C. WHITUS & J. W. WILKS.
SAW SET.


Fig. 1

Fig. 2.

Fig. 3. Fig. 4.

Fig. 5.

Witnesses:

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Inventor.

by John P. Haffner, attorney.

THE NATIONAL LITHOGRAPHING COMPANY,
WASHINGTON, D. C.
To all whom it may concern:

Be it known that we, CHARLES WHITUS and JOHN W. WILKS, citizens of the United States, residing at Chester, in the county of Chester, in the State of South Carolina, have invented certain new and useful Improvements in Saw-Sets, and we do hereby declare the following to be a full, clear, and exact description of the invention, such as will enable others skilled in the art to which it appertains to make and use the same.

Our invention is a new "saw set" and consists in the novel construction and arrangement of its parts.

The object of our invention is to enable the operator to set all saws used at a work bench from the smallest to the largest, and in fine saws to set as many as three or more teeth at a stroke, and with larger saws two or more teeth and with still larger saws one tooth, and where the teeth of the saws are exceedingly fine we may remove the die from the point of the plunger and place a washer behind the anvil thus bringing the anvil in reach of the plunger and set one tooth at a time of the most delicate saw.

In the accompanying drawings: Figure 1, is a side view of our invention partly in section. Fig. 2, is a top plan view. Fig. 3, is a perspective view of the "combination guide and gage." Fig. 4, is a perspective view of the anvil. Fig. 5, is a perspective view of the washer. Figs. 6 and 7, are perspective views of dies used in connection with our invention.

Our invention is described as follows:

A, represents the body of the invention, a, the handle integral with the body, b, the lever handle pivoted to the body, a', the nose piece, a", and a", the throats and c", the mouth. The lever handle b, is pivoted between the bifurcated projection b', of the body A, and has a shoulder b", for moving the plunger, forward. Said shoulder is provided with a friction roller c", which operates against the rear end of the plunger. Said plunger operates through the throats c", and a", in the body of the invention and is made to stand back against the roller c", in the shoulder b", by means of a spiral spring c'. The said throats a", and c", are circular and the plunger that operates therein is cylindrical and fits in said throats. The front end of said plunger is smaller than its body leaving a shoulder c', for the rear faces of the dies to rest against. The die is perforated and fits over the point of the plunger and has two bearings, the bottom wall impinging against the point of the plunger and its face against the shoulder of the plunger. The die may be turned either edge up (see Figs. 6 and 7). The die blocks (Figs. 6 and 7) are all the same size and are kept from turning on the point of the plunger by means of the guides d", on the upper and front part of the "combination guide and sliding gage" D. The said "combination guide and sliding gage" D, is provided with a vertical longitudinal slot d", through which the threaded portion of the thumb screw d', passes and screws into a threaded opening in the lower side of the body.

In the nose of the body is a recess e", for the anvil e', to rest in, which is provided with an incline e", to determine, in combination with "combination guide and sliding gage" D, the set of the saw. And in the nose of the body A, is a vertical slot e', through which the threaded portion of the thumb screw e', passes and screws into a threaded opening in the anvil e'. The object of the last named arrangement is for the purpose of enabling the operator to move the anvil up or down to determine the length of the set.

When we wish to set a fine saw we use the die f', which is provided on one edge with three teeth 1, 2, 3—which enable us to set three teeth of a saw at one stroke. This edge of the die will set a saw with from thirteen to fifteen teeth to the inch.

When we wish to set a coarser saw we turn the other edge of the die up, which is provided with two teeth 4, 5—and set two teeth of a saw at one stroke, and is adapted to set a saw having from eight to eleven teeth to the inch. Die g, is provided with one tooth, and is adapted to set larger and coarser saws; and one tooth at a stroke and is, therefore, not confined to saws with any given distances between the teeth but may set any work bench saw no matter how far the teeth may be apart.

We may use as many different dies as we see proper and they may be cut to set the teeth of any saw.
For the purpose of setting very fine surgical saws, we use a die prepared for that express purpose, having from one to six teeth.

When we use our invention as a punch we may make the anvil $e'$, a little thicker than when we use it as a saw set, and in the face of the anvil we make an opening $e''$, provided with an escape opening $e''$.

We are aware that a saw set has heretofore been invented having a body, handles, nose, anvil, plunger, and gage; said gage however is not provided with our guides $d$, for keeping the die in proper position, and the plunger has its front end shaped to impinge against a saw tooth and can set only one tooth at a stroke, and has a portion of its surface flattened its entire length, and the throats through which it passes has a portion flattened to correspond with the plunger to keep it from turning. Said invention has no dies.

Our plunger is cylindrical and may be turned and thus avoid the expense of flattening its surface.

The throats may be bored and the holes in the dies may be bored, thus saving us the expense of flattening or mortising.

Having described our invention, what we claim as new, and desire to secure by Letters Patent, is—

1. In a saw set, the combination, consisting of the body $A$, having the handle $a$, provided with circular throats $a'$, $a''$, cylindrical plunger $c$, working in said throats, and having a smaller cylindrical end leaving a shoulder $c'$, a die having one or more teeth to impinge against the saw teeth; said die pivoted on the front end of the plunger; combination guide and gage $D$, provided with the guides $d$, one working against each side of the die; anvil $e'$, adjustably secured in the nose of the body $A$ and lever handle $b$, provided with a friction roller $c''$, operating against the rear end of the plunger, substantially as shown and described and for the purposes set forth.

2. In a saw set, the combination, consisting of the body $A$, having the handle $a$, provided with circular throats $a'$, $a''$, cylindrical plunger $c$, working in said throats and having a smaller cylindrical end leaving a shoulder $c'$; a die having one or more teeth to impinge against the saw teeth, said die pivoted on the front end of the plunger; combination guide and gage $D$, provided with the guides $d$, one working against each side of the die; anvil $e'$, adjustably secured in the nose of the body $A$; lever handle $b$, operating against the rear end of the plunger, substantially as shown and described and for the purposes set forth.

In testimony whereof we affix our signatures in presence of two witnesses.

CHARLES WHITUS.
JOHN W. WILKS.

Witnesses:
GRAHAM L. GORDON,
ANNIE A. LANSDALE.