

(No Model.)

A. DE LASKI.

SUPPLEMENTAL JAW ATTACHMENT FOR HAND SCREWS.

No. 306,592.

Patented Oct. 14, 1884.

Fig. 1.

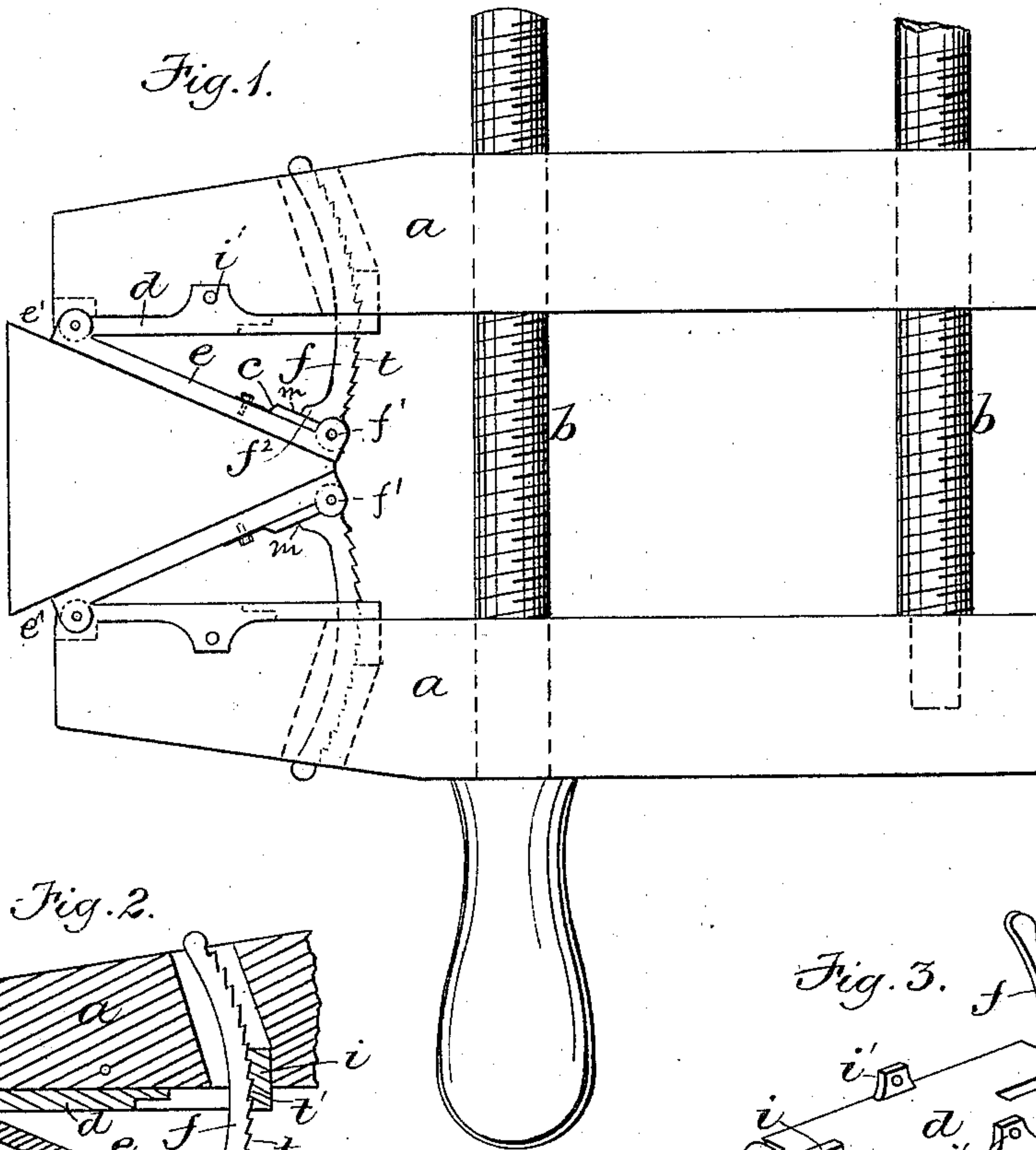


Fig. 2.

