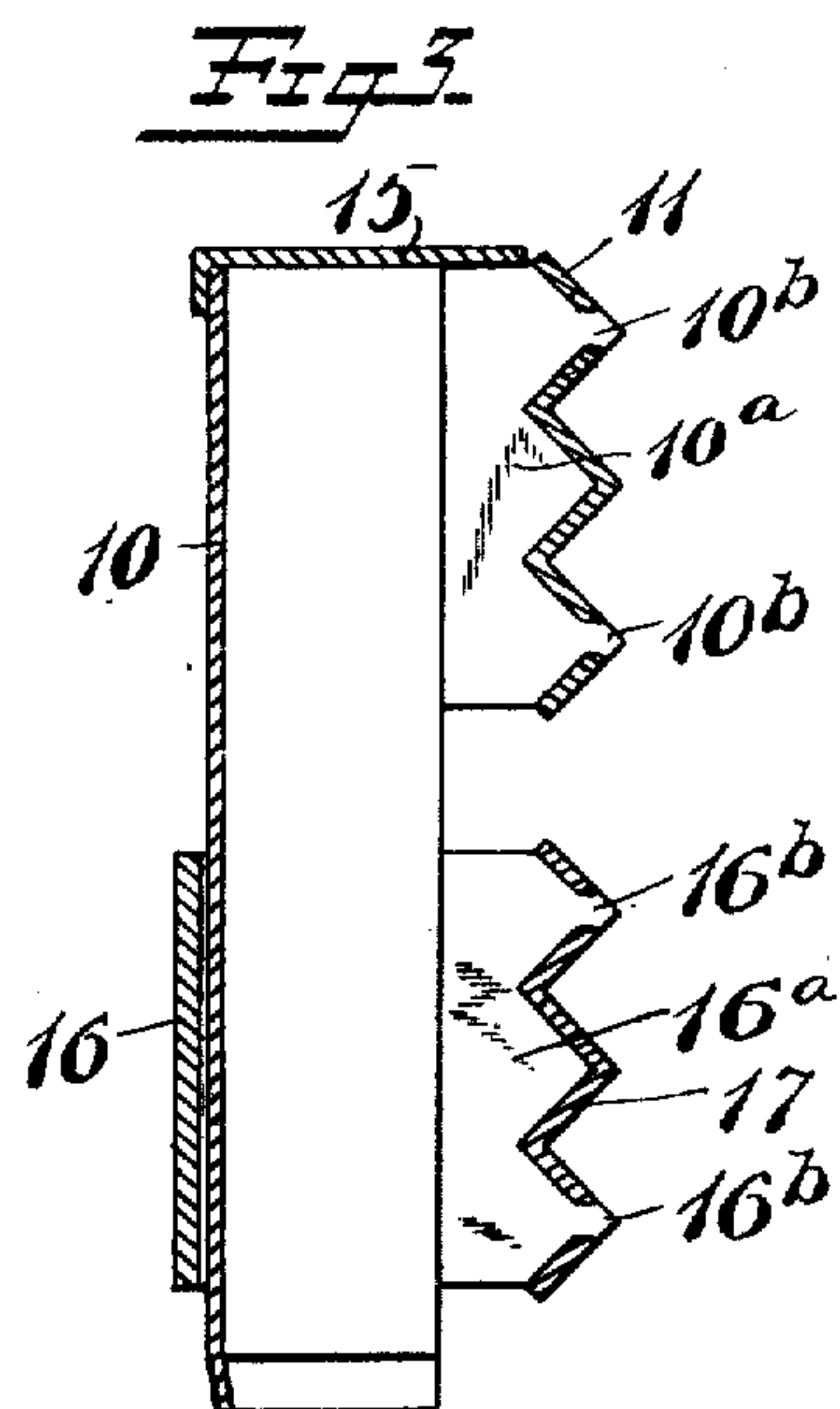
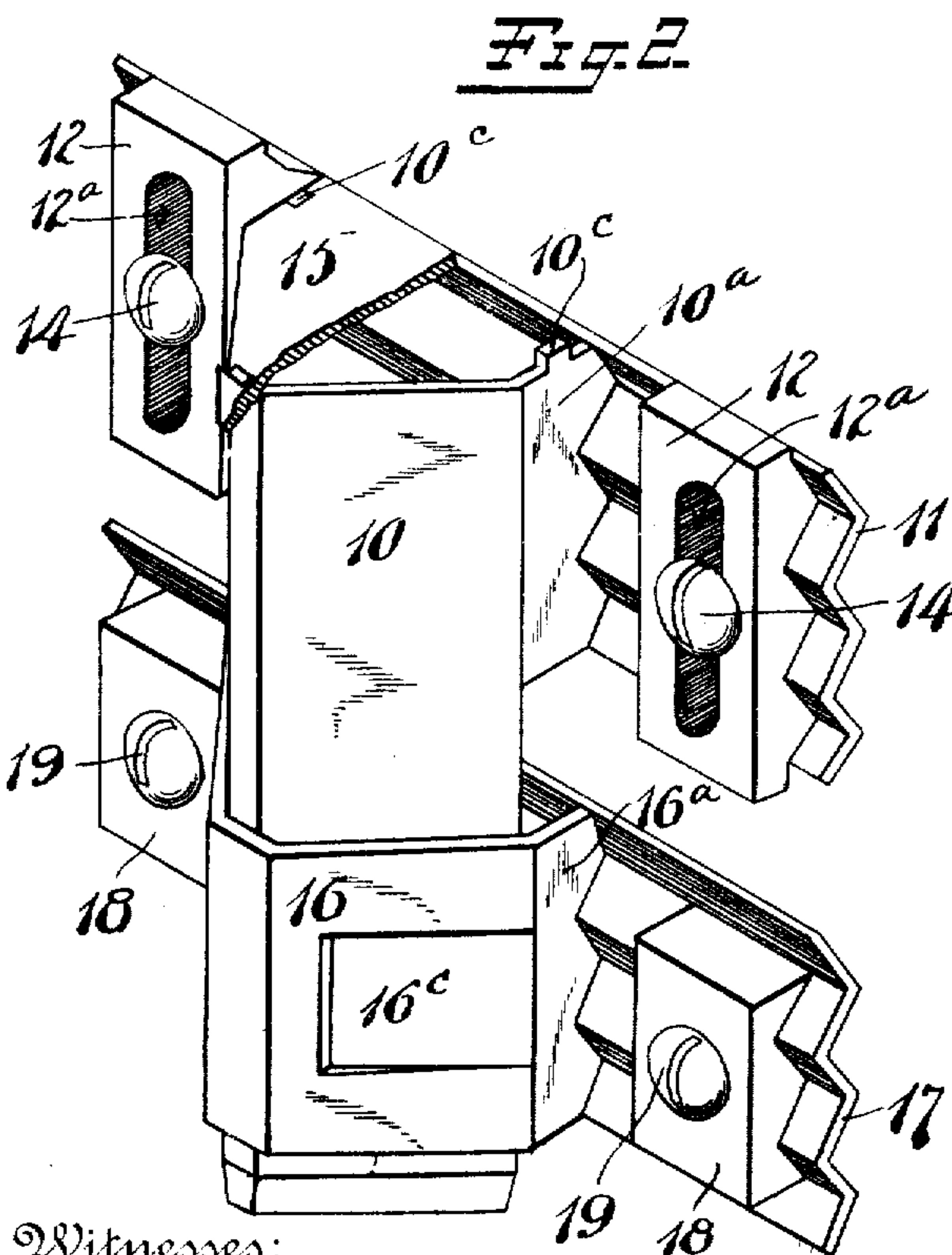
