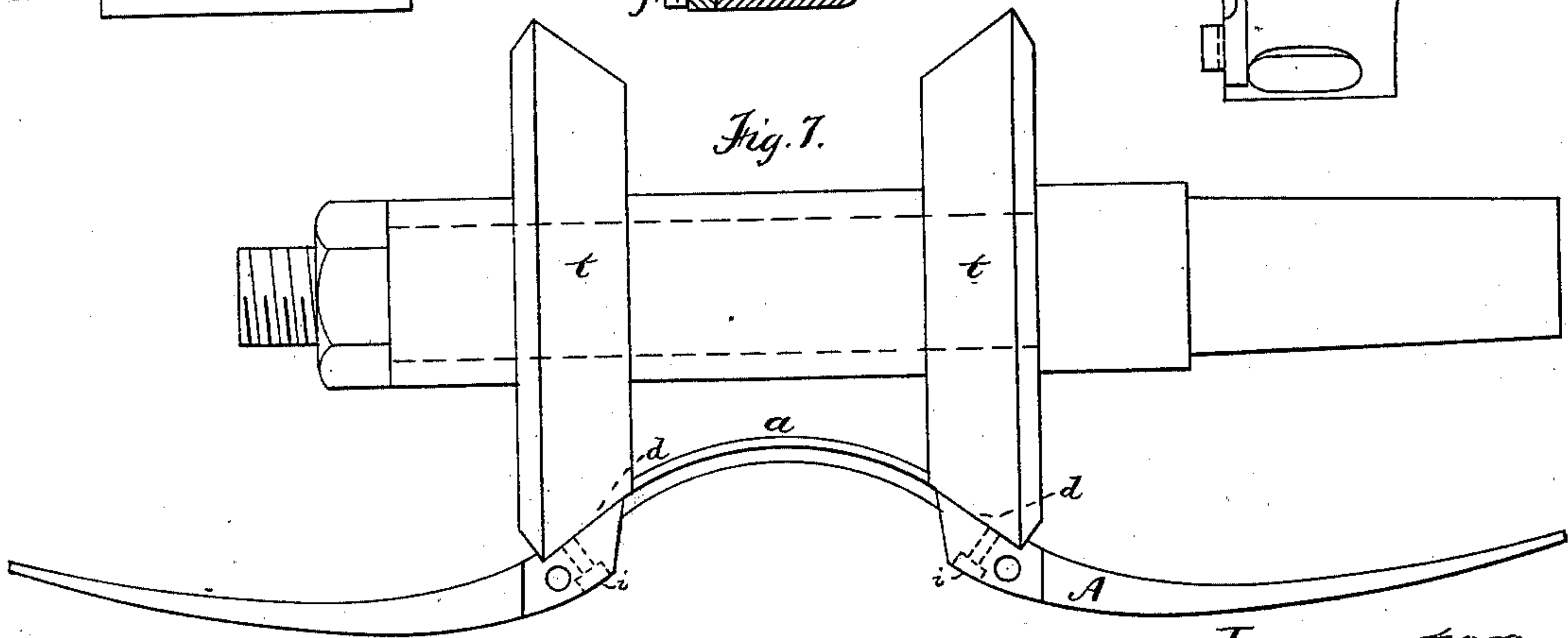
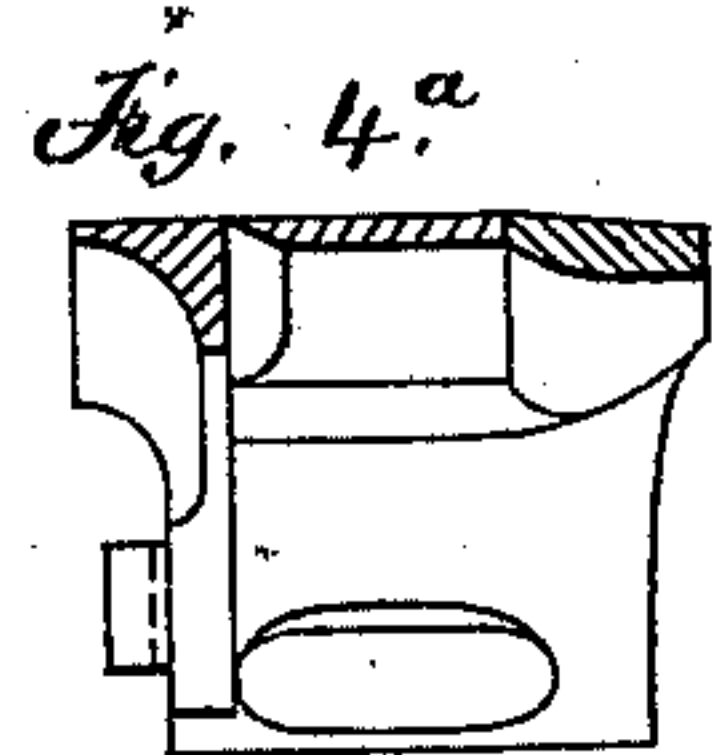