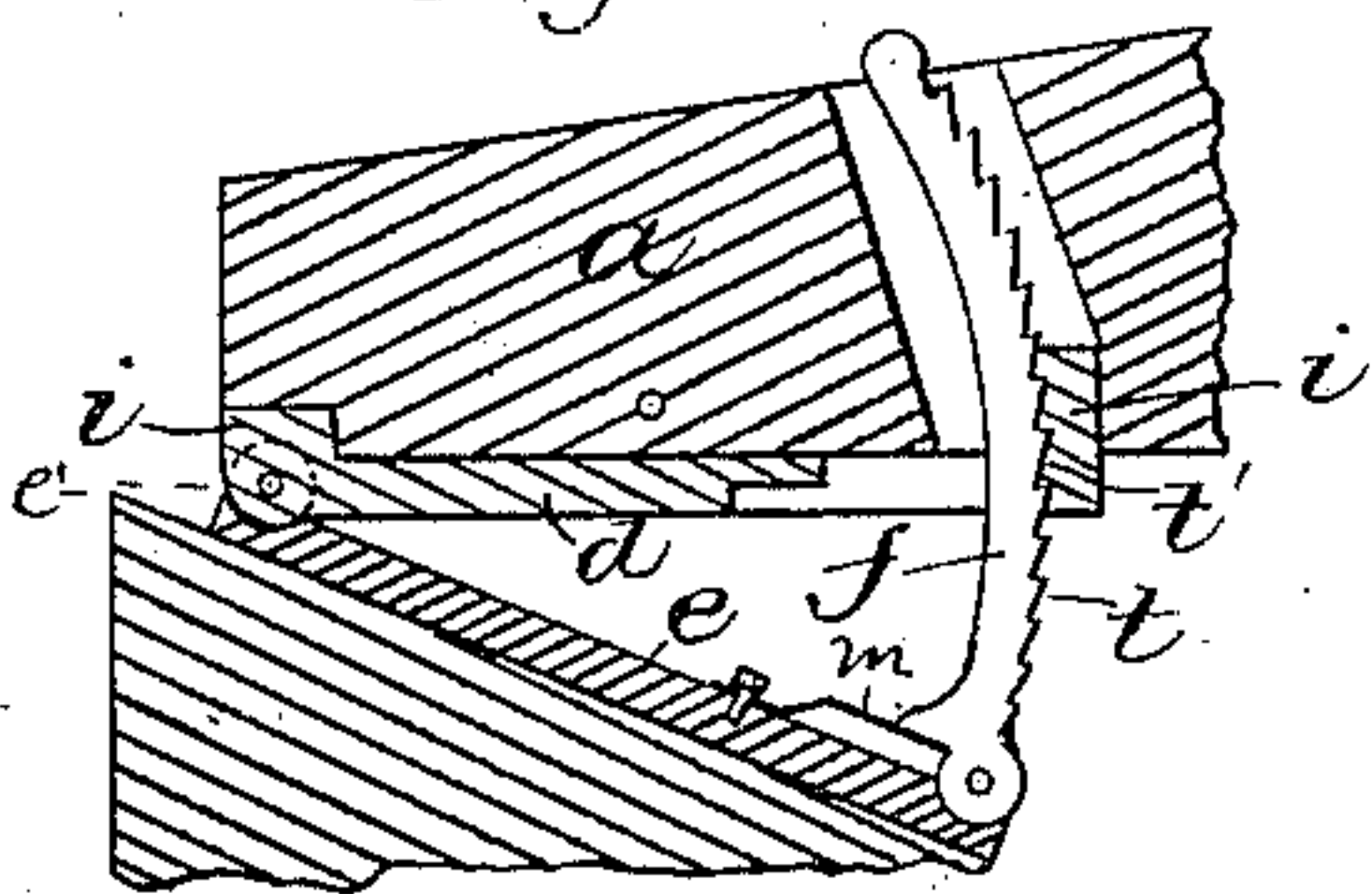


Fig. 3.

