

(Model.)

2 Sheets—Sheet 1.

H. M. BARROWS.
Handle for Folding Cutlery.

No. 232,626.

Patented Sept. 28, 1880.

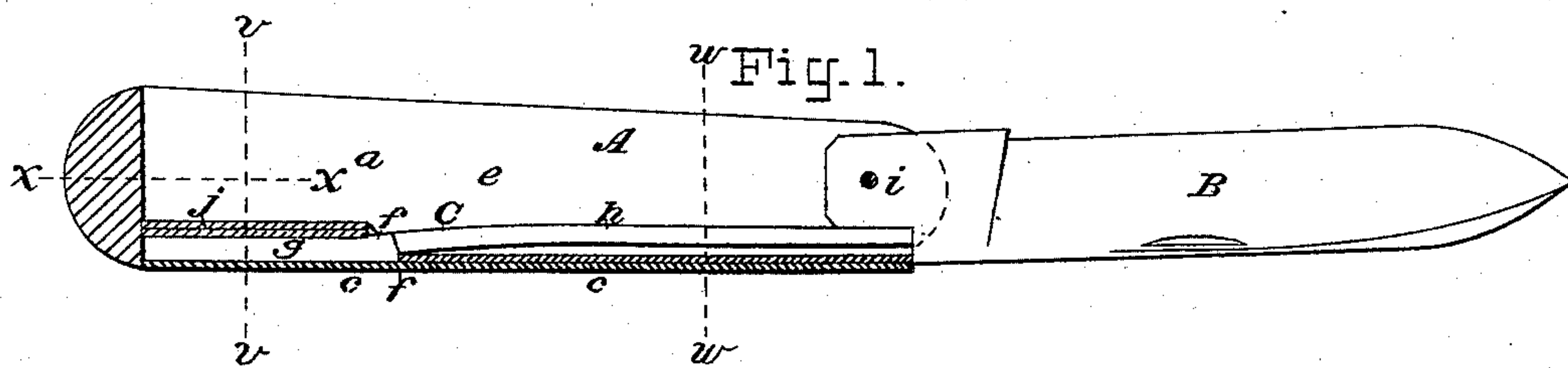


Fig. 2.

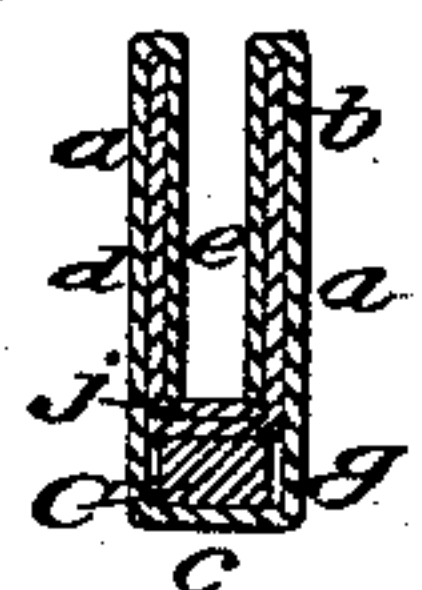


Fig. 3.

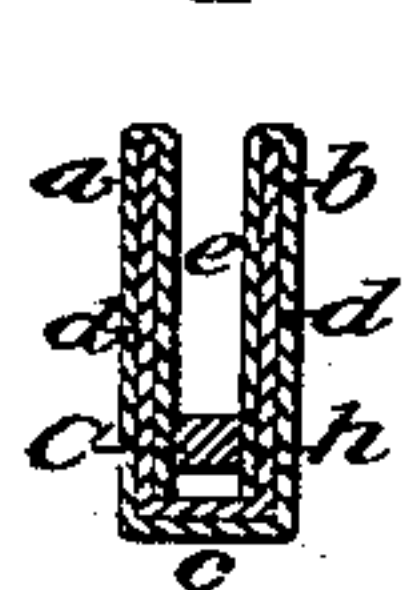


Fig. 4.

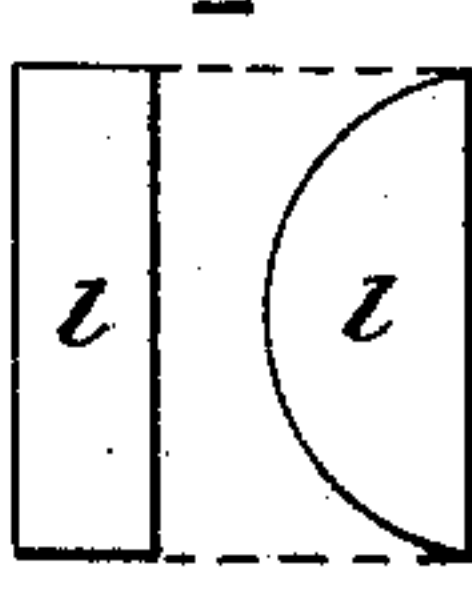


Fig. 5.

