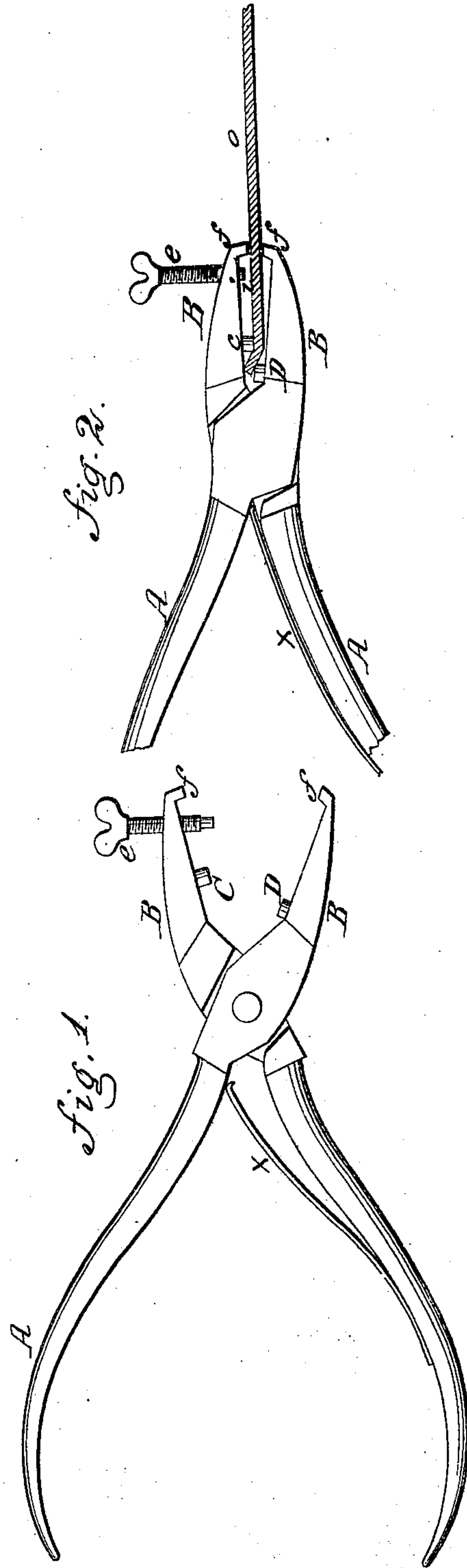


H. Schauer

Saw Set.

N^o 86,945.

Patented Feb 16, 1869.



WITNESSES.
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HENRY SCHAUER, OF ALLEGHENY CITY, PENNSYLVANIA.

Letters Patent No. 86,945, dated February 16, 1869.

IMPROVEMENT IN SAW-SET AND PUNCH.

The Schedule referred to in these Letters Patent and making part of the same.

To all whom it may concern:

Be it known that I, HENRY SCHAUER, of the city and county of Allegheny, and State of Pennsylvania, have invented a new and useful Improvement in Apparatus which combines in one Device a Saw-Set, a Pair of Nippers, and a Punch; and I do hereby declare that the following is a full and exact description thereof, reference being had to the accompanying drawings, and to the letters of reference marked thereon.

The nature of my invention consists in combining, in one apparatus, a saw-set, nippers, and a punch, the whole being constructed, arranged, and operating as hereinafter described.

To enable others skilled in the art to make and use my invention, I will proceed to describe its construction and operation.

In the accompanying drawings, which form part of my specification—

Figure 1 is a side view of my improvement, combining in one apparatus a saw-set, nippers, and punch.

Figure 2 is a side view of the same, representing the position of the parts when setting the teeth of a saw.

In the drawings—

A represents the handles of the apparatus.

B represents the jaws, which are provided with an anvil, *c*, tooth-set, *d*, adjustable and regulating screw-punch, *e*, and an opening for the punch, and lips, *f*, for nippers.

x represents an ordinary spring for holding the jaws open.

As the construction and arrangement of the several parts of my improvement, and the arrangement that the several parts bear to each other, will be readily seen and understood by reference to the accompanying drawings, I will therefore, without further description of its construction, proceed to describe its operation, which is as follows:

When I desire to use the apparatus as a pair of nippers, I remove the screw and punch *e*, or "screw it"

back, so that the lips *f* will come close together. The apparatus will then answer the purpose of a pair of nippers or pincers.

When it is desired to use the apparatus as a punch, for making holes in narrow strips of sheet-metal, the screw or punch *e* is turned or "screwed down," so that its point will enter the opening made in the saw. It can then be used as a punch.

When the apparatus is used for "setting" the teeth of saws, the screw or punch *e* is turned and adjusted, so that any desired set may be obtained or given to the teeth. This arranging of the screw or punch *e* for obtaining the desired set will readily be understood by the skilled mechanic, without further description of the manner of manipulating the screw, for its position must of necessity regulate the "set" of the saw-teeth.

The saw-blade *o* is placed between the jaws B, so that the teeth will come directly over or under the set D, with the anvil near the base of the teeth, and the screw or punch *e* resting on the side of the saw-blade, as indicated by the dotted lines *i*. Then by pressing or forcing the handles A together, the jaws B will close, and the desired set will be given to the saw-teeth.

The advantages of my improvement consist in providing mechanics with a cheap, durable, and efficient apparatus, which will serve a threefold purpose, viz, a saw-set, a punch, and a pair of nippers—things which are necessary to a complete "kit of tools."

Having thus described the nature, construction, and operation of my improvement,

What I claim as of my invention, is—

The arrangement of the jaws B B, provided with lips *f*, punch *e*, anvil *c*, and tooth-set *d*, constructed, arranged, and operating substantially as herein described and for the purpose set forth.

HENRY SCHAUER.

Witnesses:

A. C. JOHNSTON,

JAMES J. JOHNSTON.