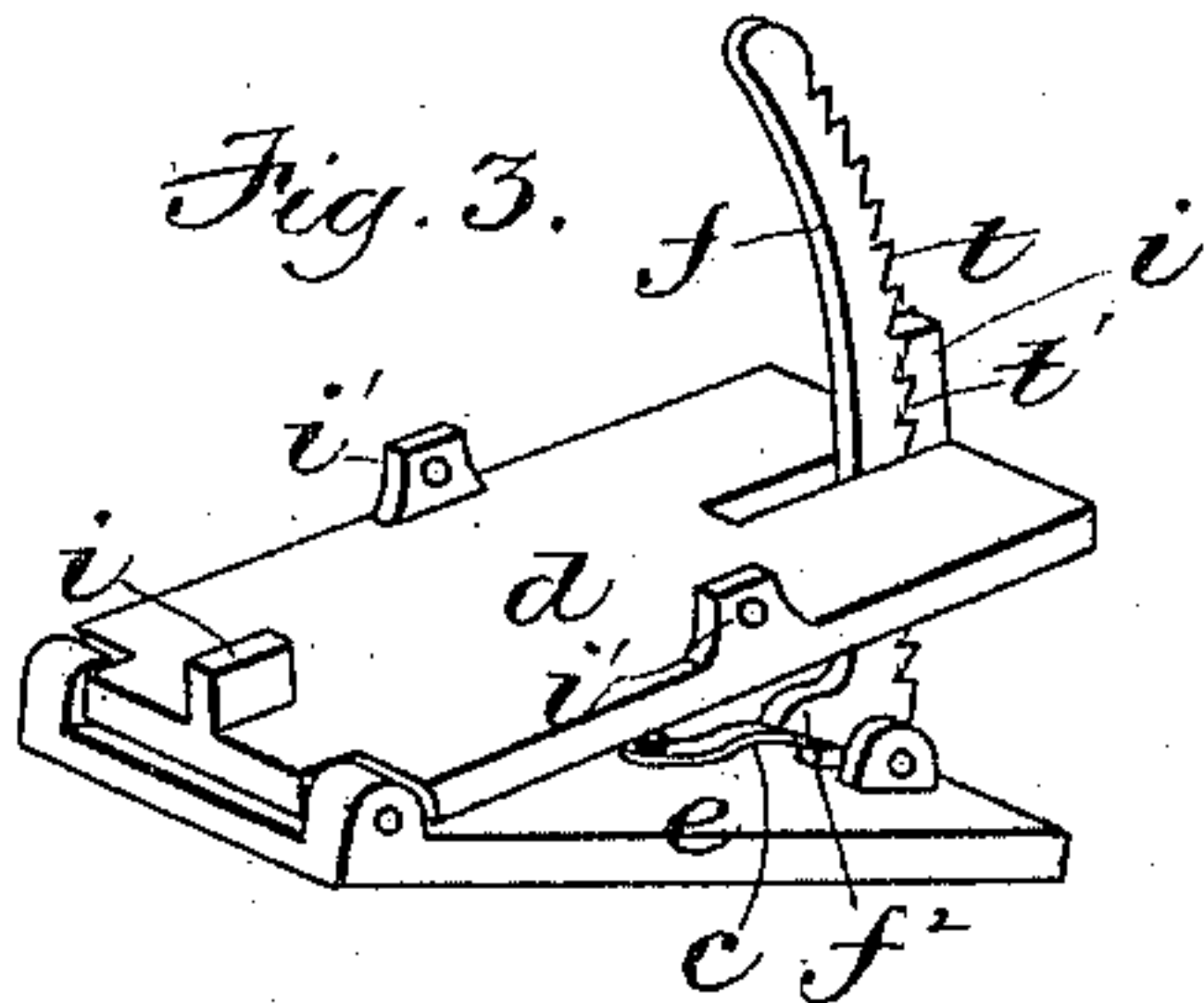


Fig. 7.