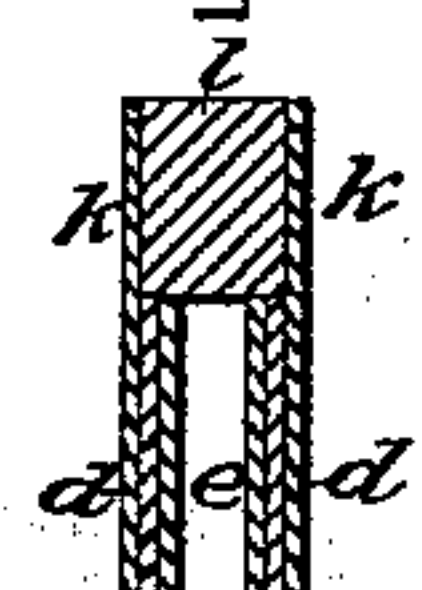


Fig. 6.

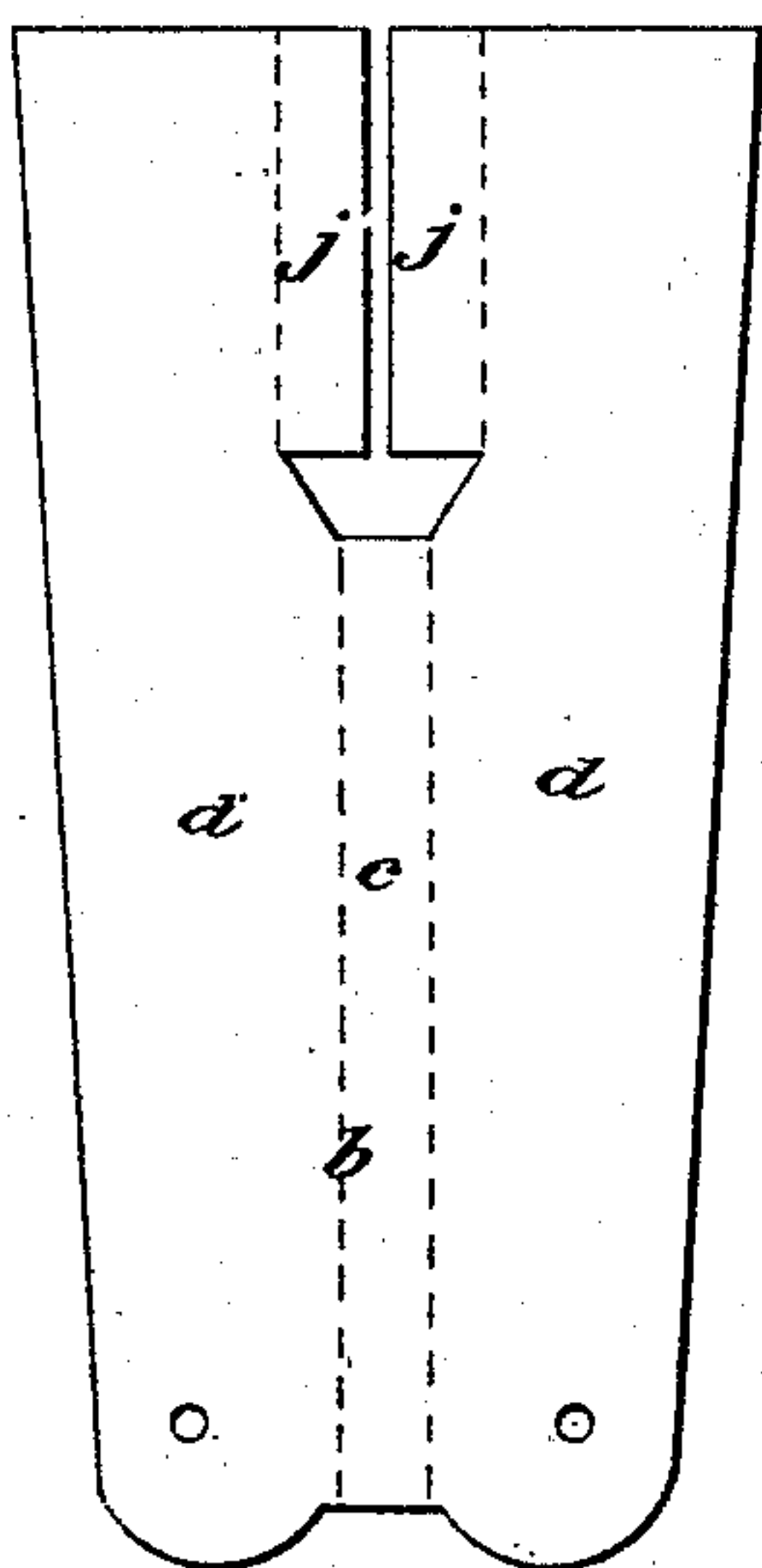


Fig. 7.