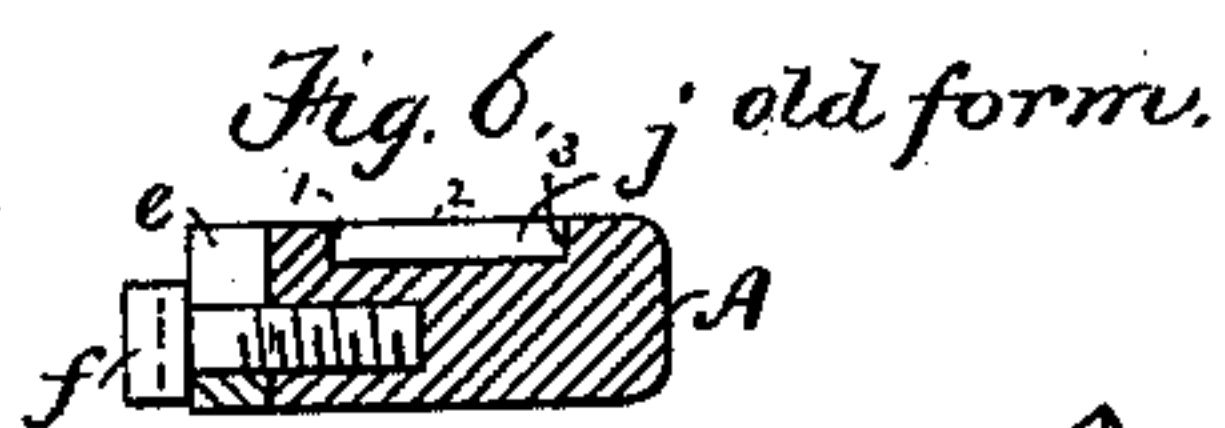
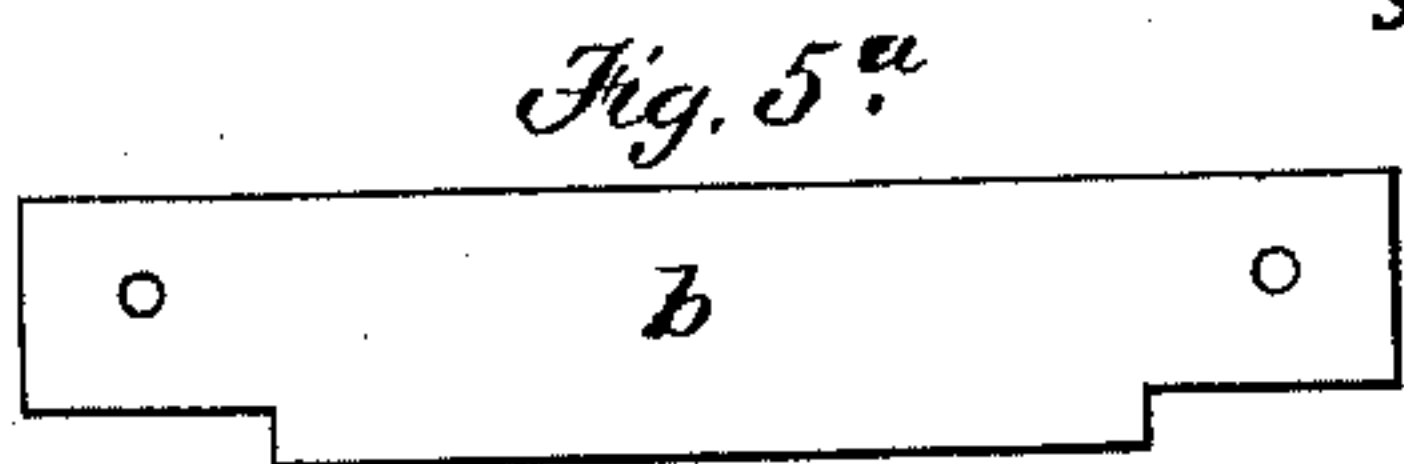
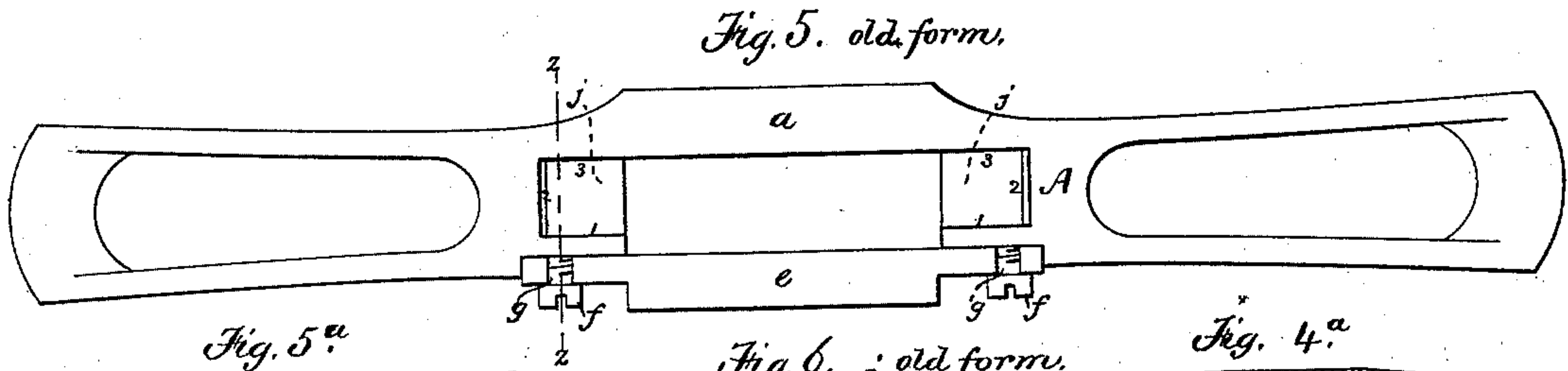