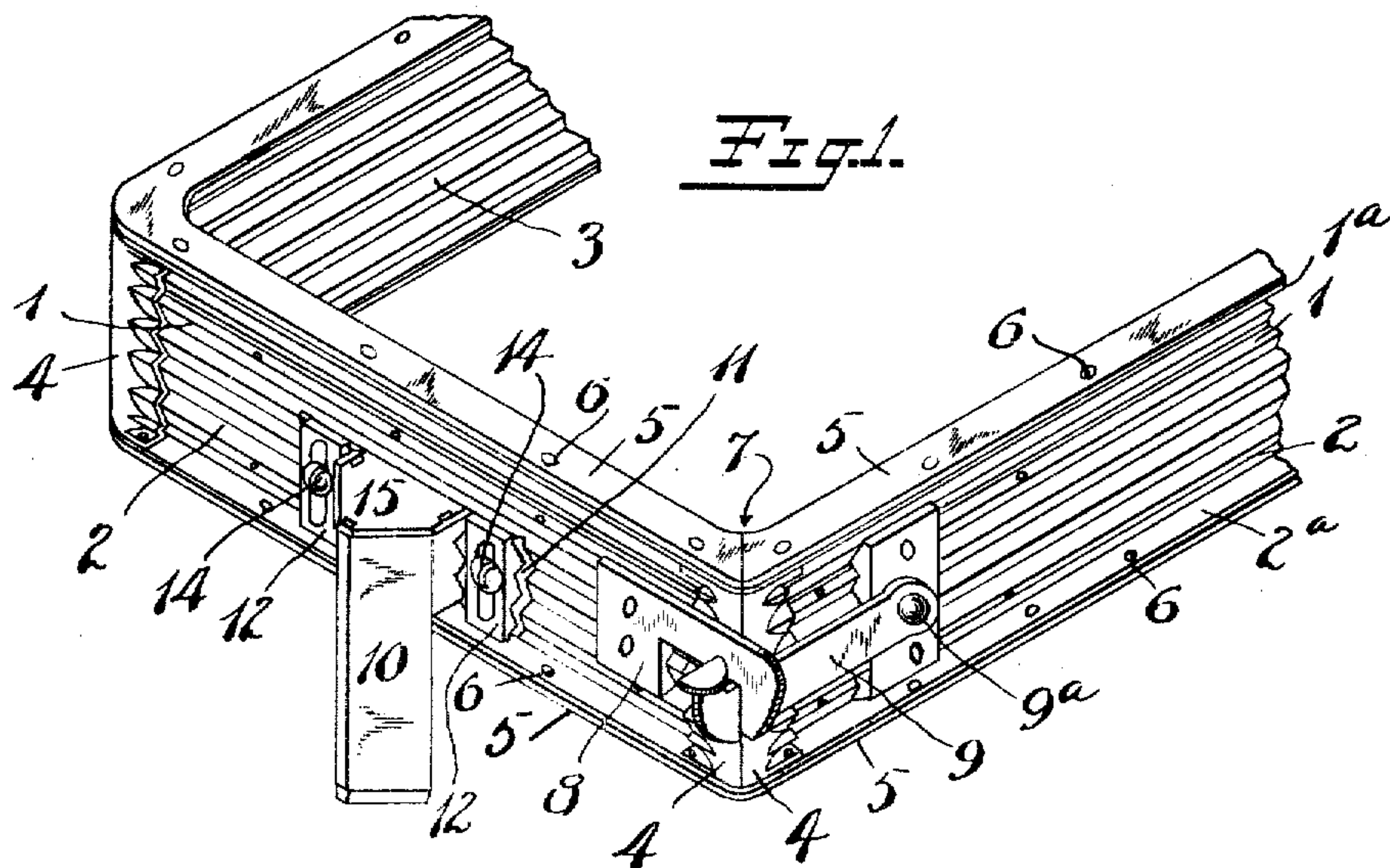