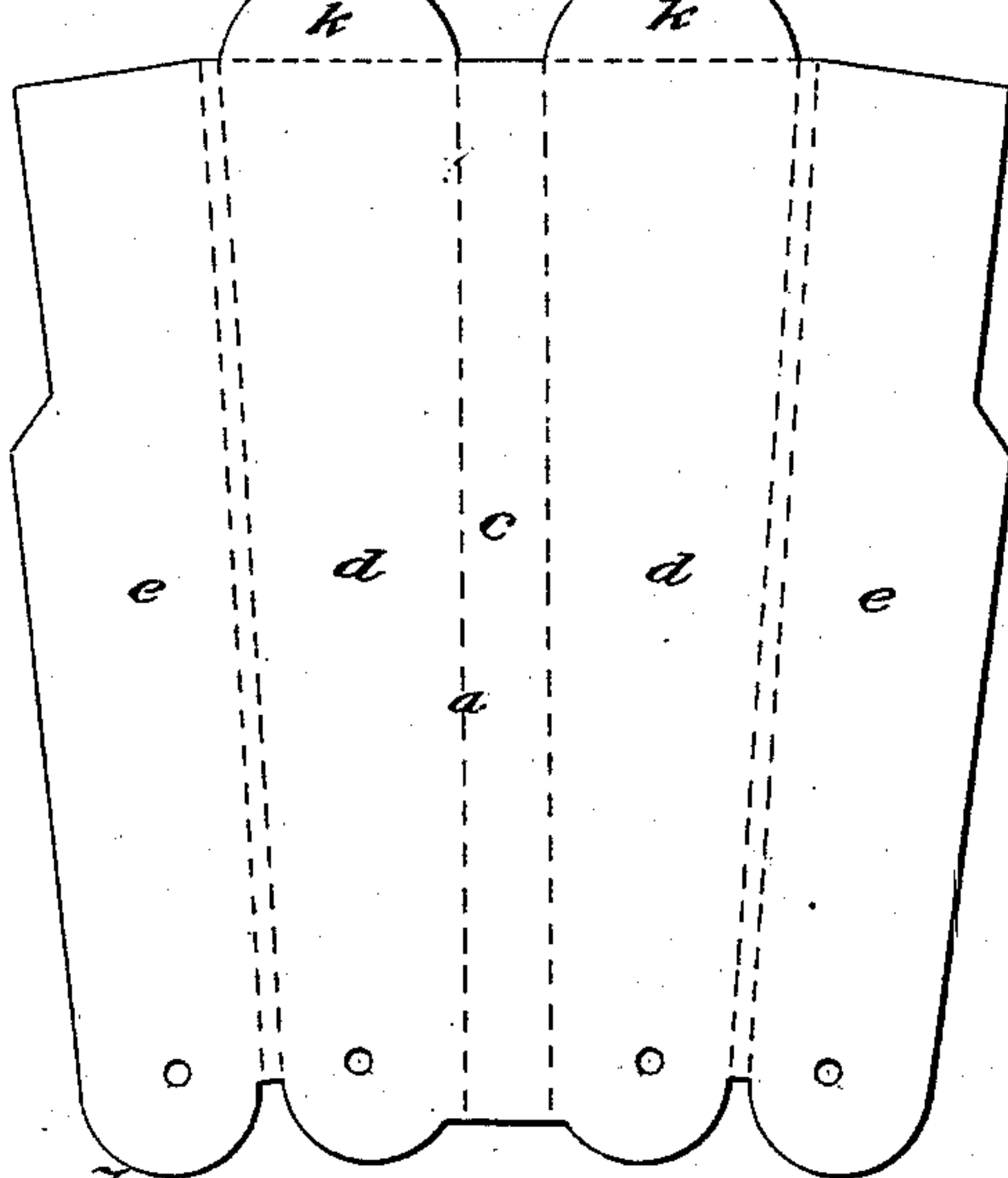


Fig. 8.

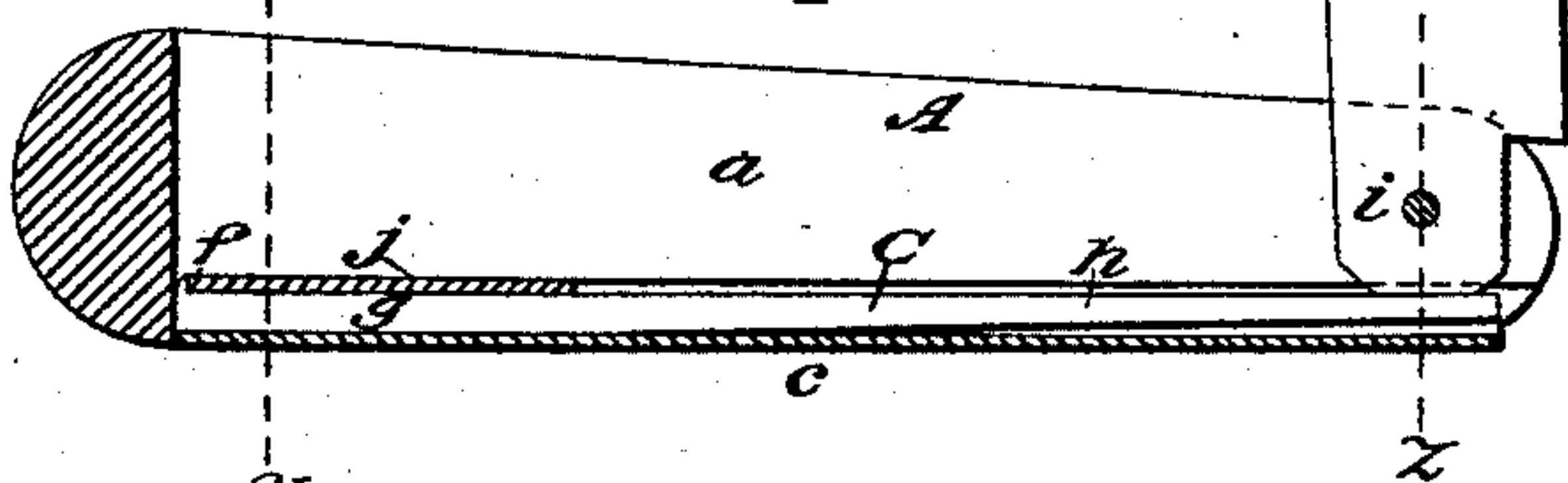


Fig. 9.

