

No. 773,628.

PATENTED NOV. 1, 1904.

H. F. CRAWFORD.
SHANK STIFFENER.

APPLICATION FILED MAR. 30, 1904.

NO MODEL.

Fig. 1.

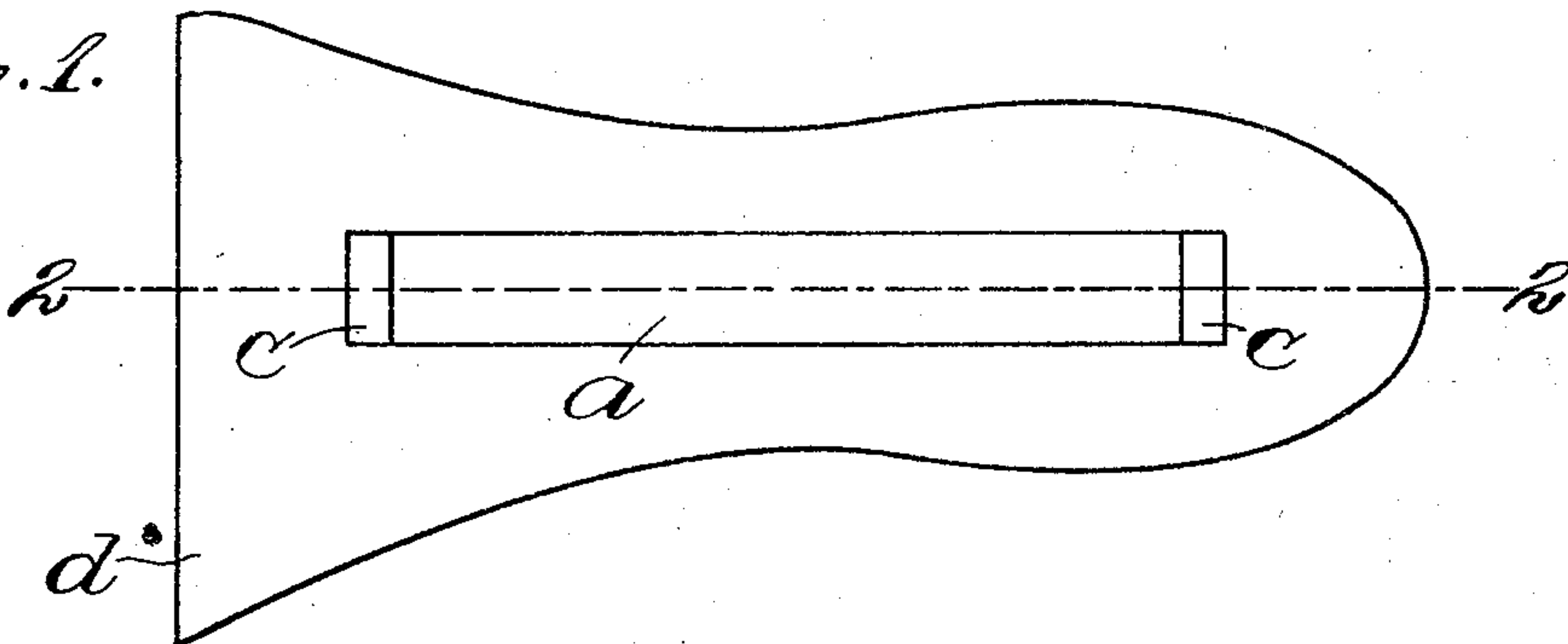


Fig. 2.