H. G. VOIGHT.
SNAP FLASK FOR MOLDERS' USE.
APPLICATION FILED DEC. 22, 1908.

921,922.

Patented May 18, 1909.

3 SHEETS—SHEET 1.



Witnesses:
Fred M. Dammelfelser.
Charles E. Card

Inventor
H. G. Voight.
By his Attorney.
Barrett, Brown & Wheeler

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Fig. 4.

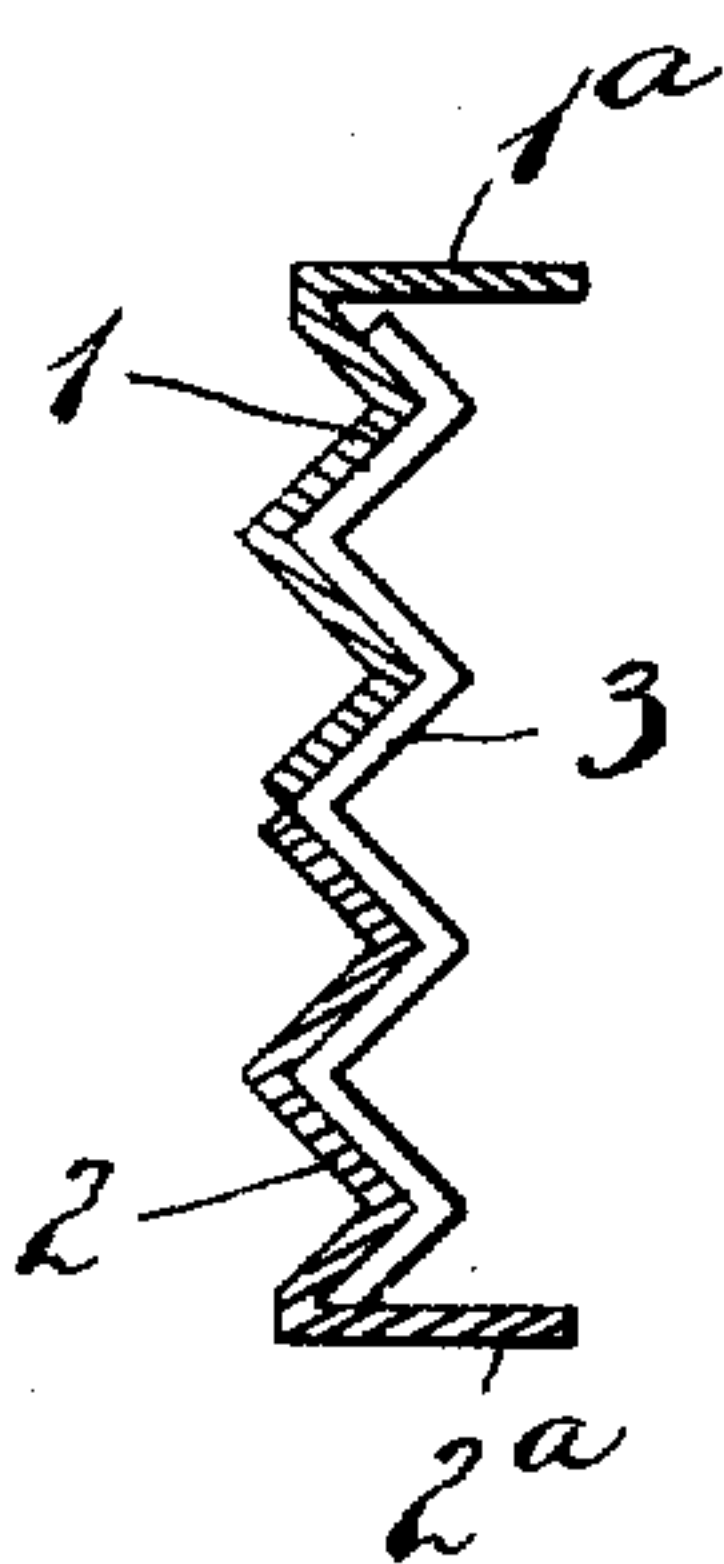


Fig. 5.