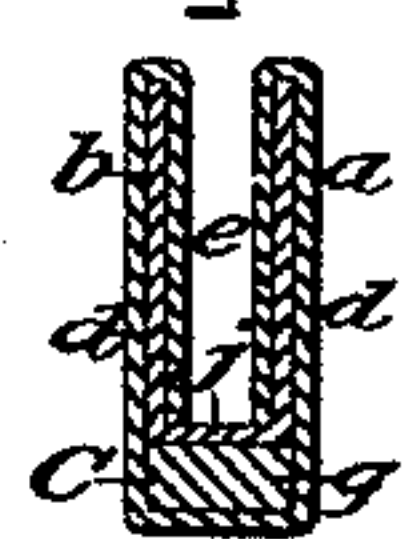
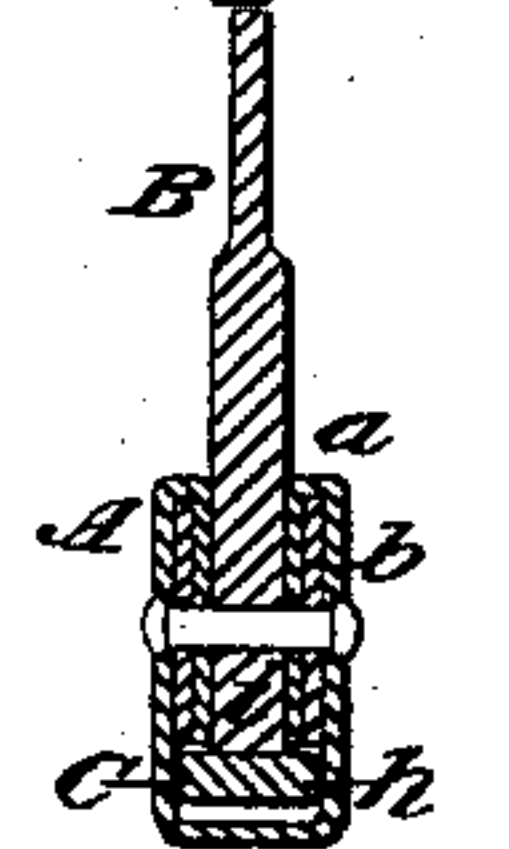


Fig. 10.



ATTEST:

Jas H. Denithorne.
S. A. Brown.

INVENTOR:

Henry M. Barrows
By his Attys:
Burke, Fraser & Hornum

(Model.)