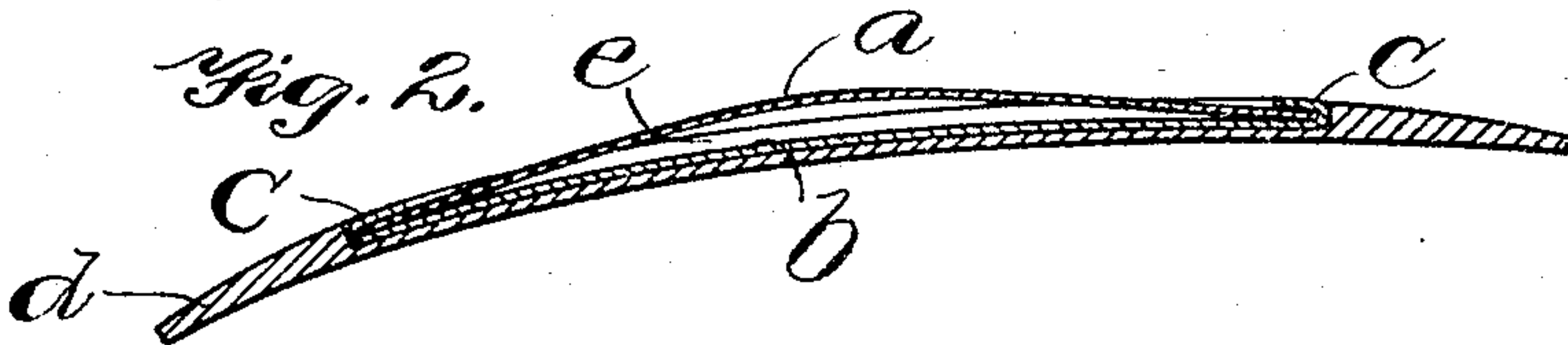


Fig. 3.

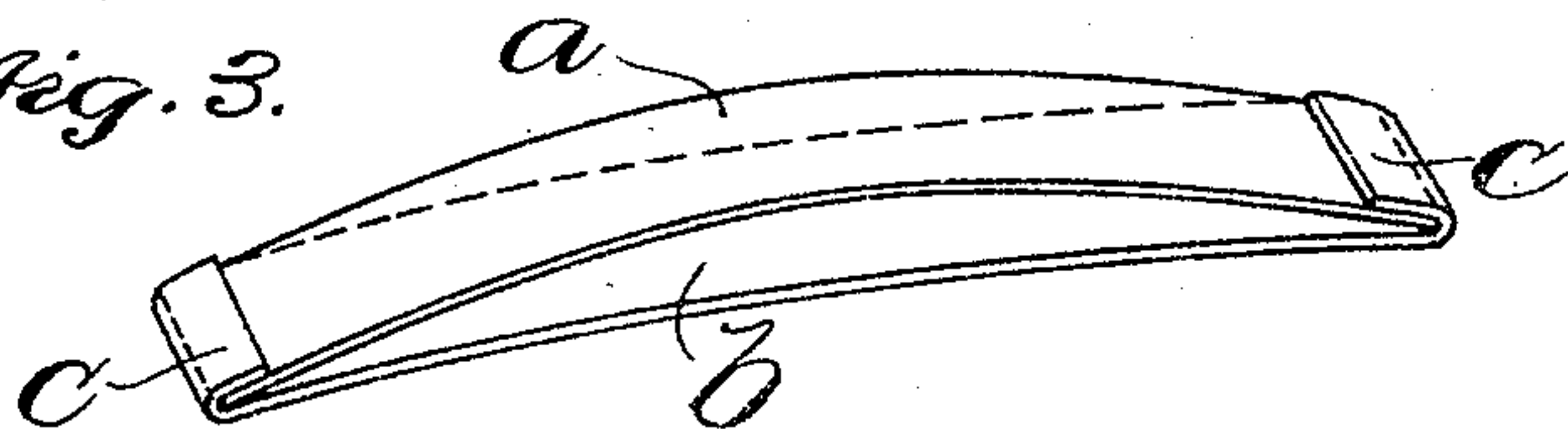


Fig. 4.

