of their widths  
90 and in which are mounted springs 23, bearing against the jaws 8 and 9 and holding the anvils with the flanges 20 and 21 normally in contact with the lips of openings 16 and 17. Adjacent the transverse middle line the anvils  
95 are provided with transverse bores 24, within which are mounted plungers 25 and 26, bearing at their inner ends against the internal walls of openings 16 and 17 and extending through the face of the anvils and terminating in beveled ends 27 and 28. To hold the  
100 plungers normally in contact with the interior walls of the jaws 8 and 9, springs 29 are provided, surrounding the plunger and bearing against the lower extremities of the bores  
105 24 and against heads 30 and 31, formed upon the plungers.

To adjust the plungers for contact with saw-



teeth at desired points, a guide is provided, comprising a plate 32, carrying upstanding arms 33, provided with right-angularly-disposed flanges 34 for contact with the extremities of the saw-teeth. The guide is regulated by loosening screws 35, disposed within slots 36 and engaging the jaw 9. To adjust the plungers to saw-teeth of different gages, screws 37 and 38 are provided, piercing the arms 33 and contacting with the ends of the anvil 19. To prevent the longitudinal displacement of anvil 18, a plate 39 is provided, having lips 40, downwardly disposed at each end over the jaw 8 and secured in any approved manner, as by the screw 41.

In operation the saw-set is placed over the toothed edge of a saw until the plates 34 contact with the extremities of the teeth. The screws 35 are then loosened and the guide moved transversely to such position that the plungers contact with the teeth at the desired points, after which the screws 35 are tightened to retain the guide at the desired adjustment. The anvil 19 is then adjusted to operate with the gage of saw required by loosening screw 37 or 38 and tightening the opposite screw, thereby moving the anvil 19 and the plunger 26 transversely of the jaw and to a position such that the points 27 and 28 of the plungers will contact squarely with adjacent teeth upon opposite sides. When the desired adjustments have been secured, the handle member 3 is forced downwardly toward the handle member 1, thereby operating the jaws 8 and 9 to force them together and to force the anvils 18 and 19 to clamp opposite sides of a saw-blade, as indicated more especially in Fig. 5. When the anvils have contacted with the saw, a continued pressure upon the handle will cause the jaws 8 and 9 to force the plungers 25 and 26 downwardly through the anvils and against the saw-teeth, and a continued pressure will bend the teeth to conform to the beveled ends 27 and 28, thereby producing the desired set of the two teeth in opposite directions.

Having thus described the invention, what is claimed is—

1. A saw-set embodying cooperating yieldably-supported anvils, cooperating plungers carried by the anvils, abutments adapted to engage the plungers, means for adjusting one anvil longitudinally, with respect to the other, and means for forcing the anvils together.

2. A saw-set embodying cooperating jaws, mating anvils yieldably supported on the jaws, plungers piercing the anvils and adapted to engage the jaws when the latter are moved to closed position, means for adjusting one of the anvils longitudinally with respect to the other, and means for operating the jaws.

3. A saw-set embodying cooperating jaws, mating anvils yieldably mounted on the jaws, plungers carried by the anvils and adapted to

engage the jaws when the latter are moved to operative position, a guide secured to one of the jaws, means carried by the guide for adjusting one of the anvils longitudinally with respect to the other, and means for operating the jaws.

4. A saw-set embodying cooperating jaws, mating anvils yieldably mounted on the jaws, plungers carried by the anvils and provided with inclined faces, a guide mounted for lateral movement on one of the jaws and provided with terminal arms embracing said jaws, and adjusting-screws threaded in the arms and adapted to engage one of the anvils for adjusting the same longitudinally with respect to the other.

5. A saw-set embodying cooperating jaws, anvils yieldably mounted on the jaws and movable in a plane at substantially right angles thereto, plungers carried by the jaws and extending through the anvils, a laterally-adjustable guide mounted on one of the jaws and provided with angularly-disposed arms embracing said jaw, means carried by the arms for adjusting the adjacent anvil longitudinally with respect to the opposite anvil, and means for clamping the guide in adjusted position.

6. A saw-set embodying cooperating jaws provided with transverse recesses defining inwardly-extending retaining-lips, an anvil mounted for reciprocation in the recess of one of the jaws, a mating anvil mounted in the recess of the adjacent jaw and adjustable longitudinally with respect to the opposite anvil, plungers carried by the anvils and adapted to bear against the walls of said recesses, means for yieldably supporting the anvils in said jaws, and means carried by the anvils and engaging the lips for limiting the reciprocating movement of said anvils.

7. A saw-set embodying cooperating jaws provided with transverse recesses defining inwardly-extending lips, mating anvils yieldably mounted for reciprocation in said recesses and provided with laterally-projecting flanges adapted to engage the lips for limiting the movement of the anvils, plungers carried by the anvils, and flanges secured to the anvils and bearing against the walls of the transverse recesses, one of said anvils being adjustable longitudinally with respect to the other.

8. A saw-set embodying cooperating jaws provided with transverse recesses defining inwardly-extending lips, mating anvils mounted for reciprocation in said recesses and provided with lateral flanges adapted to engage the lips, springs for normally holding the flanges in engagement with the lips, plungers carried by the anvils and having their adjacent ends beveled and their opposite ends bearing against the walls of the recesses, and means for adjusting one of the anvils longitudinally with respect to the other.



9. A saw-set comprising coöperating jaws  
each provided with a groove having inturned  
lips, an anvil with outturned flanges mount-  
ed in each groove, resilient members within  
5 the grooves and disposed to hold the flanges  
normally in contact with the lips, plungers  
inserted through the anvils and abutting the  
bottoms of the grooves, means for moving  
one anvil and its associated plunger and re-  
10 silient member longitudinally relative to the  
other anvil and means for operating the jaws.

10. A saw-set comprising coöperating piv-  
oted jaws each provided with a groove hav-  
ing inturned lips an anvil with outturned  
15 flanges mounted in each groove, resilient  
members within the grooves and disposed to  
hold the flanges normally in contact with the  
lips, plungers inserted through the anvils,

springs engaging the plungers to hold them  
against the bottom of the groove and nor- 20  
mally within the anvils, a gage secured to one  
jaw and held from longitudinal movement  
relative thereto, screws inserted through op-  
posite arms of the gage and abutting opposite  
ends of one anvil and whereby such anvil 25  
may be moved longitudinally together with  
its associated plunger and resilient members,  
and means for operating the jaws.

In testimony that I claim the foregoing as  
my own I have hereto affixed my signature in 30  
the presence of two witnesses.

HARRY WISE.

Witnesses:

O. H. SCHULTZ,  
P. H. GRAUT