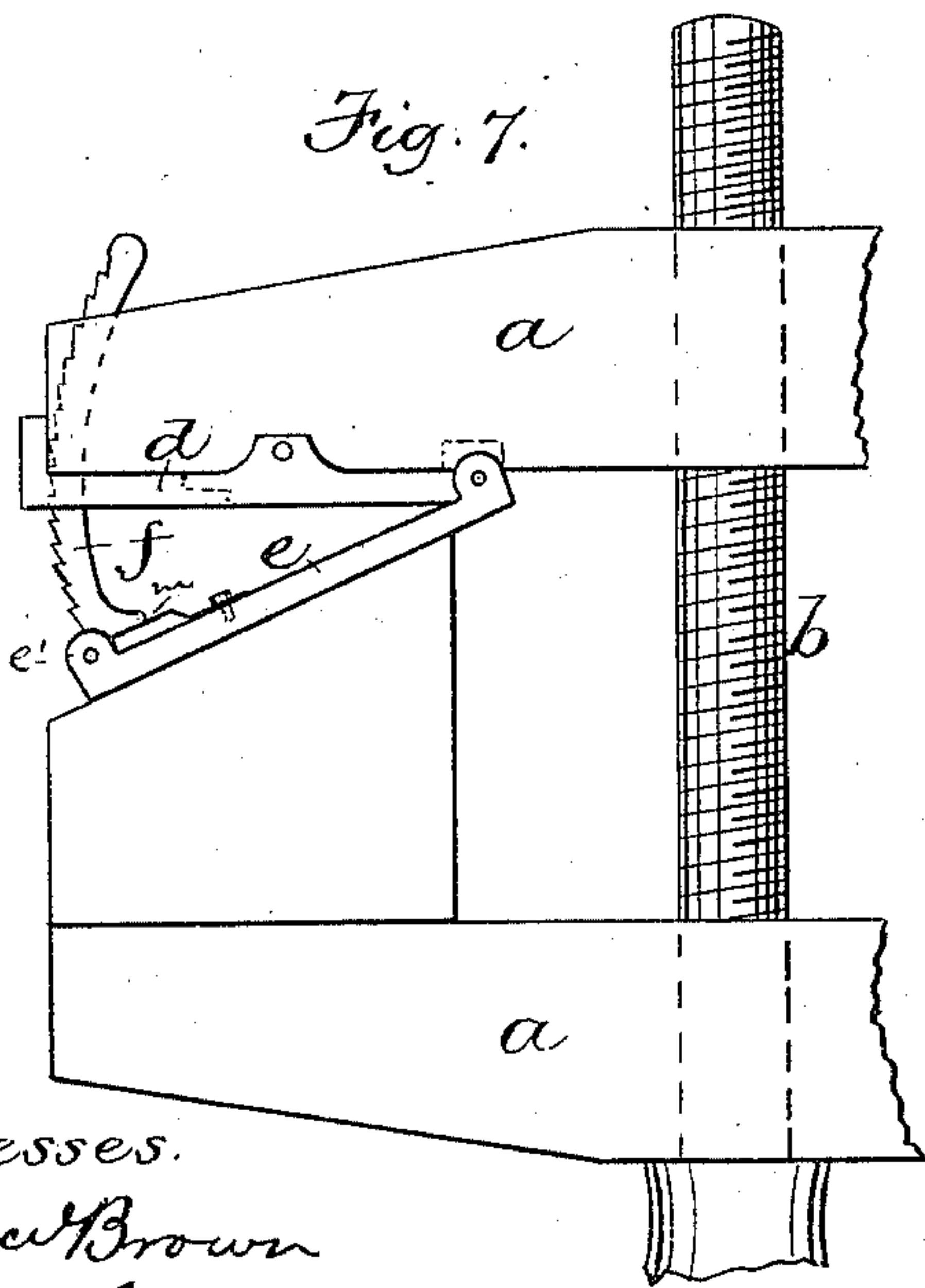


Fig. 4.

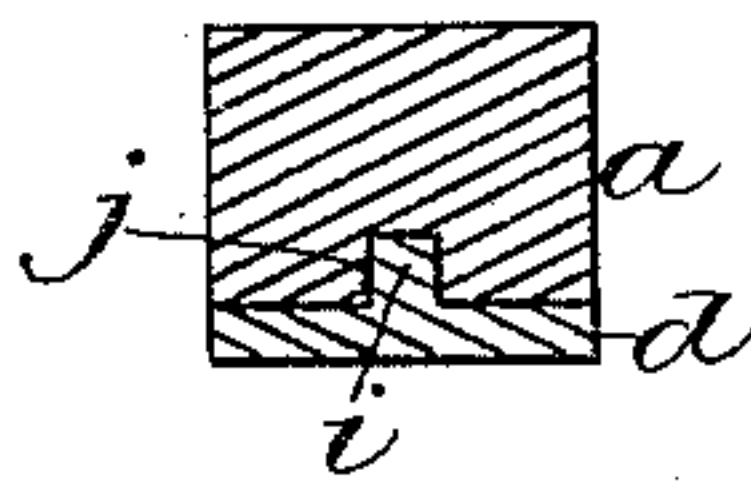


Fig. 5.

