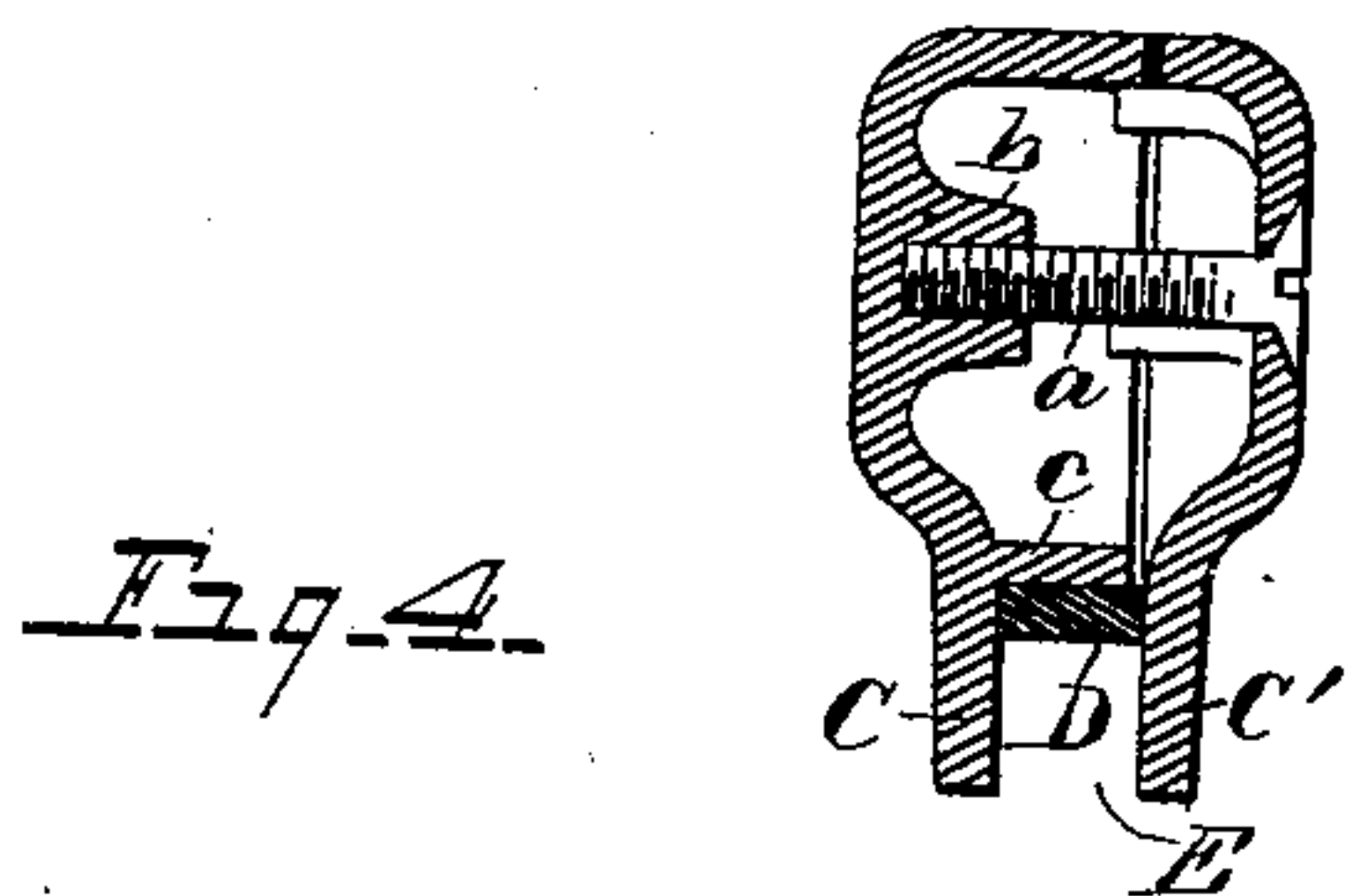
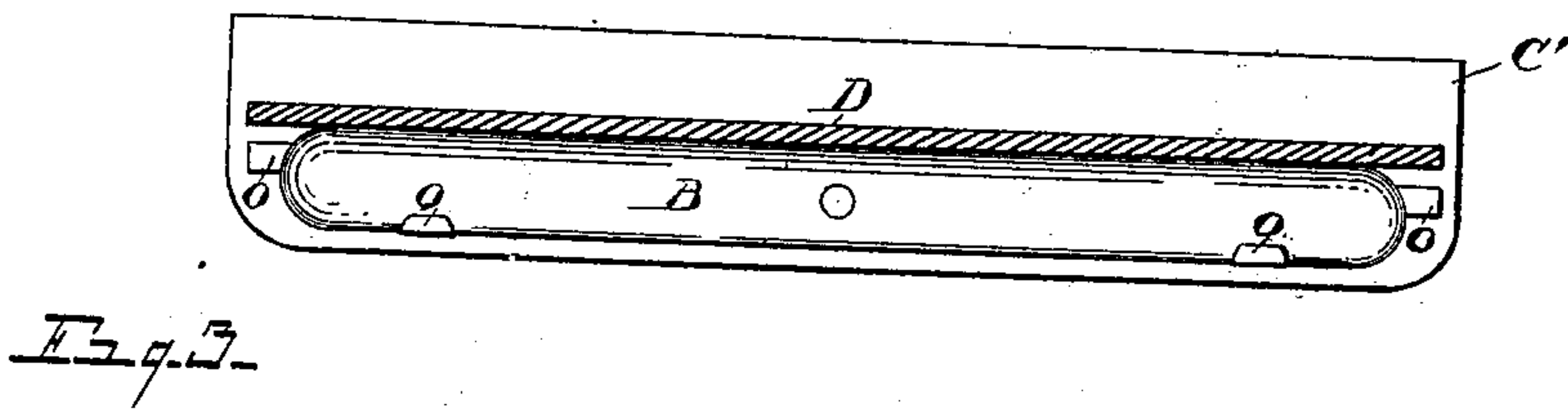