2 Sheets—Sheet 2.

H. M. BARROWS.
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Fig. 11.

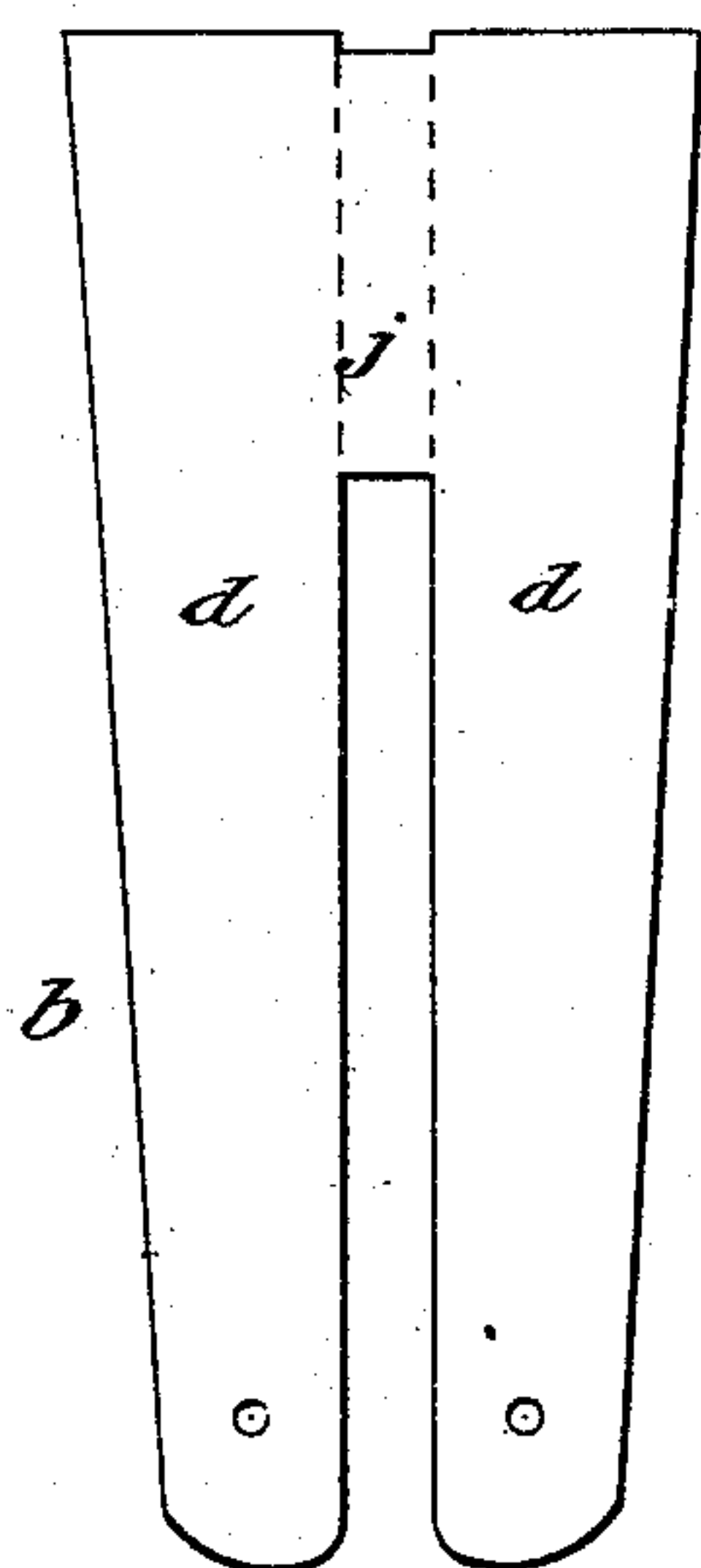


Fig. 12.

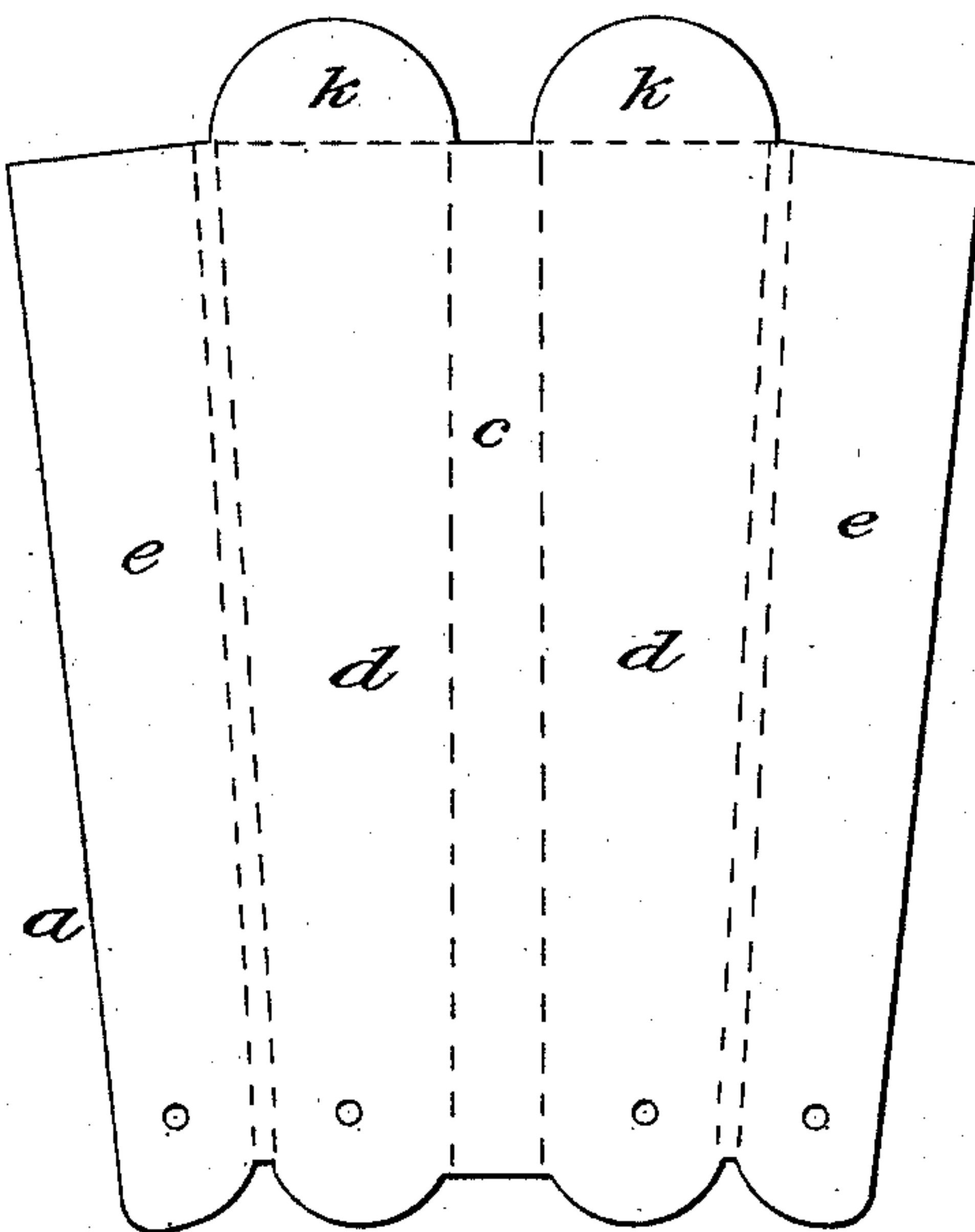


Fig. 13.