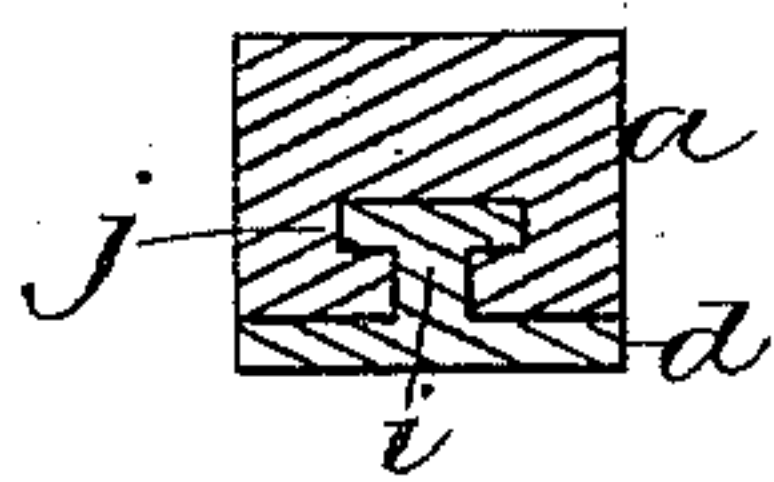
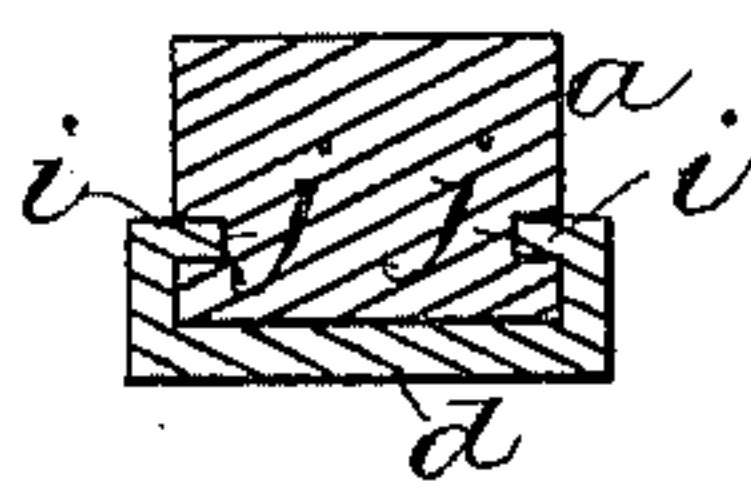


Fig. 6.



Witnesses.

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UNITED STATES PATENT OFFICE.

ALBERT DE LASKI, OF LYNN, MASSACHUSETTS.

SUPPLEMENTAL JAW ATTACHMENT FOR HAND-SCREWS.

SPECIFICATION forming part of Letters Patent No. 306,592, dated October 14, 1884.

Application filed February 15, 1884. (No model.)

To all whom it may concern:

Be it known that I, ALBERT DE LASKI, of Lynn, in the county of Essex and State of Massachusetts, have invented certain Improvements in Supplemental Jaw Attachments for Hand-Screws, &c., of which the following is a specification.

This invention has for its object to provide a supplemental jaw attachment for hand-screws, vises, and equivalent clamping devices, whereby objects of various forms may be securely held.

The invention consists in the provision of a pivoted jaw or jaws adapted to be adjusted to any desired angle with relation to the main jaw or jaws, and means, as hereinafter described and claimed, for supporting said pivoted jaw or jaws in any position to which they may be adjusted, so that said pivoted jaws will be practically rigid when in use.

The invention also consists in the provision of a plate or holder, to which the supplemental jaw is pivoted, said plate being adapted to be detachably connected to one of the main jaws by the connections hereinafter described and claimed.

The invention also consists in certain details of construction, all of which I will now proceed to describe and claim.

Of the accompanying drawings, forming a part of this specification, Figure 1 represents a side elevation of a hand screw or clamp provided with my improvements. Fig. 2 represents a longitudinal section of the same. Fig. 3 represents a perspective view of the attachment. Figs. 4, 5, and 6 represent sectional views of one of the main jaws. Fig. 7 represents a modification.

