

(No Model.)

W. G. AVERY.

COMBINED SAW SET AND PUNCH.

No. 387,133.

Patented July 31, 1888.

Fig. 2.

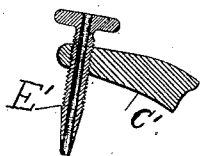
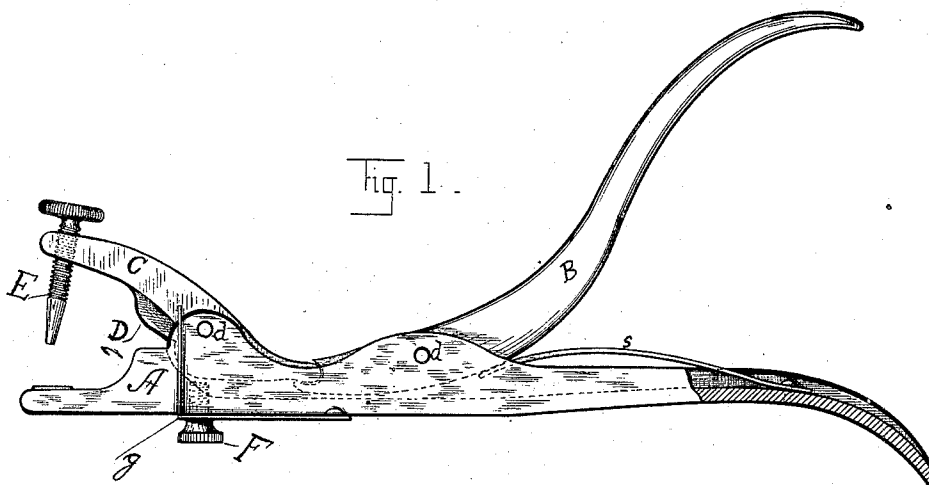


Fig. 1.



Witnesses,

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# UNITED STATES PATENT OFFICE.

WILLIAM G. AVERY, OF CLEVELAND, OHIO.

## COMBINED SAW-SET AND PUNCH.

SPECIFICATION forming part of Letters Patent No. 387,133, dated July 31, 1888.

Application filed May 12, 1888. Serial No. 273,687. (No model.)

### *To all whom it may concern:*

Be it known that I, WILLIAM G. AVERY, a citizen of the United States, residing at Cleveland, in the county of Cuyahoga and State of Ohio, have invented a new and useful Improvement in a Combined Saw-Set and Punch, of which the following is a specification.

My invention relates to an improvement in the saw-set and punch patented to me by Letters Patent No. 282,600, dated August 7, 1883. The saw-set and punch covered by said Letters Patent are provided with a hollow punch adjustably fixed near the end of the jaw C to be used when desired for punching leather. The punch is held in place by a set-screw, so that the punch may be taken out and reversed in position—*i. e.*, the point turned up from said jaw when not required for use. It is also provided with a thumb-screw to pass through said jaw C at a point between said punch and the die D for use in gaging the throw of the said die when the tool is used for setting a saw.

This invention is a thumb-screw bored through its length, so that it may be used in connection with said tool either as a punch or for gaging the throw of the die D in setting a saw. Its object is to simplify said tool and cheapen its manufacture by doing away with the separate thumb-screw gage and the hollow punch with its set-screw.

In the accompanying drawings, Figure 1 is a side elevation of a combined saw-set and punch containing the improvement herein set forth. Fig. 2 is a longitudinal section of the within-described hollow thumb-screw, and shows its use in connection with the gripping-jaw C.

The thumb-screw E is round, made hollow,

as shown in Fig. 2, and is tapered to a cutting-edge at its lower end, and is threaded to pass through a cylindrical threaded hole made in the gripping-jaw, C, as shown in the drawings. Said hollow thumb-screw E may be adjusted as desired for gaging the throw of the die D in setting a saw, or it may be used for punching leather, paper, and other articles.

The drawings so fully exhibit the invention herein claimed that no fuller description of the same or of its construction and operation is needed than what is set forth.

The anvil-jaw A, with its chambered handle, having the ears *d* and the spring *s*, the adjustable gage *g*, the lever-handle B, and the movable gripping-jaw C, having a die, D, are no part of this invention and are not claimed herein. The combination with the jaw C of the saw-set, and of a common cutting-punch adjustably fixed and held with a set-screw for punching leather in conjunction with the jaw A, is also a part of the invention covered by said Letters Patent No. 282,600, and is not claimed herein.

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

The combination, with the saw-set consisting of the anvil-jaw A, with its chambered handle, having ears *d d* and spring *s*, lever-handle B, and the movable gripping-jaw C, having die D, of the screw-threaded hollow punch E, substantially as set forth, and for the purpose specified.

WILLIAM G. AVERY.

Witnesses:

LOUIS H. WINCH,  
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