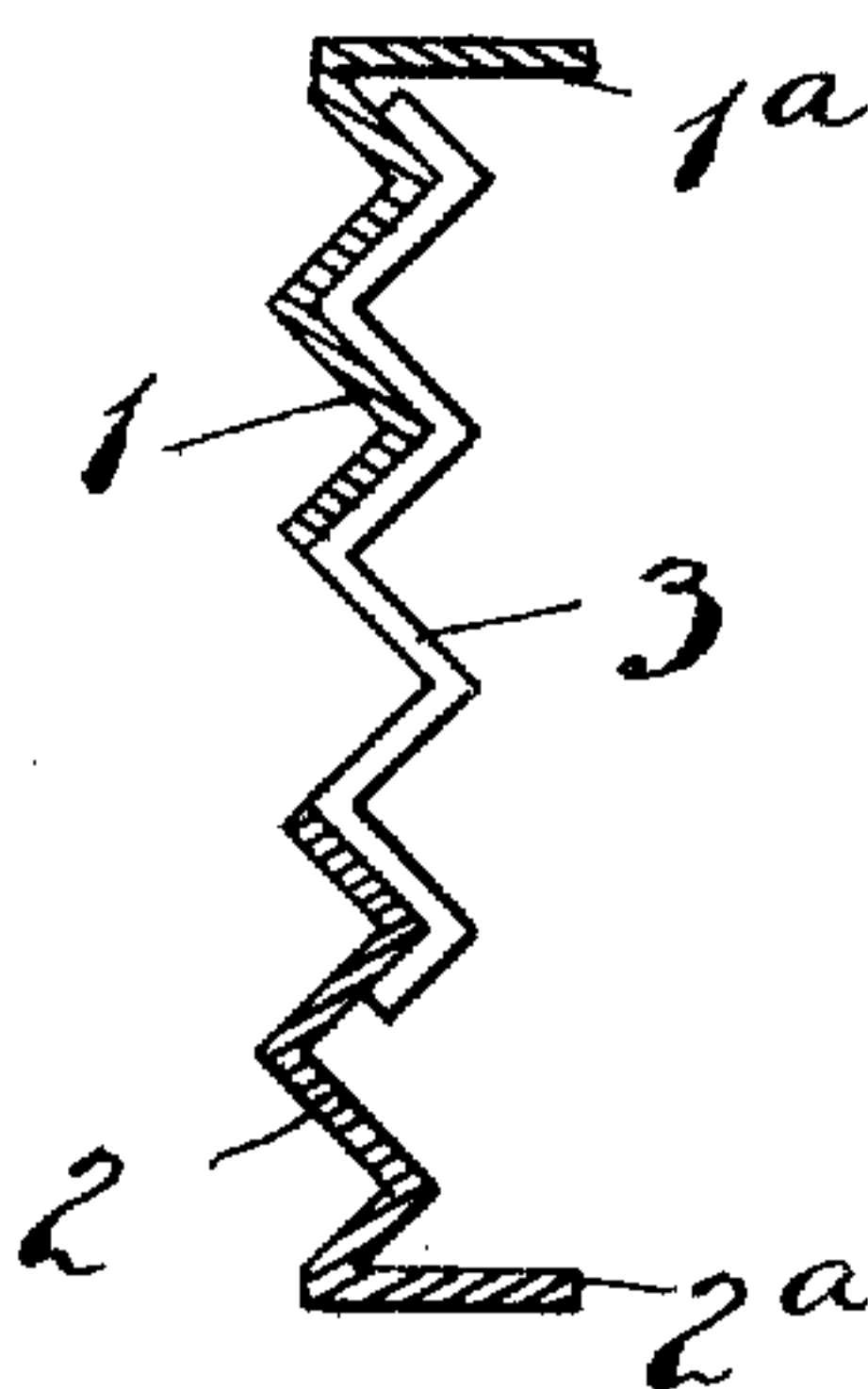


Fig. 6.

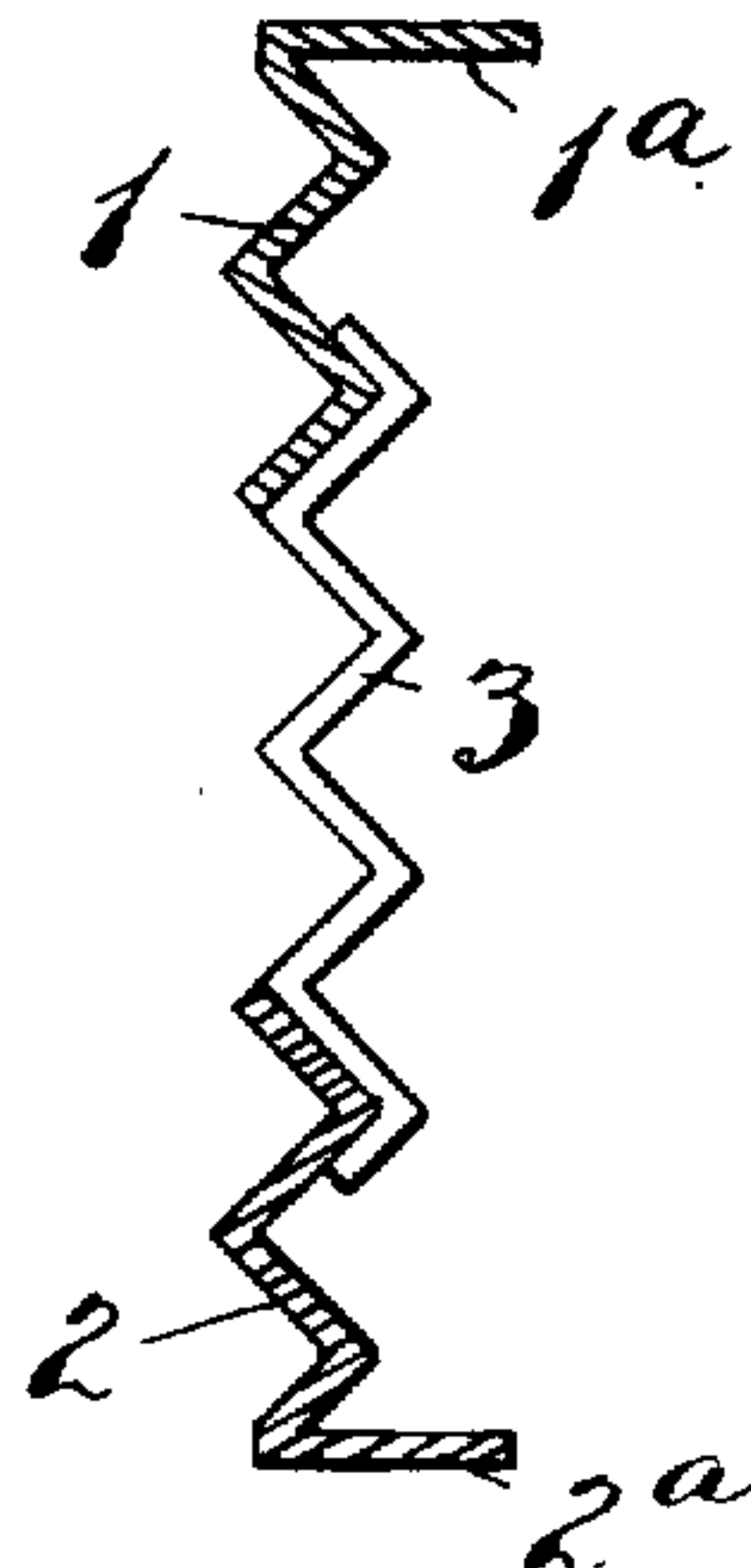


Fig. 7.