The same letters of reference indicate the same parts in all the figures.

In the drawings, *a a* represent the jaws of a hand-screw of the ordinary general construction, and *b b* represent the screws which connect said jaws in the usual manner.

In carrying out my invention I provide plates or holders *d d*, adapted to be detachably secured to the jaws *a a* in any suitable manner, preferably by means of lugs *i i*, formed on the back of each plate, and grooves *j*, formed in the main jaws *a* to receive said lugs. Said lugs and grooves may be T-shaped in cross-section, as shown in Fig. 5, or laterally ar-

ranged, as shown in Fig. 6, so that the engagement of the lugs with the grooves will retain the plate *d* in contact with the jaw *a*. When the lugs and grooves are not adapted by their form to prevent the plate from being laterally separated from the jaw, the plate may have lugs *i' i'* at its edges adapted to bear against the sides of the jaw *a*, said lugs *i'* being screwed to the jaw. In either case the plate *d* is adapted to be readily applied to and removed from the jaw *a*, so that the latter can be used without the attachment, if preferred.

e e represent the supplemental jaws, which are pivoted at *e' e'* to the plates *d d*, and are adapted to be inclined at any desired angles with relation to said plates.

f f represent segmental arms or braces, which are pivoted at *f' f'* to the supplemental jaws, and project through slots in the plates *d d* and jaws *a a*. Said arms or braces are provided with ratchet-teeth *t* on their convex sides. Said teeth are caused by springs *m* on the back sides of the supplemental jaws to press the toothed sides of the arms or braces *f* against corresponding teeth, *t'*, formed at the ends of the slots in the plates *d*, through which the arms or braces pass, said springs *m* bearing against offsets *f''*, formed on the arms *f*. The teeth *t* are formed to slip on the teeth *t'* when the arms or braces *f* are being drawn outwardly to increase the angle of the supplemental jaws with relation to the fixed jaws; but when inward pressure is exerted on the supplemental jaws the teeth *t* and *t'* become engaged and resist such pressure. It will be seen, therefore, that either of the supplemental jaws can be readily adjusted to any desired angle with the main jaw, to which it is applied, and is positively held against inward pressure by its brace *f* at any angle to which it may be adjusted. The hand-screw can therefore be adapted to hold triangular, wedge-shaped, or other objects having opposite sides which are not parallel.

It is obvious that only one of the jaws *a* may be provided with this attachment, as shown in Fig. 7.

The brace or arm *f* may be pivoted either to the inner or to the outer end of the supplemental jaw.

If preferred, the plate or holder *d* may be reversible, so that it may be applied to the

jaw *a* with the brace *f* either at its inner or its outer end.

This improvement is applicable to vises and other clamping-tools as well as to hand-screws.

5 The supplemental jaws may be faced with rubber or other yielding material to prevent injury to polished surfaces of articles held thereby.

I claim—

10 1. An attachment for a jaw of a hand-screw or equivalent clamping device, said attachment consisting of a plate or holder adapted to be detachably secured to said jaw, a supplemental jaw pivoted to said plate or holder,
15 and a toothed adjustable brace pivoted to the supplemental jaw and adapted to engage by its teeth with a detent and hold the supplemental jaw at any desired angle with relation to the plate or holder, as set forth.

20 2. The improved clamping-jaw attachment consisting of the plate or holder *d*, adapted to be secured to a clamping-jaw, *a*, the supplemental

jaw *e*, pivoted at one end to said plate, the notched brace *f*, pivoted to the supplemental jaw and provided with a spring, whereby its 25 toothed face is pressed against a tooth or shoulder on the plate *d*, as set forth.

3. The combination, with the main jaw having a longitudinal groove or slot, of the plate or supplemental jaw-holder, adapted to 30 enter said groove, and provided on its back with a lug or lugs, *i*, adapted to enter said groove, and at its edges with lugs *i' i'*, adapted to bear against the sides of the main jaw, as set forth. 35

In testimony whereof I have signed my name to this specification, in the presence of two subscribing witnesses, this 13th day of February, 1884.

ALBERT DE LASKI.

Witnesses:

C. F. BROWN,
A. L. WHITE.