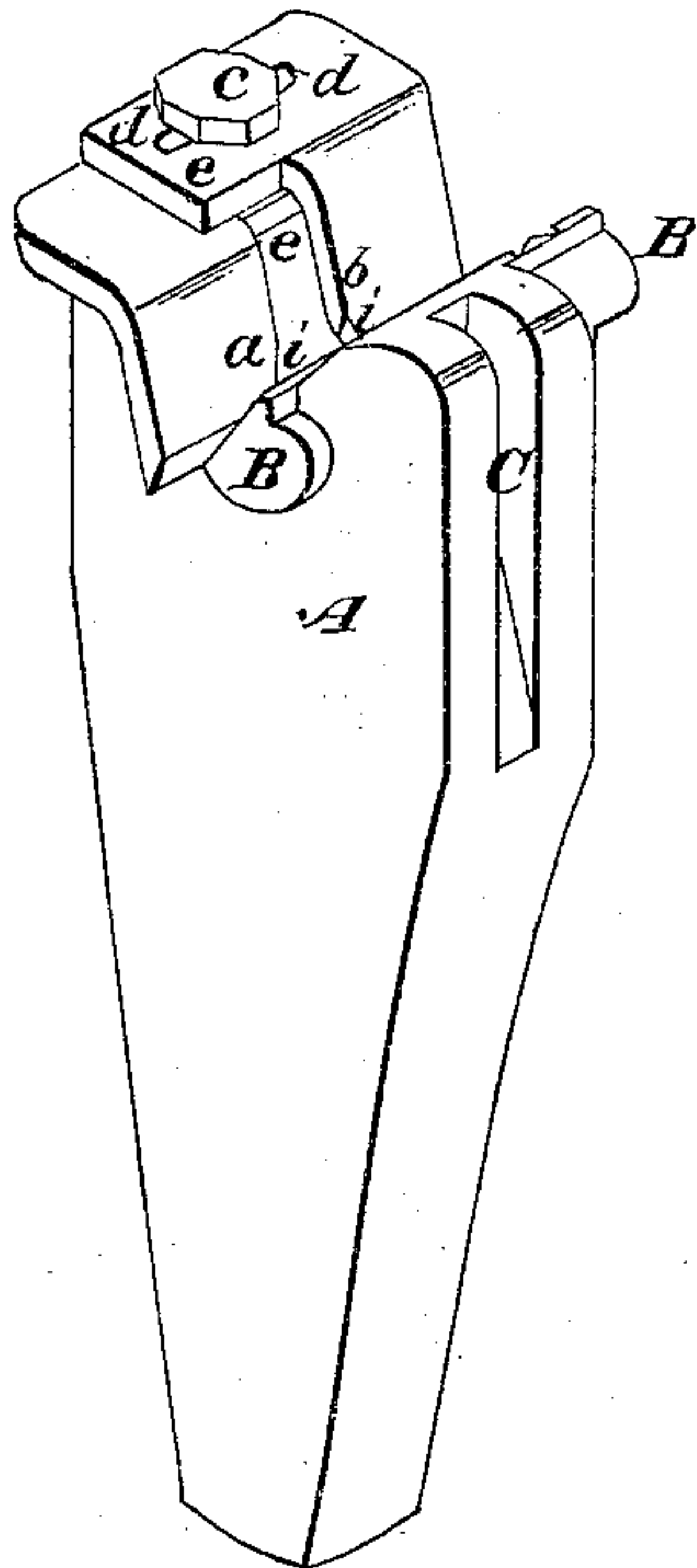


*J. E. Emerson*

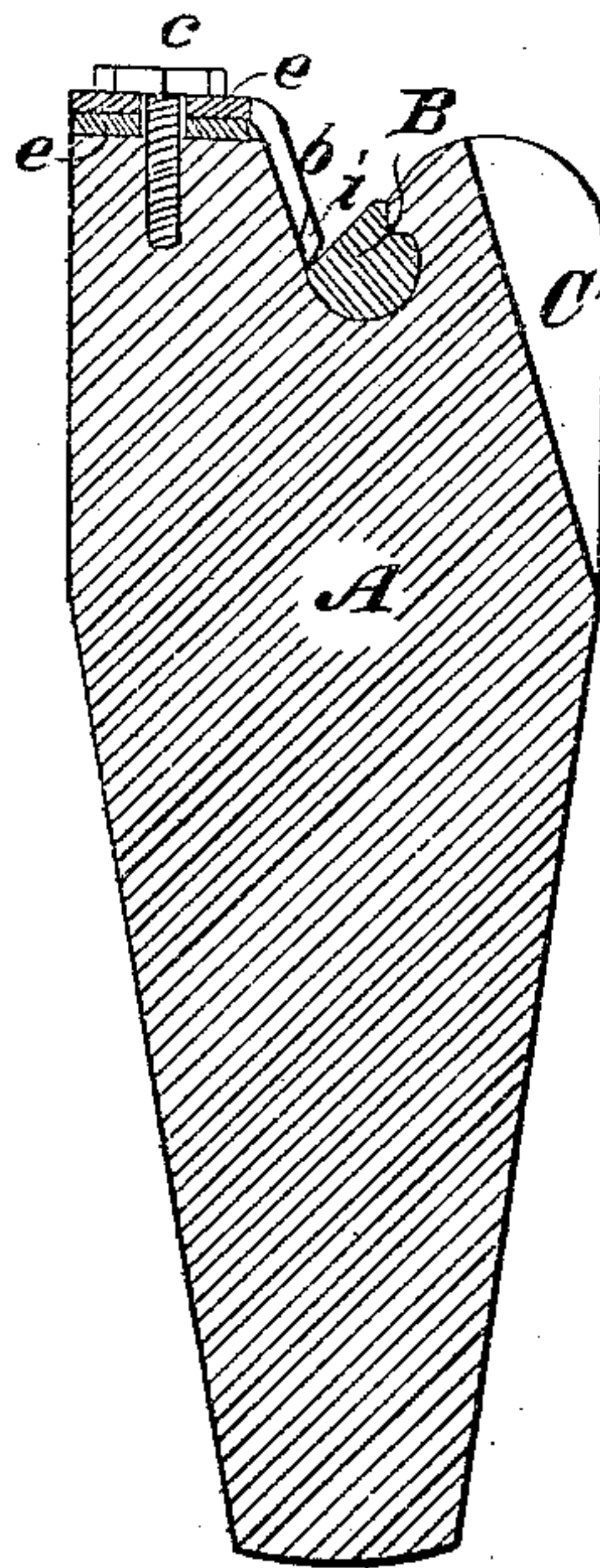
*Saw-Set,*

*N<sup>o</sup> 65,358. Fig 1*

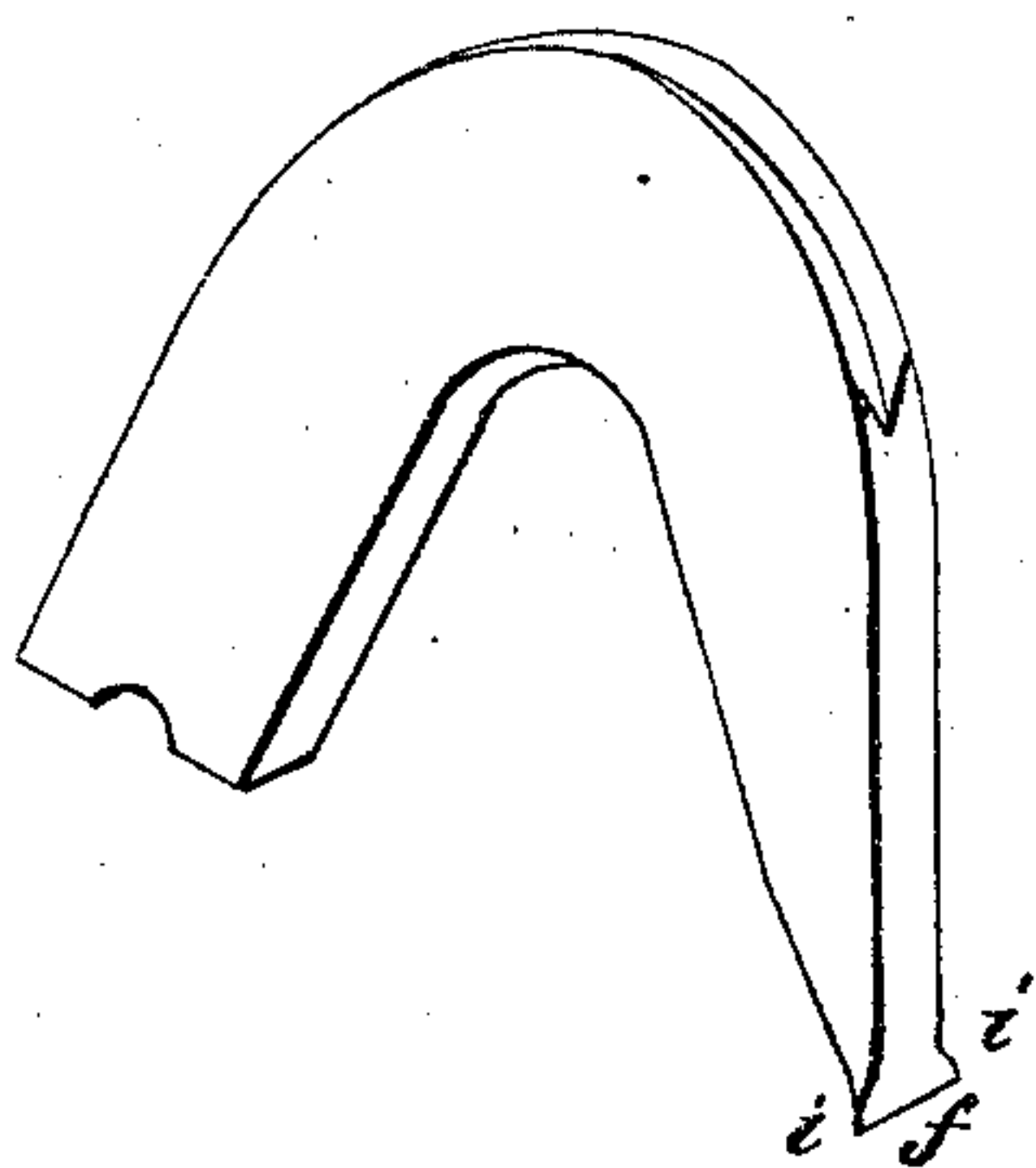
*Patented June 4, 1867.*



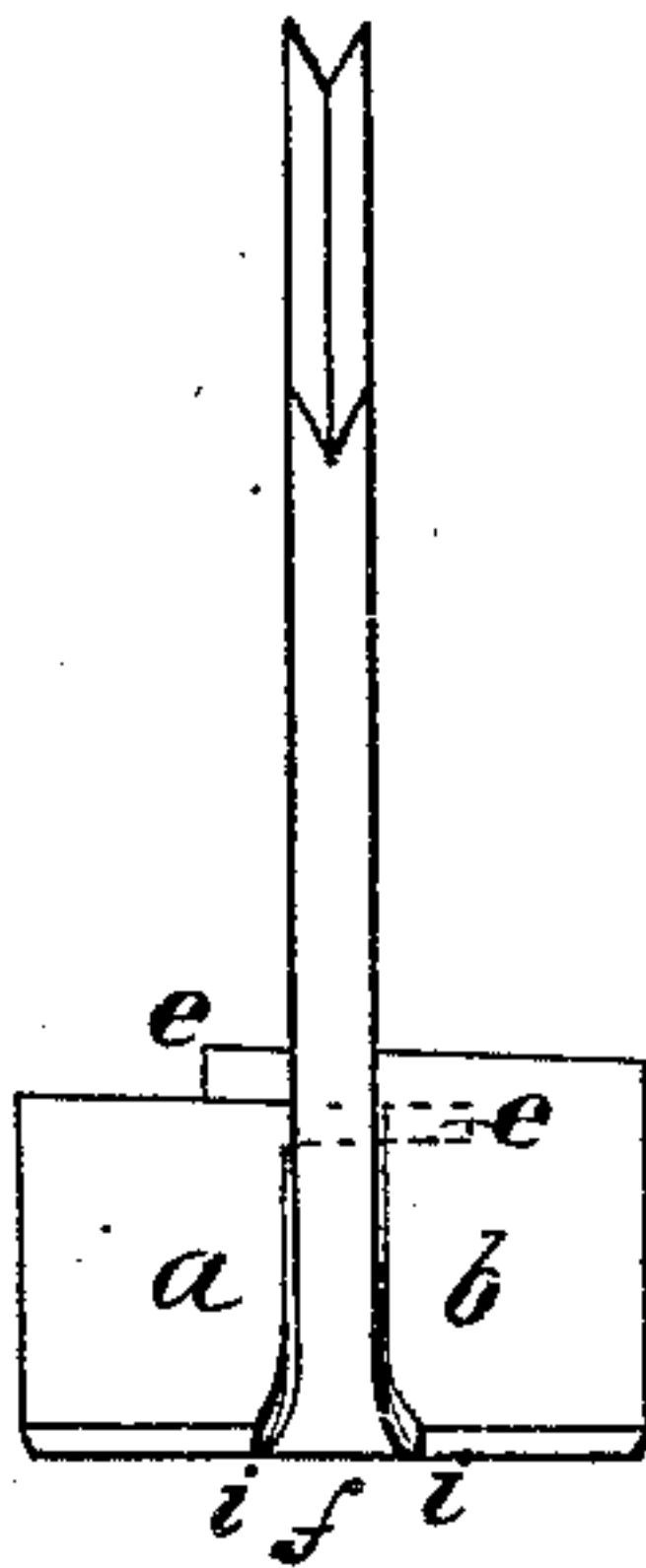
*Fig 2*



*Fig 3*



*Fig 4*



**WITNESSES:**

*Jno D. Patten*  
Thos J. Chamberlain

**INVENTOR:**

James E. Emerson  
By atty A. B. Stoughton,

# United States Patent Office.

JAMES E. EMERSON, OF TRENTON, NEW JERSEY.

*Letters Patent No. 65,358, dated June 4, 1867.*

## IMPROVEMENT IN SAW-SETS.

*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, JAMES E. EMERSON, of Trenton, in the county of Mercer, and State of New Jersey, have invented certain new and useful improvements in gauging and sharpening Swages for Setting the Teeth of Saws; and I do hereby declare the following to be a full, clear, and exact description of the construction and operation of the same, reference being had to the accompanying drawings, making a part of this specification, in which—