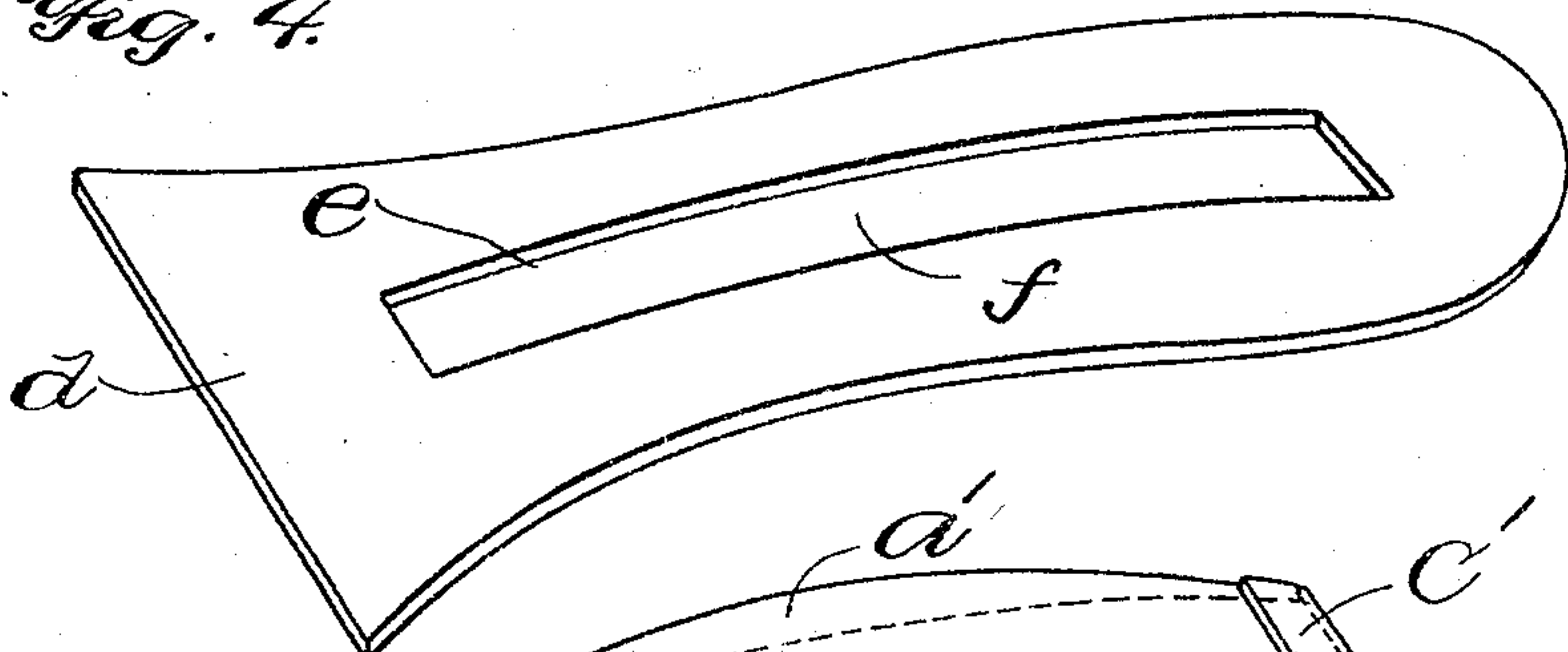
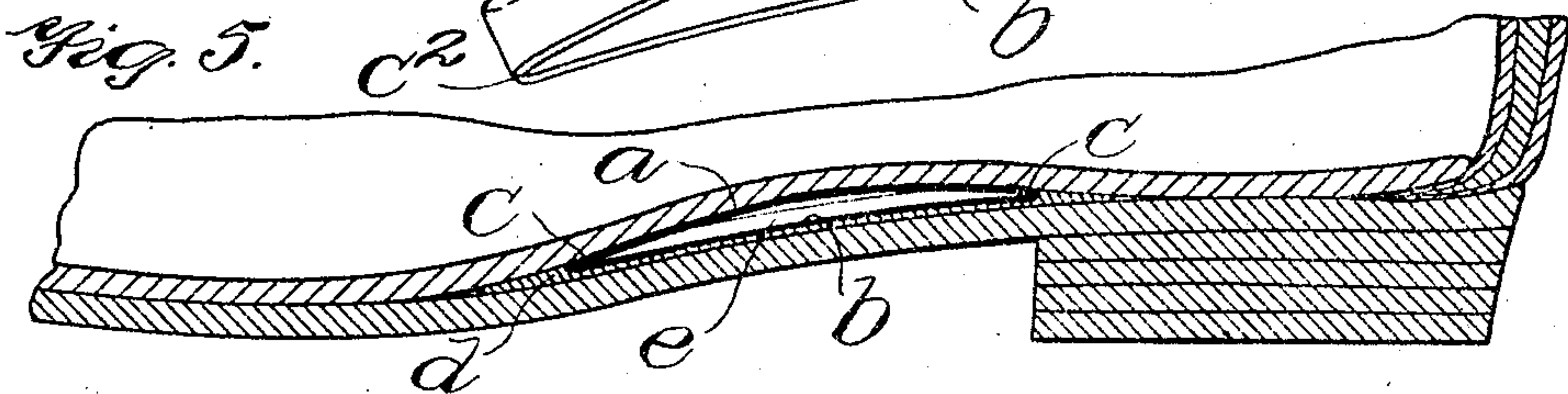


Fig. 5.



Witnesses:

P. H. Pizzetti

E. Baehner

Inventor:

H. F. Crawford

By Wright, Brown & Linsky
Attys

UNITED STATES PATENT OFFICE.

HARVEY F. CRAWFORD, OF BROCKTON, MASSACHUSETTS, ASSIGNOR OF
ONE-FOURTH TO FREDERICK A. HOYT, OF BROCKTON, MASSACHU-
SETTS.

SHANK-STIFFENER.