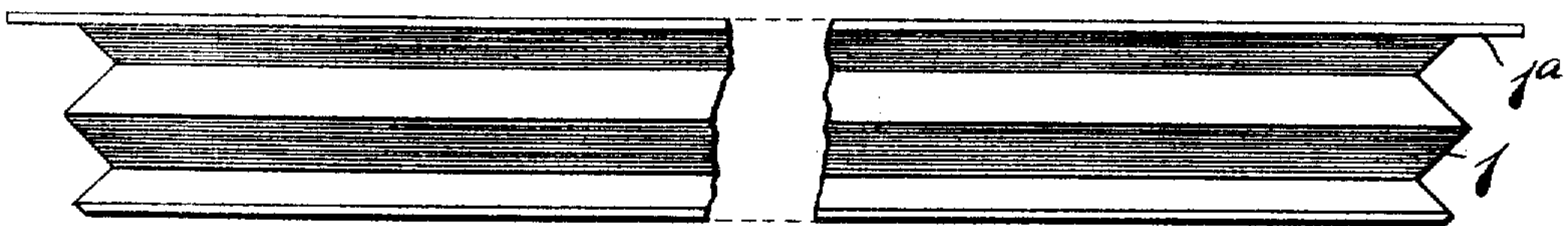


Fig. 8.

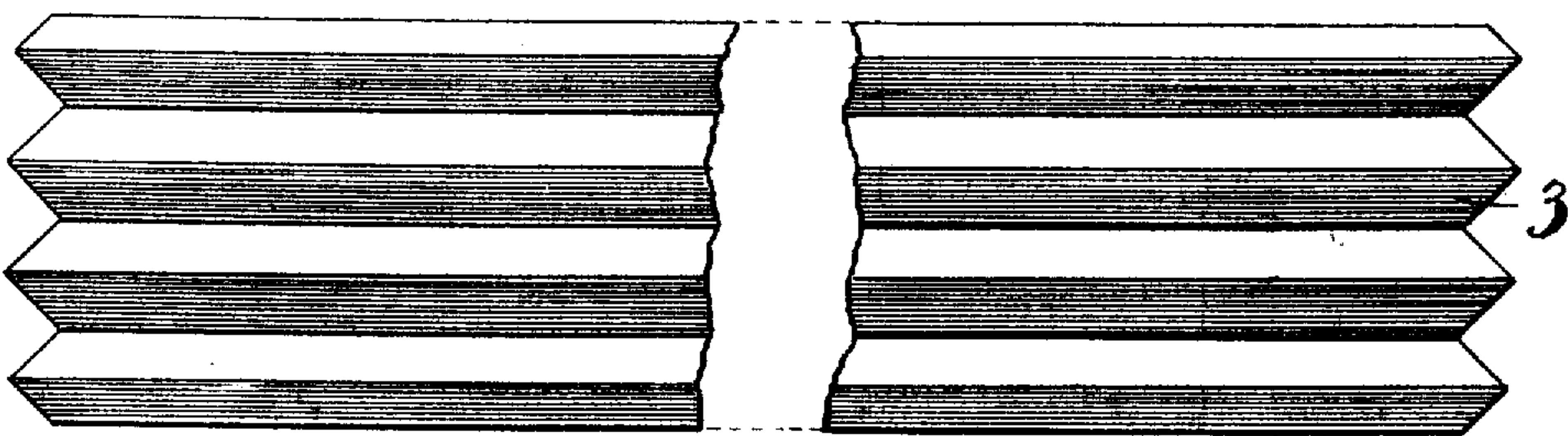
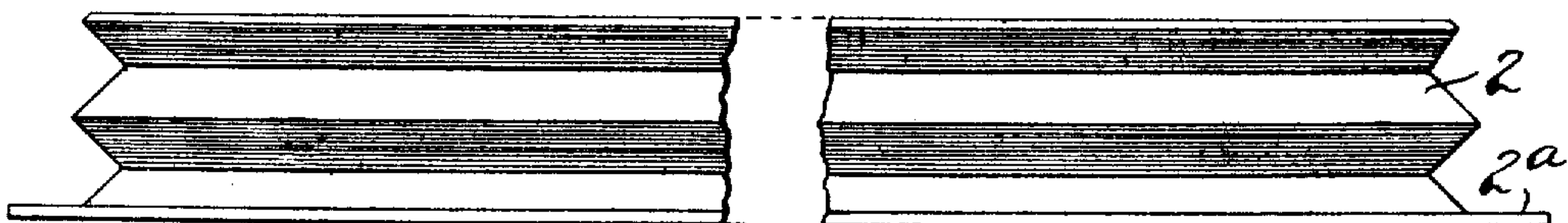


Fig. 9.