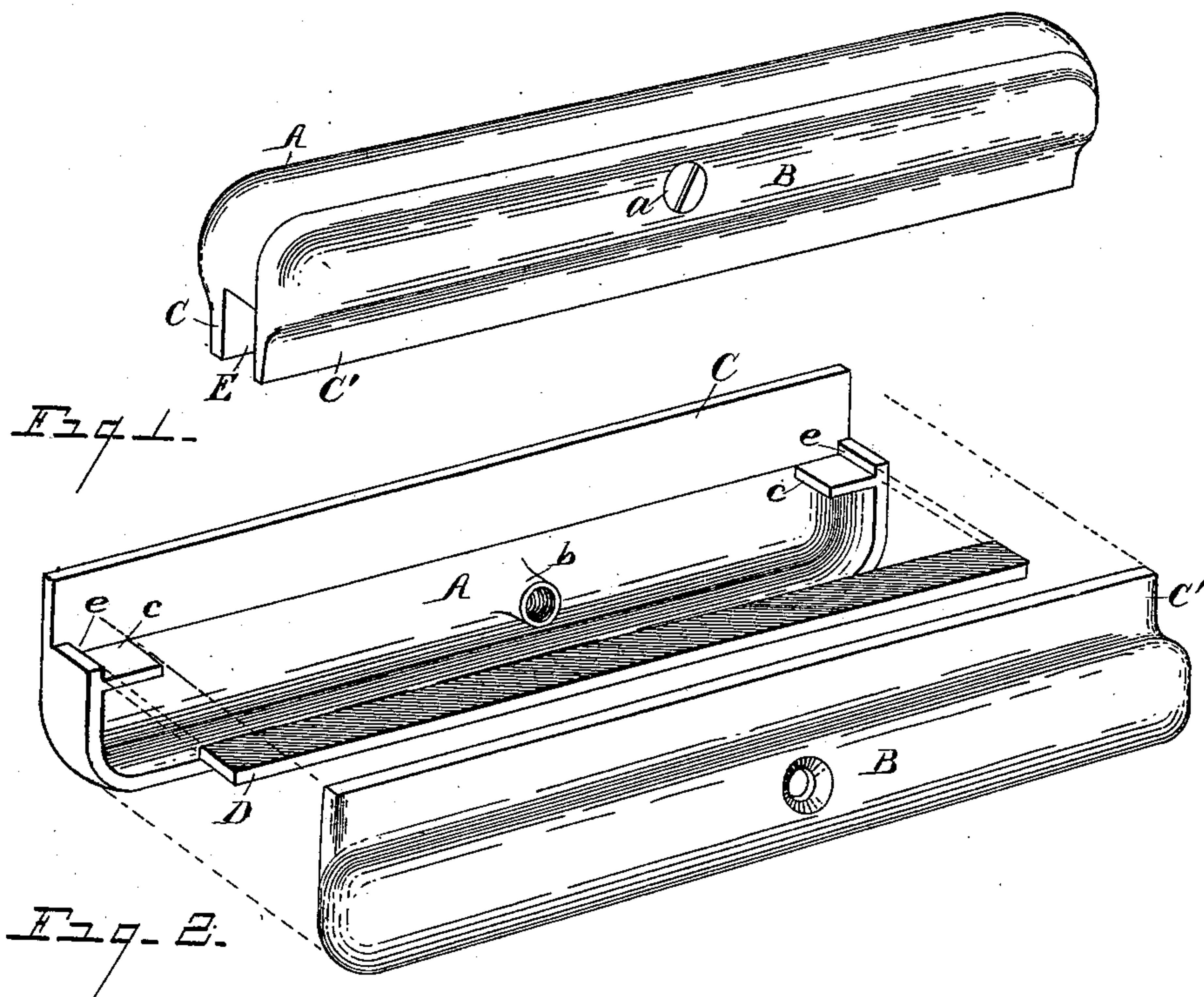


