

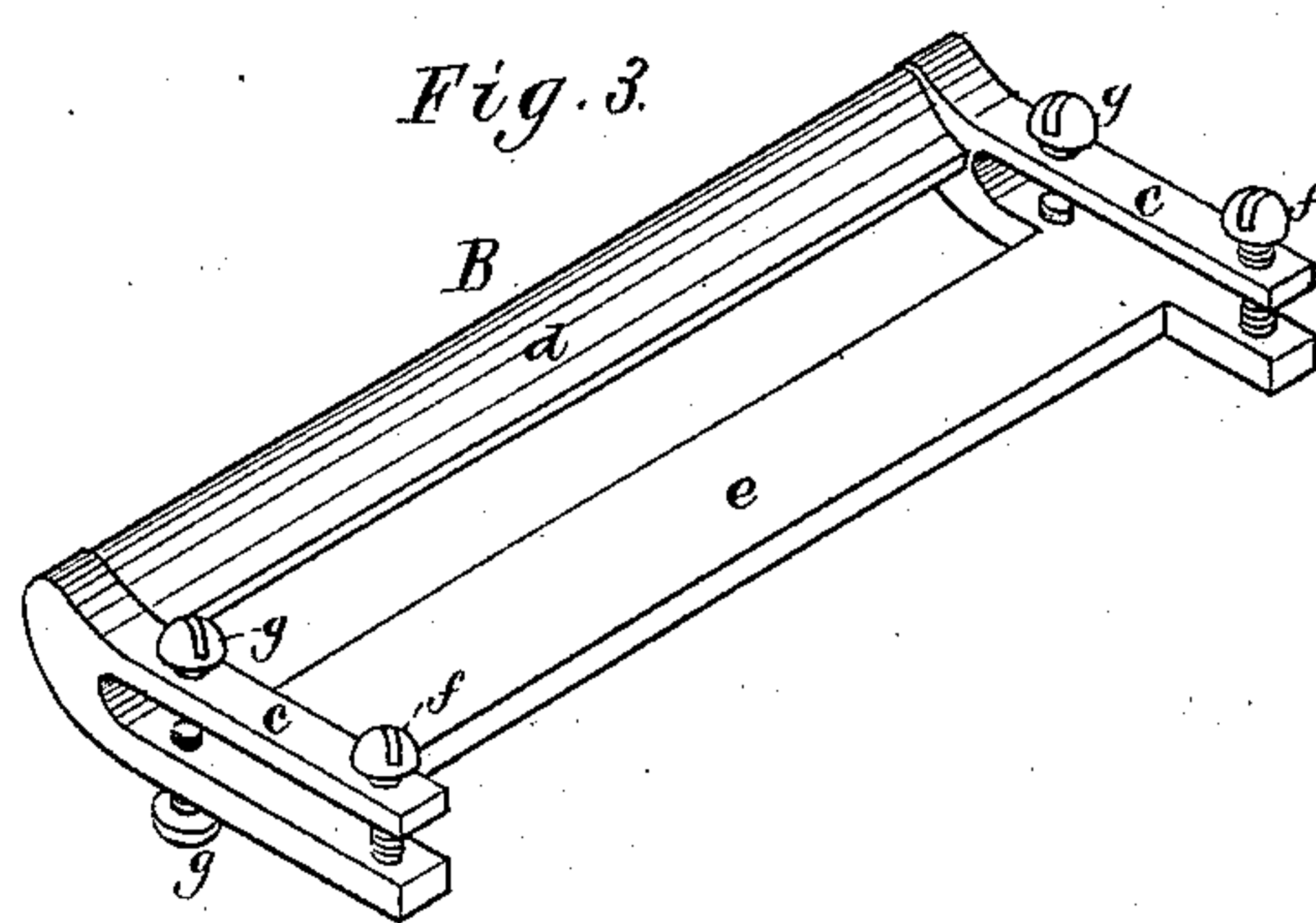
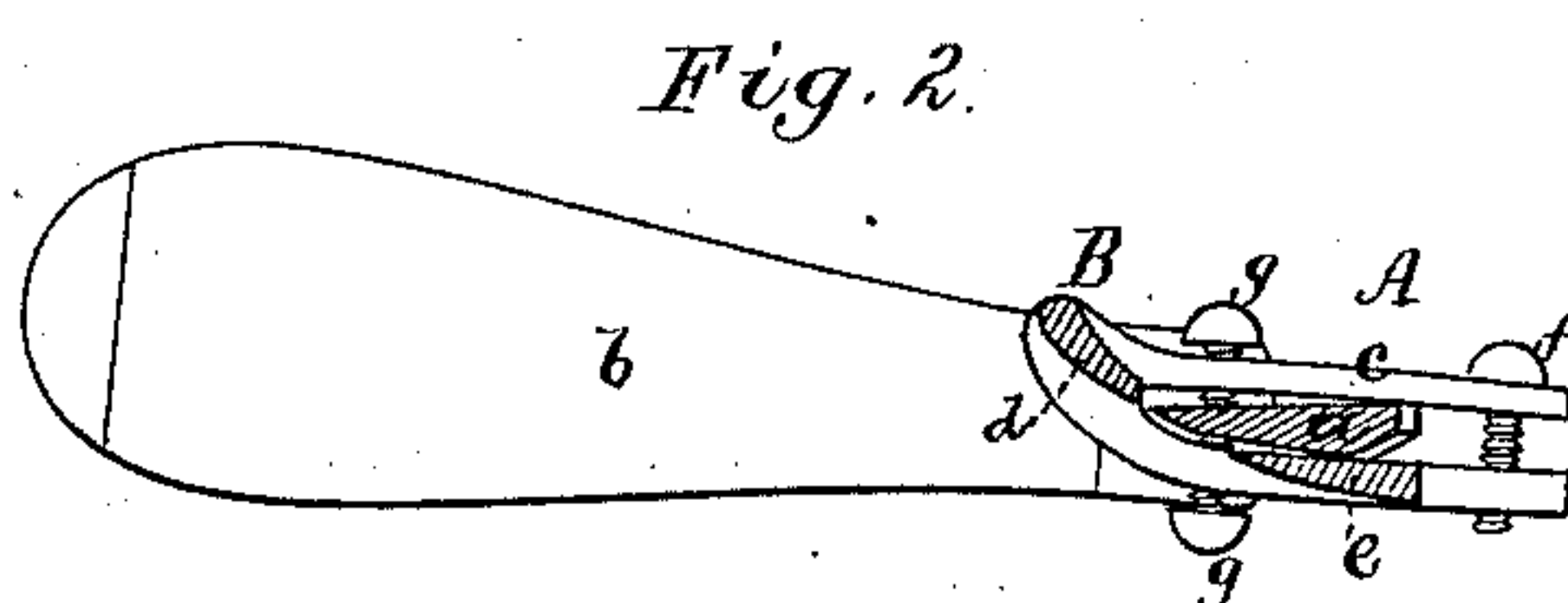