SPECIFICATION forming part of Letters Patent No. 773,628, dated November 1, 1904.

Application filed March 30, 1904. Serial No. 200,664. (No model.)

To all whom it may concern:

Be it known that I, HARVEY F. CRAWFORD, of Brockton, in the county of Plymouth and State of Massachusetts, have invented certain
5 new and useful Improvements in Shank-Stiffeners, of which the following is a specification.

This invention relates to means for stiffening the shank of a boot or shoe, and has for its object to provide a support for the instep
10 of the foot, which support will be sufficiently rigid to permanently retain its function.

A further object of the invention is to provide a shank-stiffener which will be much lighter in construction to attain a given amount
15 of strength than has heretofore been produced.

To these ends the invention consists in the shank-stiffener, either as an article of manufacture or in combination with a shank-piece or filler, substantially as hereinafter described
20 and claimed.

Of the accompanying drawings, forming a part of this specification, Figure 1 represents a plan view of a shank-piece or shank-filler having a stiffener embedded therein, said stiffener being constructed according to my present invention. Fig. 2 represents a section on line 2 2 of Fig. 1. Fig. 3 is a perspective view representing my improved stiffener in one of its preferred embodiments. Fig. 4 is
30 a perspective view representing a shank-piece or shank-filler having a recess to receive the stiffener shown in Fig. 3. Fig. 5 represents a longitudinal section of a portion of a shoe having the shank-piece and stiffener located
35 between the inner and outer soles of such shoe. Fig. 6 represents a modification.

Similar reference characters indicate similar parts throughout the several views.

The shank-stiffener shown in Fig. 3 comprises a curved strip or plate *a* and a substantially straight strip or plate *b*, the two plates being preferably of spring metal and the ends of the plate *b* being preferably bent to form sockets *c*, which receive the ends of the strip
40 or plate *a*. It is to be understood, however, that I do not limit myself to this specific means for connecting the two strips, since any other suitable means for preventing relative move-

ment of the ends of the two strips might be substituted for the construction shown. 50

The strip *a* sufficiently exceeds in length the distance between the bottoms of the sockets *c* to cause the strip *a* to permanently retain a bowed form relatively to the plate *b*. It is to be understood that the plate *b* is preferably not perfectly straight, but slightly
55 curved, so as to properly fit the bottom of the recess of the shank-piece and to correspond with the form desired for the shank portion of the inner and outer soles of the boot or shoe. In referring to the plate or strip *b* as
60 "straight" it is to be understood that it is so only by reason of its form relatively to that of the upper strip or plate *a*. Referring to Fig. 3, it will be readily understood that the
65 parts shown in said figure practically constitute a truss, for the reason that the bowed form of the strip *a* will be retained under all circumstances, (excepting possibly a crushing strain,) and that there can be no depression
70 of any portion of the shank-piece between points where the ends of the stiffener rest in or upon said shank-piece.

The shank piece or filler *d* is preferably formed with a recess *e* to receive the truss-stiffener, a bottom piece *f* being sometimes employed to more properly retain the stiffener in said recess. I do not limit myself, however, to the particular provision for assembling the shank-piece and the stiffener.
80 For instance, the shank-piece might be of molded pulp with the stiffener inclosed therein, or it may be a shank-piece of any suitable material and died out to form the recess to receive the stiffener. 85

The stiffener may be formed with the usual holes, such as one near each end, to receive the nails or tacks commonly employed for securing the stiffener against lateral movement relatively to the inner and outer soles of a
90 shoe, such as shown in Fig. 5.

In Fig. 6 I show as a modification the entire stiffener formed from a single strip bent at one end to form a socket *c'*, which engages the opposite end of the strip, an intermediate
95 bend *c''* being formed in the strip. In this

modification one limb or member a' of the strip is the equivalent of the curved strip or member a , while the other limb or member, b' , is the equivalent of the substantially straight
5 strip or member b .

I claim—

1. As an article of manufacture, a shank-stiffener comprising two members connected at both ends, one member being shorter than
10 the other between their points of connection, said members being permanently spaced apart between their ends to form a truss.

2. As an article of manufacture, a shank-stiffener comprising a lower member having

its ends bent to form sockets, and an upper 15 member of greater length than the distance between the bottoms of the sockets of the lower member, whereby the upper member will be retained in curved form and thereby produce, in connection with the lower mem- 20 ber, a truss.

In testimony whereof I have affixed my signature in presence of two witnesses.

HARVEY F. CRAWFORD.

Witnesses:

C. F. BROWN,
E. BATCHELDER.