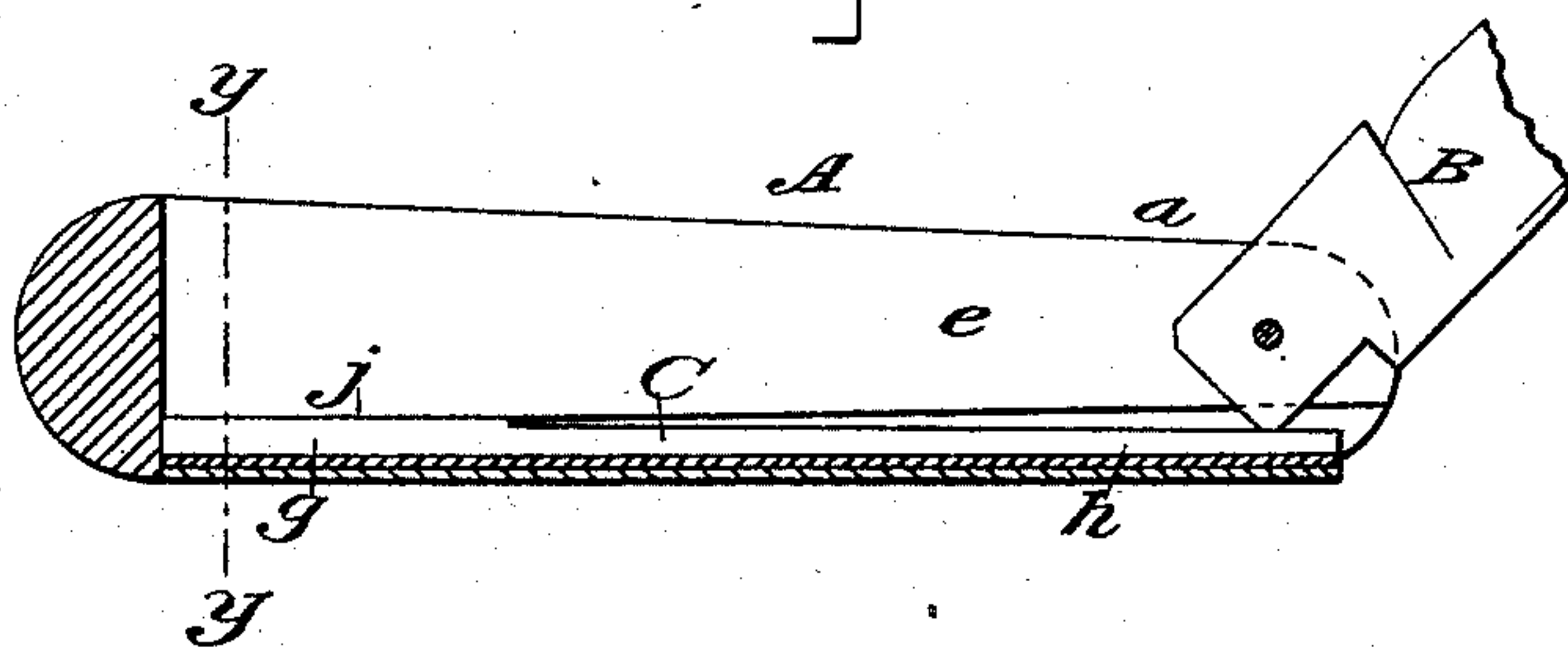
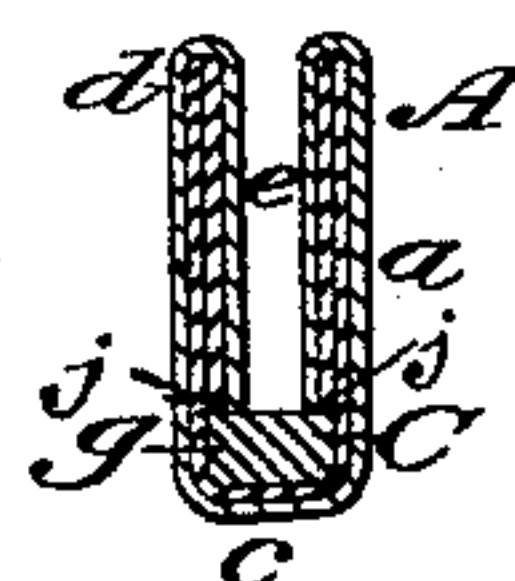


Fig. 14.



INVENTOR:

Fig. 15.



ATTEST:

E. B. Bolton
Jos. H. Denilthorne.

Henry M. Barrows.

By his Attorneys,

Burke, Fraser & Bennett

UNITED STATES PATENT OFFICE.

HENRY M. BARROWS, OF BROOKLYN, NEW YORK.

HANDLE FOR FOLDING CUTLERY.

SPECIFICATION forming part of Letters Patent No. 232,626, dated September 28, 1880.

Application filed May 26, 1880. (Model.)