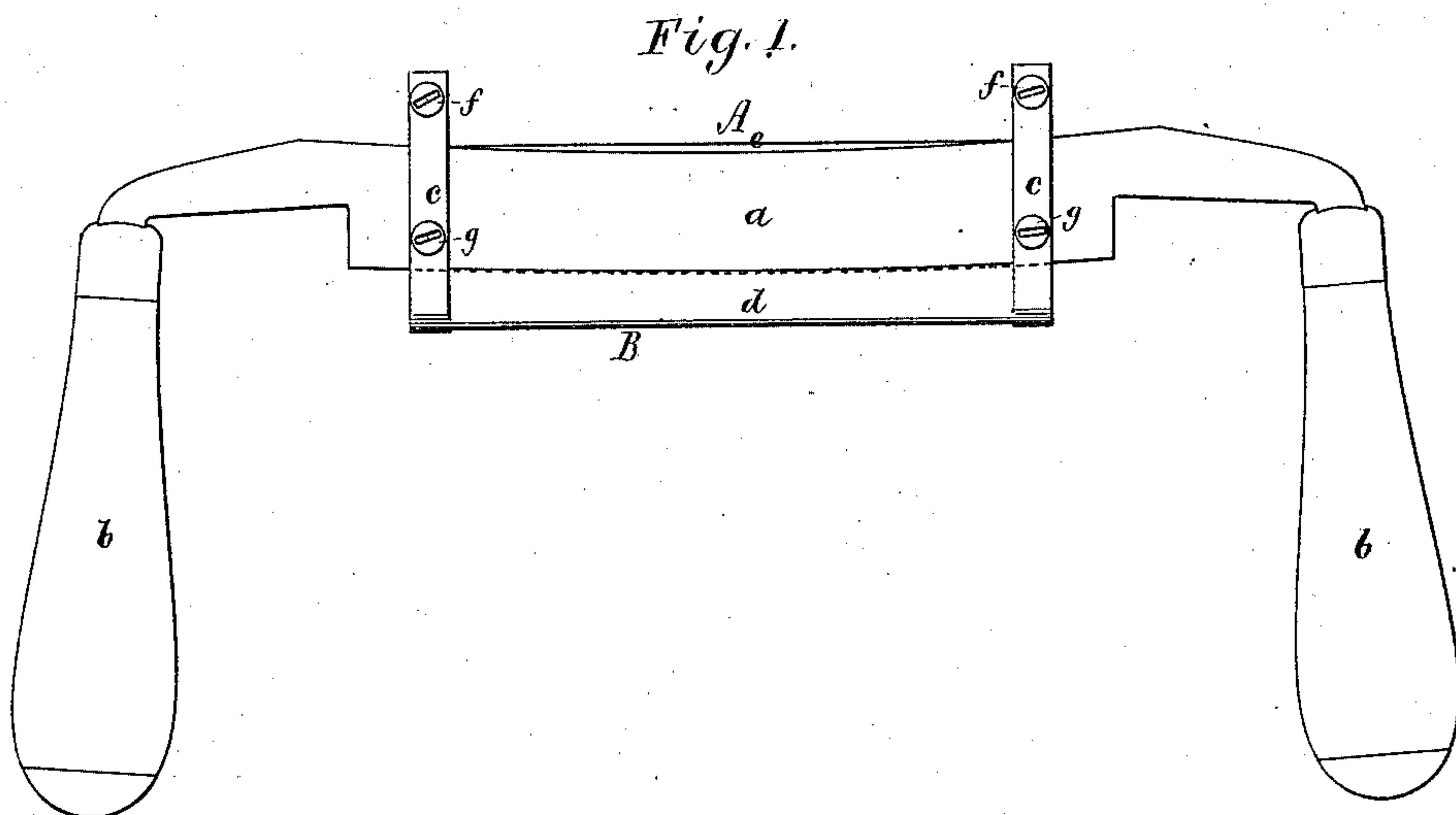
(No Model.)