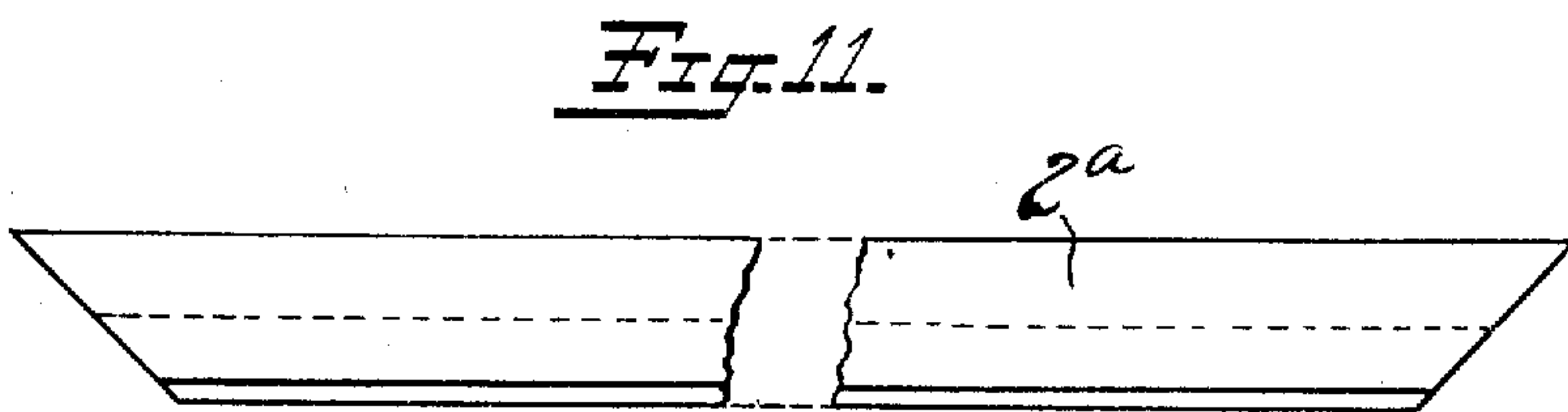
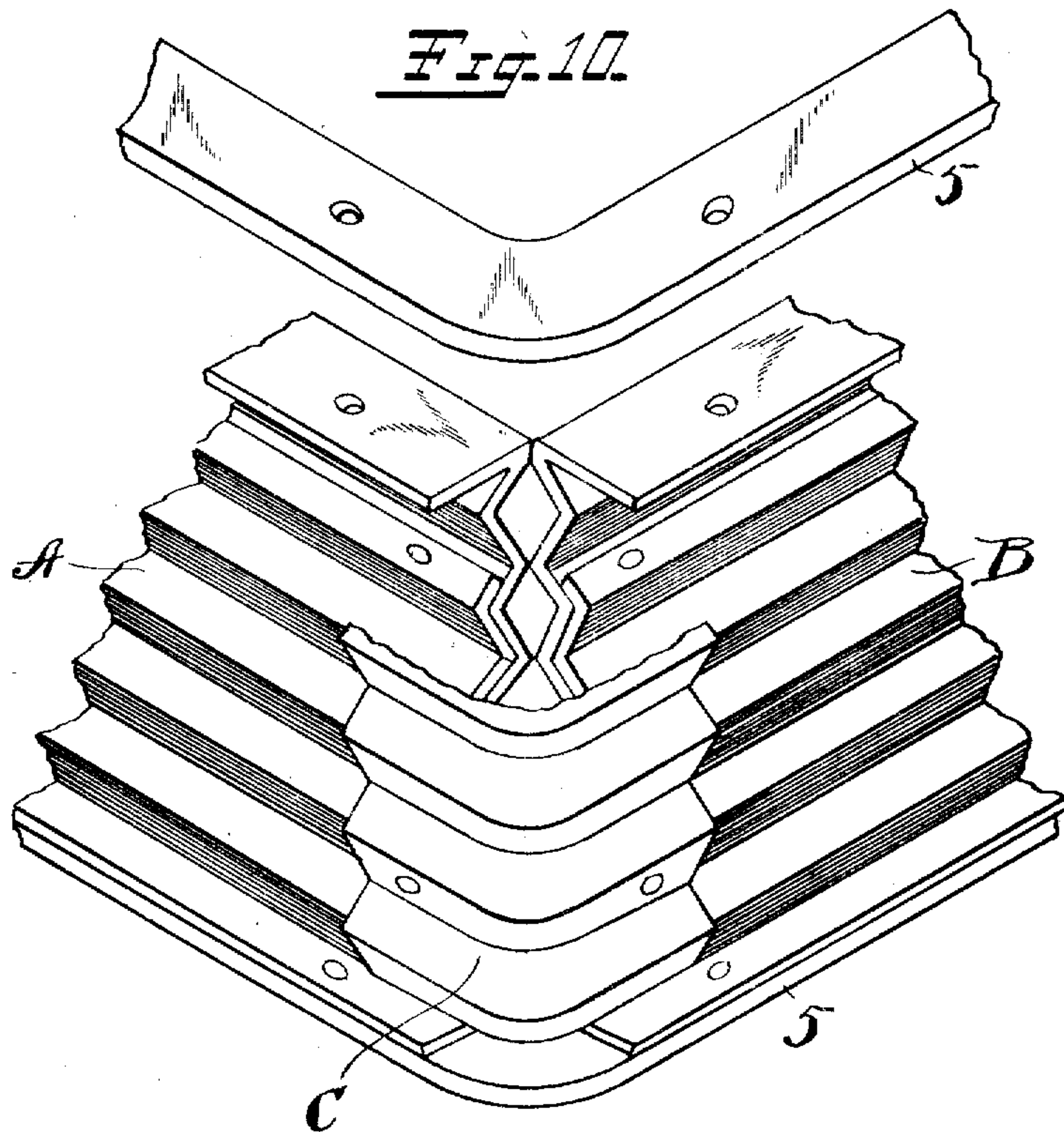
Witnesses:
 Fred M. Dammefelder.
 Chas. W. Care

Inventor
 H. G. Voight.
 By his Attorneys,
 Carter, Bromberg & Thier

921,922.

H. G. VOIGHT.
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Patented May 18, 1909.
3 SHEETS—SHEET 3.



Witnesses:
Fred M. Dammefelar.
Chas. A. Reid

Inventor
H. G. Voight.
By his Attorneys.
Paul W. Barnes & W. H. H. H.

UNITED STATES PATENT OFFICE.

HENRY G. VOIGHT, OF NEW BRITAIN, CONNECTICUT.

SNAP-FLASK FOR MOLDERS' USE.

No. 921,922.

Specification of Letters Patent.

Patented May 18, 1909.

Application filed December 22, 1908. Serial No. 468,854.

To all whom it may concern:

Be it known that I, HENRY G. VOIGHT, a citizen of the United States, residing at New Britain, county of Hartford, State of Connecticut, have invented certain new and useful Improvements in Snap-Flasks for Molders' Use, of which the following is a full, clear, and exact description.

My invention relates to improvements in molders' flasks of the "cope" and "nowel" type, and more particularly to "snap flasks," so-called. These devices comprise two companion upper and lower sections termed respectively the "cope" and the "nowel." With these sections top and bottom boards are used, but since these boards constitute no part of this invention, they need not be shown or described.

The object of my invention is to provide a simple, exceedingly durable and effective construction, aiming at economy of manufacture and maximum serviceability. The construction also has the advantage of lightness, strength and comparative inexpensiveness.