To all whom it may concern:

Be it known that I, HENRY M. BARROWS, a citizen of the United States, residing at Brooklyn, in the county of Kings and State of New York, have invented certain Improvements upon Handles for Folding Cutlery, of which the following is a specification.

This invention relates to that class of handles for folding or pocket cutlery which are formed of sheet or plate metal.

Heretofore sheet-metal knife-handles have been made by bending up a plate of metal into U shape in cross-section, the one plate forming both the sides and the back of the handle. In such handles the back-spring has been arranged against the closed back and confined in place by taking under the squared boss of a blade at each end of the handle. Cast-metal handles have also been made with a blade jointed to but one end and the spring resting against the closed back and confined by taking under the boss of the said blade at one end and a fixed overhanging shoulder at the other, and in lieu of these arrangements the spring has been fastened in place by a rivet or rivets passing through the handle.

The state of the art being as thus recited, my invention has for its object to improve the construction or formation of the handle proper, and also to provide an improved method of securing the spring therein.

My handle is formed with a closed back of one or more thicknesses of metal, and with cheeks or sides of two or more thicknesses, the inner or lining thickness of the cheeks being formed in one piece with the outer thickness thereof, and connecting therewith by a fold at the front of the handle.

In case a blade or blades are connected at but one end of the handle, the other end is closed by a metal block, which is embraced by the outer thicknesses of the cheeks, and abuts against the edges of the inner thicknesses thereof. The spring is retained in place by being clamped or confined for a portion of its length between two thicknesses of the metal—the closed back of the handle on the one side and a fixed surface of metal within the handle on the other. This fixed surface is preferably formed by the insertion of a second plate of metal into the handle, this plate being retained

in place by the first plate, and being so bent as to present a layer of metal on top of the confined portion of the spring; but the first plate may be brought into such contact with the spring as to fulfill the function of the second plate, in which case the second plate may be dispensed with.

I will first describe the preferred construction of the handle, which is shown in the first seven figures of the drawings.

Figure 1 is a longitudinal section of the handle, containing a knife-blade. Fig. 2 is a transverse section of the same on the line *v v*. Fig. 3 is a transverse section on the line *w w*. Fig. 4 shows the end block removed in end and side elevation. Fig. 5 is a fragmentary longitudinal section taken on the line *x x* in Fig. 1; and Figs. 6 and 7 show the plates or blanks of metal from which the handle is formed. The remaining figures will be referred to hereinafter.

Let A designate the handle as a whole, B a knife-blade or other article of cutlery which is to be attached to and capable of folding into the handle, and C the back-spring ordinarily employed in handles for folding cutlery.

Fig. 7 shows the metal plate which forms the handle proper. This plate *a* consists of a central portion, *c*, side portions, *d d*, flanking the same, and wings *e e* flanking the side portions. The plate is folded on the vertical dotted lines, the wings *e e* being first folded down onto the portion *d d*, and the latter then turned up at right angles to the central portion, *c*, and parallel to each other. The portion *c* forms the closed back of the handle, the portions *d d* form its cheeks or sides, and the wings *e e* form the lining lying next to the blade.

Fig. 6 shows the inner plate, which, in this construction, is employed to retain the spring in place. This plate *b* consists of a central portion, *c*, and side portions, *d d*, corresponding to the like-lettered portions of the plate *a*, and of one or two (preferably two) flaps, *j*, formed instead of the portion *c* for a short distance. These flaps are bent up on the dotted lines at right angles to the sides *d d*, and the latter are then bent up at right angles to the central portion, *c*. The plate *b* is then inserted in the plate *a*, its portion *c* lying against the portion *c* of that plate, and its portions *d* pass-

ing between the portions *d* and *e* of that plate, as best shown in Fig. 3; or the two plates may be bent up together, if preferred, the plate *b* being laid on the plate *a* after its flaps *j* have been bent up.

By reference to Figs. 1 and 2 it will be seen that the flaps *j* lie close upon one another, are parallel to the back *c*, and are raised somewhat therefrom. The space thus formed receives the portion *g* of the spring *C* and confines it tightly so as to prevent its vibration or displacement, while the remaining portion *h* of the spring is unconfined and free to vibrate, its end taking under the squared boss *i* of the blade *B*, as usual. The portion *g* of the spring is thus confined between two thicknesses of metal—the closed back *c* below and the flaps *j* above.

I employ two overlapping flaps for the sake of strength, as otherwise one flap might answer, or two flaps might meet at the center edge to edge without overlapping. The flaps *j* are in this construction the essential portions of the plate *b*, since its sides *d d* and back *c* serve only to secure a bearing against the plate *a* so as to keep the flaps in place. They also add some strength to the plate *a*; but the latter might be made thicker or of stronger material to attain this result.

In Figs. 8 to 12 I have shown a modification wherein the plate *b* is of different construction, that of the plate *a* remaining substantially the same.

Fig. 8 is a longitudinal section of the handle. Figs. 9 and 10 are transverse sections, taken respectively on the lines *yy* and *zz* in Fig. 8, and Figs. 11 and 12 show the plates *b* and *a* before bending.

It will be observed that the portion of the plate *b* answering to the part marked *c* in Fig. 6 is cut out, and that the remaining central portion, joining the two sides *d d*, answers in position to the flaps *j* in Fig. 6, and is so lettered.