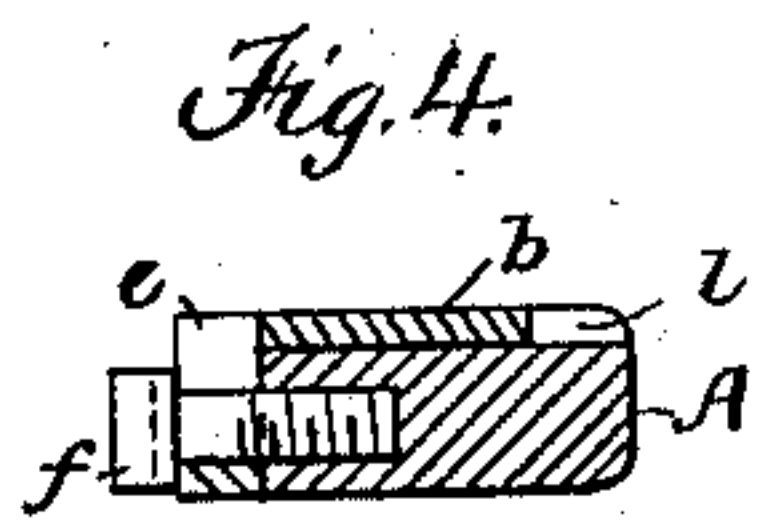
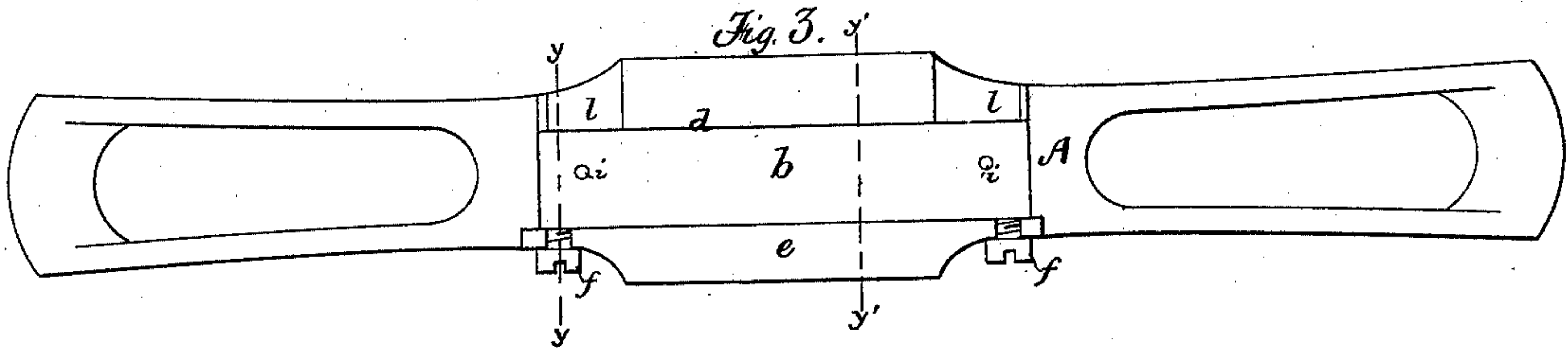