In the drawings Figure 1 is a perspective view of one section (in this instance the "cope") of a snap flask (partly broken away) and constructed to embody my invention in a preferred form. Fig. 2 is a relatively enlarged detail view of a guide-pin and socket for the "cope" and "nowel." Fig. 3 is a vertical cross-section of Fig. 2. Figs. 4, 5 and 6 are respectively sectional views of the same parts showing three different positions of adjustment. Figs. 7, 8 and 9 are respectively side elevations of the parts shown in Figs. 4, 5 and 6, said parts being separated and broken away at the center. Fig. 10 is a perspective view of one corner of one section of the flask illustrating details of construction and a slightly modified method of connecting the corner connections as compared with that illustrated in Fig. 1. Fig. 11 is a view of the under side of the part shown in Fig. 9.

Since the "cope" and "nowel" sections of the flask correspond substantially in construction, detail description of one section is sufficient for a full understanding of my invention. One of these sections carries a socket and the other a coacting guide-pin whereby in use said "cope" and "nowel" may be held together in proper operative relation. Both sections of the flask are made from sheet or wrought metal, and each sec-

tion preferably comprises a plurality of overlapping plates constituting the side walls. In the drawings I have shown the side walls as composed of three plates, to wit, an upper plate 1, a lower plate 2, and an intermediate plate 3 (see Figs. 4 to 9). These plates are correspondingly grooved or corrugated longitudinally on their abutting surfaces, so that said corrugations will register or interlock one with another when the parts are placed together. By means of these corresponding corrugations, the manufacturer may make each of these three parts of a standard size, and by giving a proper pitch or spacing to the grooves or corrugations, may assemble the same so as to provide (with one standard set of plates) a flask section of several different sizes. For example, as shown in Fig. 4, the minimum size or depth is provided. In this figure, it will be observed that the two edges of the parts 1—2 practically abut. In Fig. 5 they are spaced apart the width of one corrugation, increasing the depth of said flask section to a corresponding extent. In Fig. 6 the two edges of the parts 1—2 are spaced apart the width of two corrugations, furnishing a flask section of correspondingly greater depth. It should not be assumed that these variations in size are accomplished by the user (the molder) but they are rather an important and valuable expedient of the manufacturer, who, in making said flasks, may, by the adoption of this standard arrangement of parts, readily produce flasks of different dimensions. These sections 1, 2 and 3 are secured together at the corners, which corners may be and preferably are suitably mitered, and around which corners reinforcements 4 are secured, these corner reinforcements being suitably shaped to close the corners of each flask section to prevent leakage.

5—5 are top and bottom plates, which are secured respectively to a top flange 1^a of each part 1 and the flange 2^a of each part 2.

All the parts may be secured together by any suitable fastenings, such as rivets 6—6. Each flask section is preferably divided at two opposite corners, one line of division being indicated at 7, Fig. 1.

8—9 are interlocking devices provided for the divided corners, in this particular instance the interlocking device 8 being in the form of a hook rigidly secured to one side of the flask section, while 9 represents a

manually operable hook pivotally connected at 9^a to the adjacent side of the flask section, said hooks 8 and 9 cooperating to interlock and hold the two sections of the flask in proper operative relation for use. Suitable bearing reinforcements will be, of course, provided to support the hooks 8 and 9, these being rigidly secured to the sections of the flask which respectively carry said parts.

It may be assumed that the flask section shown in Fig. 1 is the cope, and to that end, following the usual practice, a guide-pin is provided on this part. The guide-pin is of novel construction in that it, like the preceding parts, may be formed of sheet metal of a proper gage to withstand the strain of use and wear and tear. This guide-pin is indicated at 10 and is struck up from wrought metal in such a manner that its rear side appears as channeled, each side edge of each guide-pin being turned back, as at 10^a, and cut along its edge to conform to the corrugated walls of a back-plate 11. The corrugations of the back-plate 11 preferably correspond to the corrugations in the side wall of the nowel section, so as to permit said part to be effectively secured thereto. In the preferred construction, the back-plate 11 of the guide-pin is provided at its front side with reinforcements 12—12, each of which are slotted at 12^a, said slots passing through the back-plate to receive an attaching screw bolt 14, which passes through a suitable opening or perforation in the side wall of the cope where said guide-pin is to be secured. By providing a slotted bolt passage for each guide-pin fastening bolt, the guide-pin 10 may be readily adjusted up or down. The guide-pin construction is shown on a relatively enlarged scale in Figs. 2 and 3 and the method of fastening the guide-pin to the back-plate 11 is best seen in Fig. 3, in which it will be seen the rear edge of the portion 10^a of each guide-pin is provided with integral rivet extensions 10^b—10^b which are passed through perforations in the back-plate 11 and are upset or riveted over to rigidly and permanently secure the pin 10 to the back-plate 11. The top of the guide-pin may be closed in by a plate 15 secured by integral rivets 10^c formed at the upper edge of the parts 10.

The nowel section, which, as already explained, may correspond to the cope section already described, is provided with a suitable socket to receive the guide-pin 10. The socket construction is best seen in Figs. 2 and 3, and may comprise an angular struck-up wrought metal portion 16 channeled at its back to embrace the guide-pin 10, and having turned-back rear edges 16^a secured by integral extensions 16^b to a back-plate 17, corresponding in function to the back-plate 11 of the guide-pin. This back-plate

may have reinforcements 18—18 perforated or slotted and designed to receive screw bolts or other equivalent fastenings 19, whereby said back-plate and the socket proper 16 may be secured to the nowel section. 16^c is a friction spring, which may be struck in from the side of the socket 16 to frictionally press against the guide-pin 10 when contained therein, to hold said parts snugly in frictional contact.

In Fig. 10, I have shown a slightly modified form of corner reinforcement. In this view, it will be seen that the ends of the side pieces A—B of the flask section are not mitered, but are squared off, while the corner reinforcement C is corrugated throughout, said corrugations corresponding with the corrugations in the side sections A—B to register and interlock with the same. These parts C are riveted thereto so as to make a permanent rigid structure. This figure will serve merely to illustrate that I comprehend that various modifications may be made in the construction without departing from the spirit and scope of the invention, said figure illustrating only one of the many modifications that may be adopted.