Figure 1 represents a perspective view of a gauging and sharpening swage, with my improvement attached to or connected with it.

Figure 2 represents a vertical section through the same.

Figure 3 represents a perspective view of a saw-tooth, shaped, sharpened, and set by my improved instrument.

Figure 4 represents a view of a saw-tooth, with the movable or adjustable lips in the position they occupy with regard to the tooth when the latter is being operated upon by the swage.

Similar letters of reference where they occur in the separate figures denote like parts in all the drawings.

My invention consists in the application of movable or adjustable lips to gauging and sharpening swages, by which a peculiar shape and form is given to the point or cutting-edge of the saw-tooth, viz, broadest or longest at its under edge, sharp, and full-cornered.

To enable others skilled in the art to make and use my invention, I will proceed to describe the same with reference to the drawings, in which I have represented, in its general form, a gauging and sharpening swage heretofore patented to me, but would state that this swage is only shown for convenience of illustration, as the adjustable lips may be used with other swages, whether they have a movable pin, with a part of the die formed in it, or whether the die be formed in the body of the swage, or whether the swage be in one, two, or more pieces, and held together by any of the common and well-known devices.

A represents the stock or body of the swage, and B the pin, as heretofore described and used by me, and C the slot for receiving the saw, or allowing the gauge to come up to the point of the tooth that it is to operate upon. *a b* represent two shaping-lips, which are secured to the swage by a set-screw, *c*, passing through a slot, *d*, in the overlapping flanges *e e* of said lips, which holds them, when properly adjusted, firmly to the gauge or stock A. The lower ends of these lips are so formed that they will give to the point of the tooth, as shown at *f* in figs. 3 and 4, a straight edge, longest and broadest on its under side, calling that the under side which first strikes and cuts the timber sawed by it. The result of teeth thus shaped and sharpened is, that there is no appreciable tendency of the saw to cut out of a perfectly true line, and the corners of the teeth being so sharp and prominent, remove the wood without any apparent friction or scraping at those points. A tooth gauged and sharpened, as herein shown and described, would not admit of the swage or die formed in it being drawn off past said prominent and overhanging corners of it, but it can be moved off by a motion at right angles to the rest or slot, in which the back of the tooth rests, the lips being bevelled off slightly at the points *i i*, so as to admit of this under-bevelling of the corners. The adjustment of the lips admits of operating upon saw-teeth different sizes or thicknesses of saw-plates.

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

In combination with the stock or swage-head, the adjustable or movable lips, for giving to the tooth of a saw the shape or form herein shown and represented.

J. E. EMERSON.

Witnesses:

A. B. STOUGHTON,  
EDM. F. BROWN.