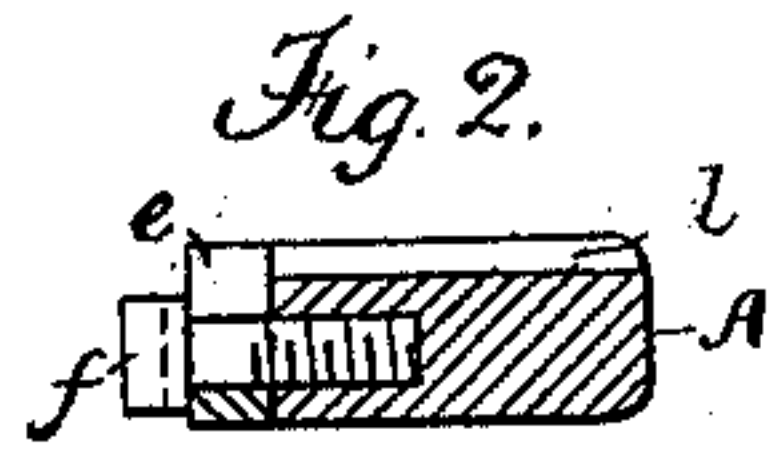
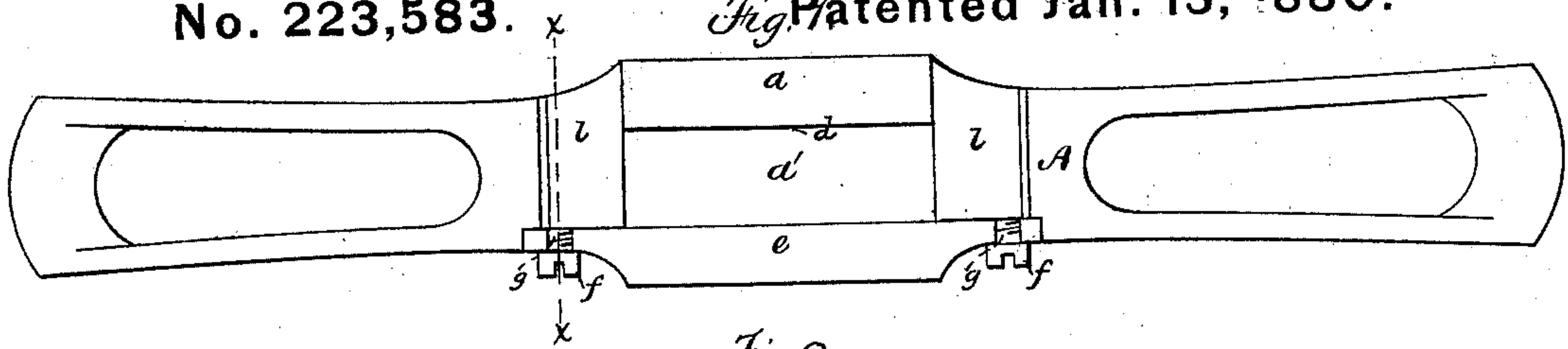