The sides *d d* are bent up at right angles to the portion *j* and inserted in the bent-up plate *a*, the width of the sides *d d* of the plate *b* being such that when in place there shall be a space between the portion *j* and the closed back *c* for the reception of the part *g* of the spring, as shown in Figs. 8 and 9. In this construction the back *c* of the handle is of but one thickness of metal, and the sides are or may be of but one thickness in the space occupied by the spring, as shown in Figs. 9 and 10, being of three thicknesses above.

The remaining figures illustrate a further modification, in which the spring is confined down against the back *c* by edges of metal instead of by a flat surface thereof.

Fig. 13 is a longitudinal section. Fig. 14 is a transverse section taken on the plane of the line *yy* in Fig. 13, and Fig. 15 is a view corresponding to Fig. 14, and showing a different construction. In these figures the edges of the wings *e e* extend down to and bear upon

the portion *g* of the spring, holding it firmly in place.

In Figs. 13 and 14 I have shown two plates, each of the shape shown in Fig. 12, bent together in the form described, and in Fig. 15 I have shown but one plate so bent. The former construction is preferable, as the metal, being thin, will fold readily without breaking, while in the latter construction to secure the desired strength the single plate must be made of greater thickness, and is liable to break at the upper fold.

To prevent any longitudinal displacement of the spring it may be provided with a shoulder, *f*, which engages some corresponding shoulder on the interior of the handle.

When but one end of the handle is to contain the blade or blades I construct the other end as follows: As seen in Fig. 7, the cheeks *d d* of the plate *a* are extended beyond the portions *c* and *e e* and beyond the end of the plate *b* to form rounded ears *k k*. I provide a block, *l*, as shown in Fig. 4, conforming in shape to the said ears, and of a width equal to the space between them when they are bent into shape for the handle, and I insert this block between the said ears and solder or otherwise secure it in position, its arrangement in relation to the several layers of metal plate being shown in Fig. 5. It will be seen from that figure that the inner or straight face of the block *l* is arranged to bear against the end edges of the inner layers of the metal forming the handle, and is thus securely seated. I have shown the block *l* as having one straight face in side elevation; but this face may be concaved, if preferred. The block *l*, being thus fixed between the cheeks *d d*, serves to keep the same in proper relative position and materially strengthens the handle, besides giving a neat finish to its closed end.

It will be understood that in case blades are to be connected to both ends of the handle the block *l* will be omitted, both ends will be constructed to receive the blades, the portion *g* of the spring will be at its center instead of at one end, both its ends will be vibrating portions *h*, and the spring clamping-surface *j* in the handle will also be at the center. Furthermore, in case two or more blades are connected to either end of the handle, a corresponding number of springs, *C*, will be employed, or one spring will have its portion *h* slitted into as many parts as there are blades.

The cheeks or sides of the handle may be convexed or bulged outwardly instead of being straight, if desired.

My handle may be used as the handle of a folding comb or other toilet article; and by the words "blade" and "cutlery" in this specification I mean any tool or device to which it may be desirable to apply my handle.

My improved handle possesses marked advantages over sheet-metal handles as heretofore made. By bending in the wings *e e*, I secure smoothly-rounded front edges without

the necessity for dressing down raw edges of metal, as heretofore. By making the sides or cheeks of two or more thicknesses I secure the desired strength by the use of thinner metal than heretofore, which metal is easier bent, and will bend without breaking or cracking.

By my method of confining the spring I fix it securely in place without necessarily forming it with any projections which are liable to be struck by the edge of the blade in closing, and without marring the external appearance of the handle.

I claim as my invention—

1. A handle for folding cutlery composed of a plate of metal bent to form a closed back, *c*, sides or cheeks *d d*, and linings *e e*, substantially as set forth.

2. A handle for folding cutlery formed of bent sheet or plate metal, having a closed back of one or more thicknesses and sides or cheeks of two or more thicknesses, wherein the back-spring is held in position by being closely embraced for a portion of its length between the said closed back and one or more of the inner or lining thicknesses of the cheeks, substantially as set forth.

3. A handle for folding cutlery composed of one or more plates of metal bent to form a closed back, *c*, sides or cheeks *d d*, and turned-

in linings *e e*, and provided with a downward-bearing surface, *j*, between which and the back *c* the back-spring *C* is confined for a portion of its length, substantially as set forth.

4. A handle for folding cutlery composed of the plate *b*, bent into U shape in cross-section, formed with a bearing-surface, *j*, and embraced by the plate *a*, in combination with said plate bent to form a closed back, *c*, and sides *d d*, and with a back-spring, *C*, whose fixed portion *g* is confined between said back *c* and said surface *j*, substantially as set forth.

5. A handle for folding cutlery formed of one or more plates of metal bent to form a closed back of one or more thicknesses and sides or cheeks of two or more thicknesses, with an end filling-block, *l*, interposed between the outer thicknesses of the sides or cheeks, and bearing against the edges of the inner thicknesses thereof, in combination with one or more blades hinged to the opposite end of the handle, substantially as set forth.

In witness whereof I have hereunto signed my name in the presence of two subscribing witnesses.

HENRY M. BARROWS.

Witnesses:

ARTHUR C. FRASER,
HENRY CONNETT.