In manufacture, it will be seen that many economies are attained, since by the production of sets of standard parts the manufacturer may, without additional cost, produce a line of flasks of varying sizes and yet of comparatively the same minimum weight. By the employment of corrugated metal two advantageous ends are attained, to wit, great strength at a minimum of weight and expense, and a capacity for original adjustment to various standard sizes.

In use, the advantage of lightness and great strength and durability are conspicuous. Again, in use the corrugated walls of the flask sections permit the sand to be packed in in such a manner as to interlock in the corrugations, thereby more firmly holding it in place than in the case of a plain flat sided wall against which the sand must adhere rather than interlock. Again, in use, the danger of injury to the flask by coming in contact with molten metal is eliminated. Again, the structure is so rigid and firm that the danger of warping is avoided. Inasmuch as devices of this kind are subjected to the most severe uses, being flung about the foundry, resistance to injury from this cause is another advantage strikingly characteristic of the construction described.

So far as the use of the terms "cope" and "nowel" are employed in the specification or claims, it should be understood that said terms are used interchangeably, for I appreciate that to a very substantial extent the advantages of my invention might be ob-

tained if either one of said sections were constructed in accordance with my invention and the other section constructed in a different manner. Hence, in order to secure adequate protection, it should be understood that from the standpoint of construction, a claim which refers to the construction of the "cope" is intended to cover and dominate similar construction employed in the "nowel".

What I claim is:

1. In a molder's flask of the cope and nowel type, one of the sections thereof constructed of a plurality of sheet or wrought metal parts overlapping at the side of said section.

2. In a molder's flask of the cope and nowel type, one of the sections thereof constructed of a plurality of sheet or wrought metal parts correspondingly corrugated and overlapping at the side of said section.

3. In a molder's flask of the cope and nowel type, one of the sections thereof constructed of a plurality of sheet or wrought metal parts overlapping at the side of said section and arranged to form a substantially rectangular frame.

4. In a molder's flask of the cope and nowel type, one of the sections thereof constructed of a plurality of sheet or wrought metal parts overlapping at the side of said section and arranged to form a substantially rectangular frame divided at two opposite corners, with means for detachably interlocking said frame at said divided corners.

5. In a molder's flask of the cope and nowel type, both of the sections thereof formed of overlapping wrought or sheet metal plates respectively, with a guide pin carried by one of said sections and a socket carried by the other section.

6. In a molder's flask of the cope and nowel type, both of the sections thereof formed of overlapping wrought or sheet metal plates respectively, with an adjustable guide pin carried by one of said sections and an adjustable socket carried by the other section.

7. In a molder's flask of the cope and nowel type, both of the sections thereof formed of overlapping wrought or sheet metal plates respectively, with an adjustable sheet or wrought metal guide-pin carried by one of said sections and an adjustable sheet or wrought metal socket carried by the other section.

8. In a molder's flask of the cope and nowel type, one of said sections having its side formed of three wrought or sheet metal plates, one of said plates overlapping the edges of both of the other plates.

9. In a molder's flask of the cope and nowel type, one of said sections having its side formed of three wrought or sheet metal

plates, one of said plates overlapping the edges of both of the other plates, all of said plates being shaped along their abutting surfaces to interlock.

10. In a molder's flask of the cope and nowel type, a cope of substantially rectangular outline, one side wall thereof comprising an upper and lower plate, a flange at the upper edge of the former and a flange at the lower edge of the latter, and an intermediate plate overlapping said upper and lower plate, and means to secure all of said plates together.

11. In a molder's flask of the cope and nowel type, a cope of substantially rectangular outline, one side wall thereof comprising an upper and lower plate, a flange at the upper edge of the former and a flange at the lower edge of the latter, and an intermediate plate overlapping said upper and lower plate, and means to secure all of said plates together, the adjacent surfaces of all of said plates being shaped to interlock.

12. In a molder's flask of the cope and nowel type, a cope of substantially rectangular outline, one side wall thereof comprising an upper and lower plate, a flange at the upper edge of the former and a flange at the lower edge of the latter, and an intermediate plate overlapping said upper and lower plate, means to secure all of said plates together, and means for securing all of the side walls of said section together at their meeting ends to form corners.

13. In a molder's flask of the cope and nowel type, a cope of substantially rectangular outline, one side wall thereof comprising an upper and lower plate, a flange at the upper edge of the former and a flange at the lower edge of the latter, and an intermediate plate overlapping said upper and lower plate, means to secure all of said plates together, and means for securing all of the side walls of said section together at their meeting ends to form corners, said means at two opposite corners including snap fastenings, whereby said section may be divided or opened diagonally.

14. In a molder's flask of the cope and nowel type, one section of the same comprising a wrought metal body composed of a plurality of plates at each side, the other section being correspondingly constructed, a wrought metal guide pin adjustably carried by the cope, and a guide pin socket adjustably carried by the nowel.

15. In a molder's flask of the cope and nowel type, the sides of one of the sections of said flask being formed of a plurality of wrought or sheet metal parts longitudinally connected along a line between the top and bottom of said section.

16. In a molder's flask of the cope and nowel type, one of the sections thereof con-

structed of a plurality of overlapping sheet or wrought metal side plates, the overlapping surfaces being grooved or corrugated to interlock.

5 17. In a molder's flask of the cope and nowel type, one side at least of one of said sections constructed of a plurality of sheet or wrought metal parts connected longitudi-
10 nally of said side and between the top and bottom thereof.

18. In a molder's flask of the cope and nowel type, one side at least of one of said sections constructed of a plurality of sheet or wrought metal parts overlapping and

connected longitudinally of said side and 15 between the top and bottom thereof.

19. In a molder's flask of the cope and nowel type, one side at least of one of said sections constructed of a plurality of sheet or wrought metal parts overlapping and 20 connected longitudinally of said side and between the top and bottom thereof, the overlapping portions being shaped to interlock.

HENRY G. VOIGHT.

Witnesses:

M. S. WARD,

HARRY E. MILES.