O. E. DUNHAM.
Heel-Shaver.

No. 223,583.

Patented Jan. 13, 1880.



Witnesses.

Alex. L. Hayes
Geo. W. Pierce.

Inventor,
O. E. Dunham
by Wright & Brown
Attorneys.

UNITED STATES PATENT OFFICE.

OSCAR E. DUNHAM, OF BROCKTON, MASSACHUSETTS.

HEEL-SHAVE.

SPECIFICATION forming part of Letters Patent No. 223,583, dated January 13, 1880.

Application filed November 20, 1879.

To all whom it may concern :

Be it known that I, OSCAR E. DUNHAM, of Brockton, in the State of Massachusetts, have invented certain Improvements in Heel-Shaves, of which the following is a specification.

This invention relates to the shoemaker's tool known as a "heel-shave."

Heel-shaves have heretofore been made of an apertured stock having, in some instances, transverse recesses to receive a rectangular blade, and provided with an adjustable guard, the tool operating like a plane to smooth the concave edge of a boot or shoe heel.

Heretofore, in many forms of heel-shaves, the construction of the stock and knife have been such that a new blade could be fitted to an old stock only by a skilled workman, so that when a blade became broken or worn out the stock has generally been discarded, because a new shave could be procured for less than the cost of fitting a new blade into the old stock.

My invention has for its object to improve the construction of the stock and blade in such manner as to enable the blade to be easily attached to the stock without the employment of skilled labor.

To this end my invention consists in the improvements which I will now proceed to describe and claim.

Of the accompanying drawings, forming a part of this specification, Figure 1 represents a front view of a heel-shave stock constructed in accordance with my invention, the blade being removed. Fig. 2 represents a section on line *x x*, Fig. 1. Fig. 3 represents a front view of the completed tool. Fig. 4 represents a section on line *y y*, Fig. 3. Fig. 4^a represents a section on line *y' y'*, Fig. 3. Fig. 5 represents a front view of a heel-shave of ordinary construction with the blade removed. Fig. 5^a represents the old form of blade. Fig. 6 represents a section on line *z z*, Fig. 5, the Figs. 5, 5^a, and 6 illustrating a form of heel-shave which it is specially the object of this invention to improve. Fig. 7 represents an edge view of the stock, showing the method of forming seats or bearings for the ends of the blade.

Similar letters of reference indicate like parts in all the figures.

In the drawings, A represents the stock of a heel-shave of the ordinary general form, the same having a concave face, *a*, which is cut away to form an aperture, *a'*, which is covered by the blade *b*.