(No Model.)

O. F. KNOWLES & H. H. MILLER.
DEVICE FOR SHARPENING SKATES.

No. 512,382.

Patented Jan. 9, 1894.



WITNESSES
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UNITED STATES PATENT OFFICE.

OTIS F. KNOWLES AND HENRY H. MILLER, OF OXFORD, MICHIGAN.

DEVICE FOR SHARPENING SKATES.

SPECIFICATION forming part of Letters Patent No. 512,382, dated January 9, 1894.

Application filed October 5, 1892. Serial No. 447,970. (No model.)

To all whom it may concern:

Be it known that we, OTIS F. KNOWLES and HENRY H. MILLER, citizens of the United States, residing at Oxford, in the county of Oakland, State of Michigan, have invented certain new and useful Improvements in Skate-Sharpening Devices; and we do declare the following to be a full, clear, and exact description of the invention, such as will enable others skilled in the art to which it appertains to make and use the same, reference being had to the accompanying drawings, and to the letters of reference marked thereon, which form a part of this specification.

This invention relates to new and useful improvements in skate-sharpening devices, and consists in the construction and arrangement of parts as hereinafter fully set forth, the essential features being pointed out particularly in the claim.

The object of the invention is to produce an instrument for sharpening skates, that shall be simple, cheap and convenient to carry, and in which the arrangement is such that in the operation of sharpening, the cutting file is held perfectly flat upon the blade of the skate, thereby obviating the beveling or rounding of the edges of said blade. This object is attained by the device illustrated in the accompanying drawings, in which—

Figure 1 is a perspective view of the complete device. Fig. 2 is an enlarged perspective view showing the parts separated. Fig. 3 is a view in elevation showing one of the sides removed. Fig. 4 is a central transverse section through the device.

Referring to the letters of reference, A designates one of the side plates of the file-containing case, and which forms the body portion thereof.

B designates the other side plate forming the complementary portion of said case, and which is attached to plate A by means of a screw *a* passing through plate B and screwing into a boss *b* on the inner face of plate A, whereby said plates may be bound tightly together, to form the complete case, as shown in Figs. 1 and 4. The sides of the plates swell

outward and are rounding so as to afford a firm grasp in manipulating the device. The end portions of the plate A are provided with the inwardly extending ledges *c* that support the ends of the file-blade D which lies upon said ledges and abuts against the shoulders *e*. Extending from the edges of the side plates of the case are the flanges C and C' respectively. Said flanges stand approximately parallel when said plates are secured together, and form a way E between their adjacent faces, adapted to freely receive the blade of the skate. The flanges of said way, extending on each side of the skate-blade, guide the sharpener, so that the file D is always held square with the surface of said blade.

On referring to Fig. 4, it will be seen that the file D is slightly wider than the ledges *c* so that the plate B may be drawn tightly against it by means of the screw *a* to retain it securely in place. To more firmly secure the plates together, the plate B is provided on its inner edge with the extending lugs *o* that engage the inner edge of the plate A and more securely couple said plates.

In the application of this device, the skate may be held in the hand, and the sharpener applied to the blade thereof, in the manner of an ordinary file; the way in the sharpener that receives the blade of the skate, directs the file squarely thereto, and enables an unskilled person to properly and easily sharpen the skates; in fact, so perfect is the operation of this device, that the skates may be readily sharpened without removing them from the feet, if desired.

Having thus fully set forth our invention, what we claim as new, and desire to secure by Letters Patent, is—

In a skate-sharpener, the combination of the concavo-convex plates A, B, forming a closed oblong case, said plates having each an extended flange, so disposed as to stand approximately parallel forming a way between their adjacent faces, the plate A having at each end an integral ledge that extends laterally into said way, and with a shoulder at the outer extremity of said ledges rising above

the plain thereof, said plate also having the
tapped boss projecting from the inner face,
the thin file blade of greater width than said
ledges supported thereon in said way and
5 abutting against said shoulders, and the screw
passing through plate B and screwing into
the boss of plate A, to bind said plates together
and clamp said blade between their faces.

In testimony whereof we affix our signatures in the presence of two witnesses.

OTIS F. KNOWLES.
HENRY H. MILLER.

Witnesses:

JOHN G. SUTHERLAND,
L. C. BALDWIN.