A. W. CROSSMAN.

DRAWING KNIFE AND ATTACHMENT THEREFOR.

No. 286,787.

Patented Oct. 16, 1883.



Witnesses.

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AMORY W. CROSSMAN, OF WEST WARREN, MASSACHUSETTS.

DRAWING-KNIFE AND ATTACHMENT THEREFOR.

SPECIFICATION forming part of Letters Patent No. 286,787, dated October 16, 1883.

Application filed July 25, 1883. (No model.)

To all whom it may concern:

Be it known that I, AMORY WALKER CROSSMAN, of West Warren, in the county of Worcester, of the Commonwealth of Massachusetts, have invented a new and useful Improvement in Drawing-Knives and Attachments therefor; and I do hereby declare the same to be described in the following specification and represented in the accompanying drawings, of which—

Figure 1 is a front view, and Fig. 2 a transverse section, of a drawing-knife and its attachment embodying my invention, the nature of which is defined in the claims hereinafter presented. Fig. 3 is a perspective view of the attachment separate from the drawing-knife, the object of such attachment being to render the said implement capable of use as a "spoke-shave" when occasion may require such an employment of it.

In the drawings, A denotes a common drawing-knife, of which *a* is the blade, and *b b* the handles.

B is the attachment, which consists, mainly, of two clamps, *c c*, and a throat-piece, *d*, and a bearing-bar, *e*, such throat-piece and bearing-bar being arranged and formed as shown, and extended between and from one to the other of the clamps, and securely fastened to them. Each clamp is furcated, as shown, and embraces the blade, and is provided with a headed screw, *f*, which goes through one prong and screws into the other, in order to draw the prongs toward each other to clamp them to the blade, which extends between the throat-piece and bearing-bar in manner as represented. Furthermore, there is screwed through each prong a screw, *g*, to bear against the blade a short distance from its cutting-edge. The two screws *g g* of each clamp serve to adjust it to carry the throat-piece nearer to or farther from the cutting-edge of the blade, in order to increase or diminish the width of the shaving throat or passage between the blade and throat-piece. The outer curved surfaces of the bearing-bar and the throat-piece are disposed in or about in range with each other,

as shown in Fig. 2. The bearing-bar, during a backward stroke of the blade, rests on the material to be cut, and serves to keep the cutting-edge of the blade out of contact with the material during each back stroke. In the forward stroke of the knife the throat-piece bears on the material and gages the thickness of the shaving removed by the blade. On removal of the attachment from the drawing-knife the latter can be used as it is ordinarily employed. In some cases the attachment may be made without the bearing-bar, but composed simply of the throat-piece and the two clamps.

I do not claim a spokeshave in which the blade is separable from the stock and its handles, which is not the case with a drawing-knife whose blade is permanently attached to its handles arranged at right angles to it.

Having thus described my invention, what I claim is as follows:

1. The combination of a drawing-knife, A, having to its blade permanently attached handles *b*, as represented, with a throat-piece, *d*, separate from the said blade and arranged along the edge thereof, and provided with clamps or means of holding it in connection with the blade, all essentially as set forth.

2. The combination of a drawing-knife, A, having permanently-attached handles *b*, arranged with its blade *a*, as represented, with a throat-piece, *d*, and a bearing-bar, *e*, and their connecting-clamps *c c*, arranged as shown, and provided, as described, with clamping and adjusting screws for fixing them, as explained, to the blade.

3. The drawing-knife attachment B, substantially as described, consisting of the throat-piece *d*, its supporting furcated clamps *c*, and their connecting bearing-bar *e*, arranged and adapted and having the said clamps provided with screws *f* and *g*, substantially as represented.

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Witnesses:

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