At one side of the aperture *a'* is a shoulder, *d*, which forms a bearing for the back of the blade, and the other side of said aperture is formed by the guard *e*, which is a curved plate attached by set-screws *f f* to the edge of the stock, and rendered adjustable laterally by slots *g g*, through which said screws pass.

The adjustable guard and the general form of the stock constitute no part of my invention.

The blade *b* is curved like the face of the stock, and is of sufficient length to cover the aperture *a'*, the back of the blade resting against the shoulder *d*, and its ends projecting beyond the ends of the aperture and resting upon seats formed in the face of the stock and secured to the stock by screws *i i*.

Heretofore, in that form of heel-shave upon which this invention is an improvement the seats for the ends of the blade have been recessed sockets *j j*, formed in the face of the stock, each socket opening into the aperture *a'* and being bounded by the three sides or shoulders 1 2 3, the shoulders 1 being interposed between the sockets *j j* and the edge of the stock on which the guard *e* rests, as shown in Figs. 5 and 6.

The stock is cast with its sockets *j j*, and the form of said sockets is such that it is impossible to economically dress their bearing-surfaces with a milling or other tool to form true bearings for the ends of the blade. Hence the sockets have to be left in the rough condition in which they are cast, and the blade has had to be made of such thickness that when it is placed on the stock its outer surface will project sufficiently to bear reduction by grinding until it conforms with sufficient exactness to the curvature of the guard *e*, it being obviously important that the cutting-edge of the knife have the same curvature as the guard. The sockets *j j* being narrower than the width of the blade, the latter has to be especially formed at its ends to fit said sockets, as shown in Fig. 5^a.

It will be seen, therefore, that not only is special care required in the construction of the blade to fit to the stock, but after the blade is

attached to the stock more or less grinding of the outer surface of the blade is required before the tool is perfected.

In carrying out my invention, I dispense with the sockets *j j* in the stock, and provide the stock with flat surfaces *l l*, which extend from the edge of the stock against which the guard *e* rests across the face of the stock, or to a point which is farther from the edge against which the guard *e* rests than the width of the blade *b*. Said surfaces are of uniform depth, and are preferably formed by removing portions of the face of the stock by milling-tools *t t*, as shown in Fig. 7, the stock being placed in a suitable milling-machine, which forms both surfaces simultaneously, and gives each the same depth as the other.

This construction of the stock enables me to employ a blade of uniform width and thickness, as no reduction of the width of the blade at the ends is required to adapt it to the surfaces *l l*, and no superfluous thickness of the blade is required to enable its outer surface to be ground off, the surfaces *l l* being tried and properly prepared by the milling-machine.

The blade *b* which I employ is formed by sharpening one edge of a rectangular blank of sheet-steel, preferably of the thickness known as "No. 13 American standard wire gage." Said blank is of uniform width, and is bent by suitable dies into the proper curvature, and is drilled to form the screw-holes by a special machine, which insures the proper position of the holes in every blade to enable said holes

to register with the screw-holes of the stock when the blade is in its proper position therein. This method of forming the blades enables them to be made very economically and rapidly, and secures interchangeability of blades, so that when a blade is broken or worn out a new blade can be applied by any person of ordinary intelligence.

When the blade is in place the guard *e* bears against the edge of the blade, near the opposite ends thereof, and as said guard is adjustable, it follows that an excess in the width of the blade which would cause it to project slightly beyond the edge of the stock on which the guard rests would not be a disadvantage, but on the other hand, would enable said guard to be pressed by its screws firmly against the edge of the blade near the ends of the latter, and assist in holding the blade.

I claim—

The improved heel-shave described, consisting of a stock, *A*, having a shoulder, *d*, and flat transverse recesses *l*, to receive the blade, in combination with a rectangular blade, *b*, its fastenings *i*, and a guard, *e*, substantially as specified.

In testimony whereof I have signed my name to this specification in the presence of two subscribing witnesses.

OSCAR E. DUNHAM.

Witnesses:

CHARLES EATON,
ETHAN ALLEN.