

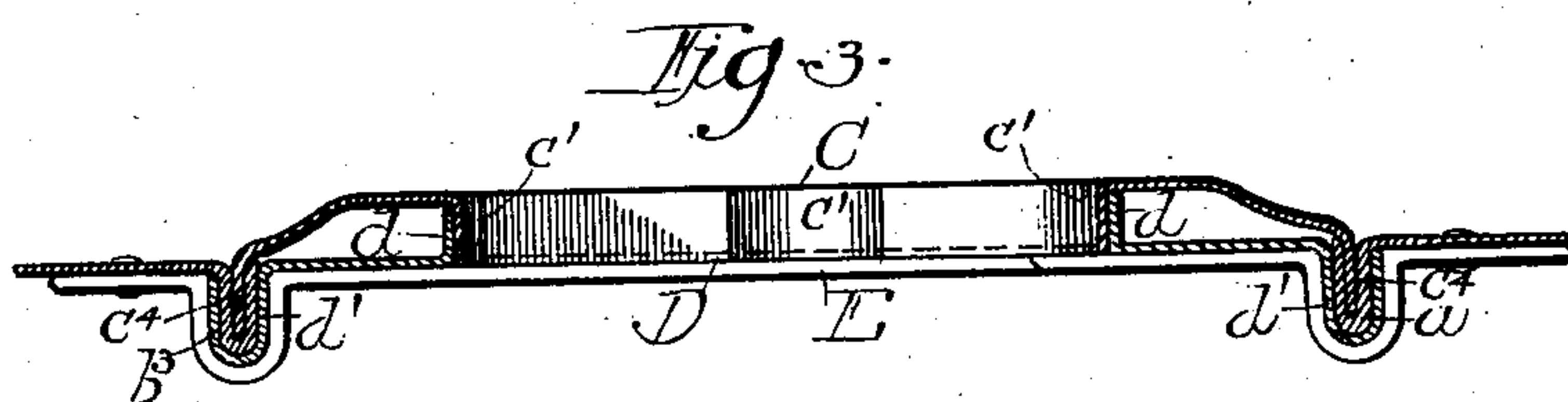
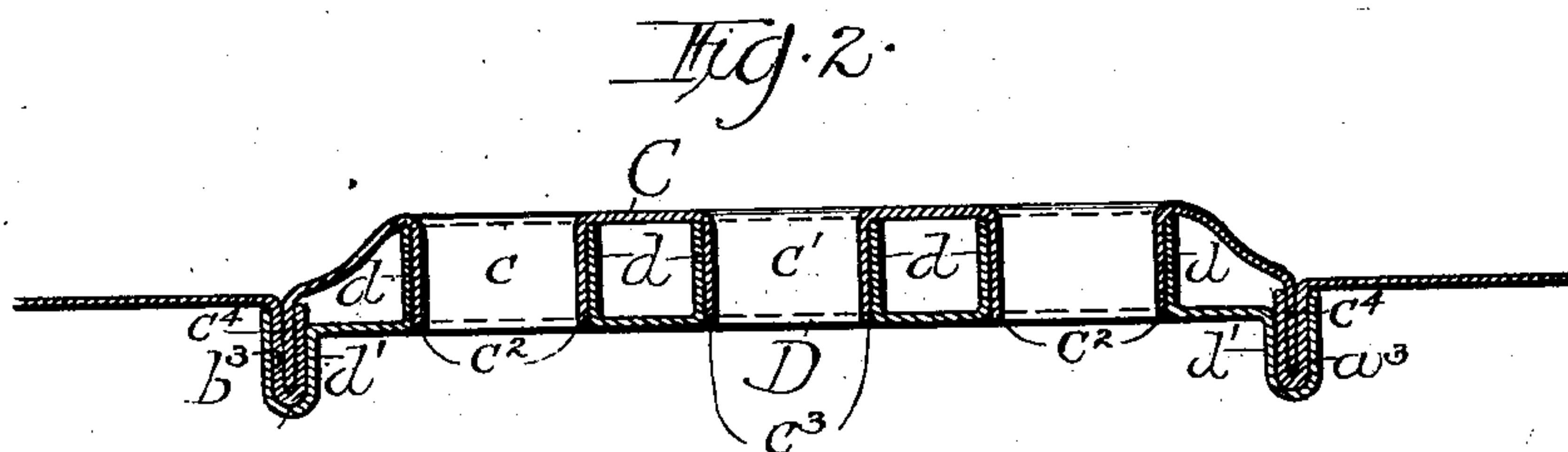
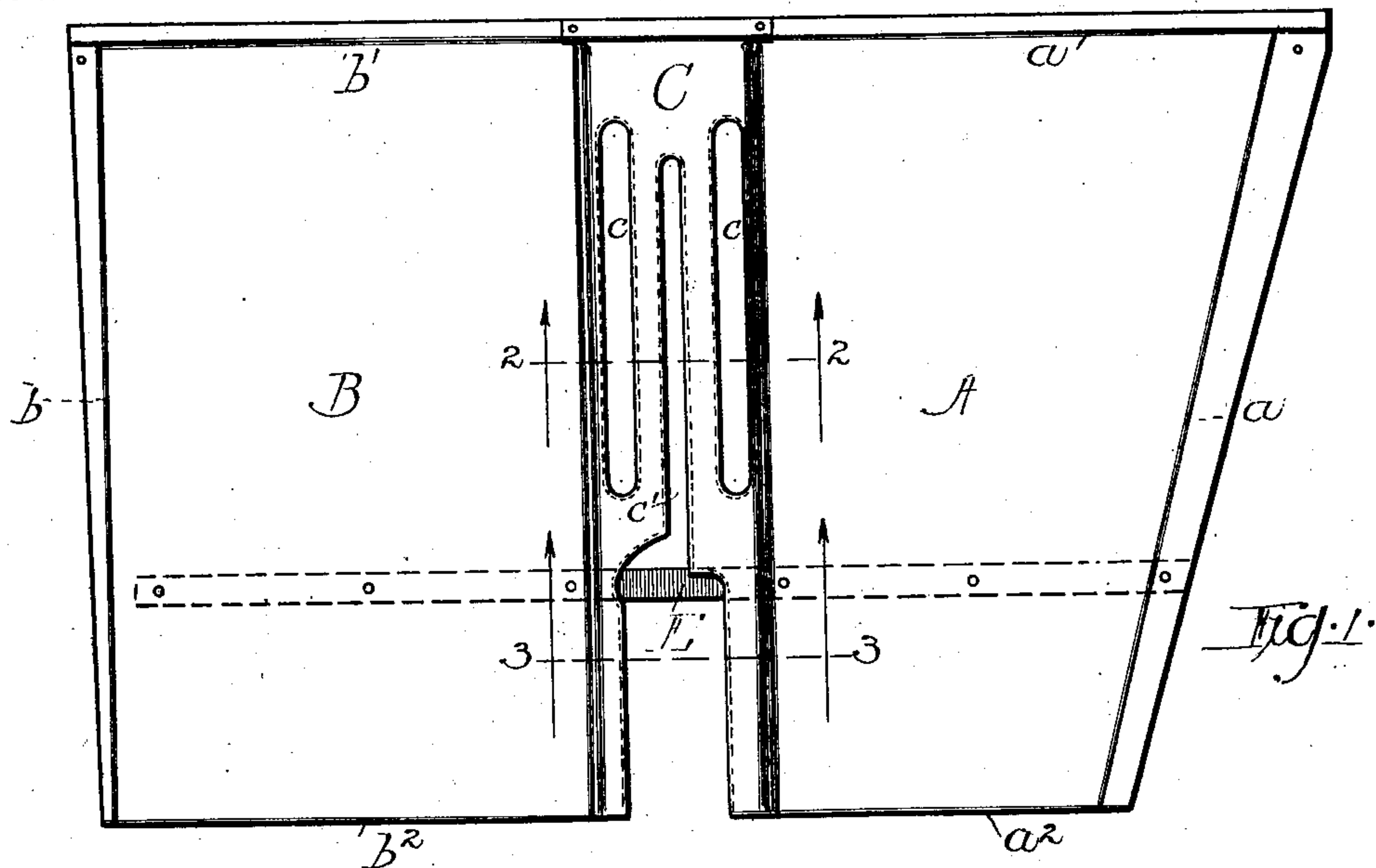
No. 754,609.

PATENTED MAR. 15, 1904.

A. REINHARDT.  
GRAIN DECK FOR HARVESTERS.  
APPLICATION FILED DEC. 14, 1903.

NO MODEL.

3 SHEETS—SHEET 1.



Witnesses:  
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Fred W. Hoffmeister

Inventor:  
Albert Reinhardt  
By J. C. Varnes  
Atty.

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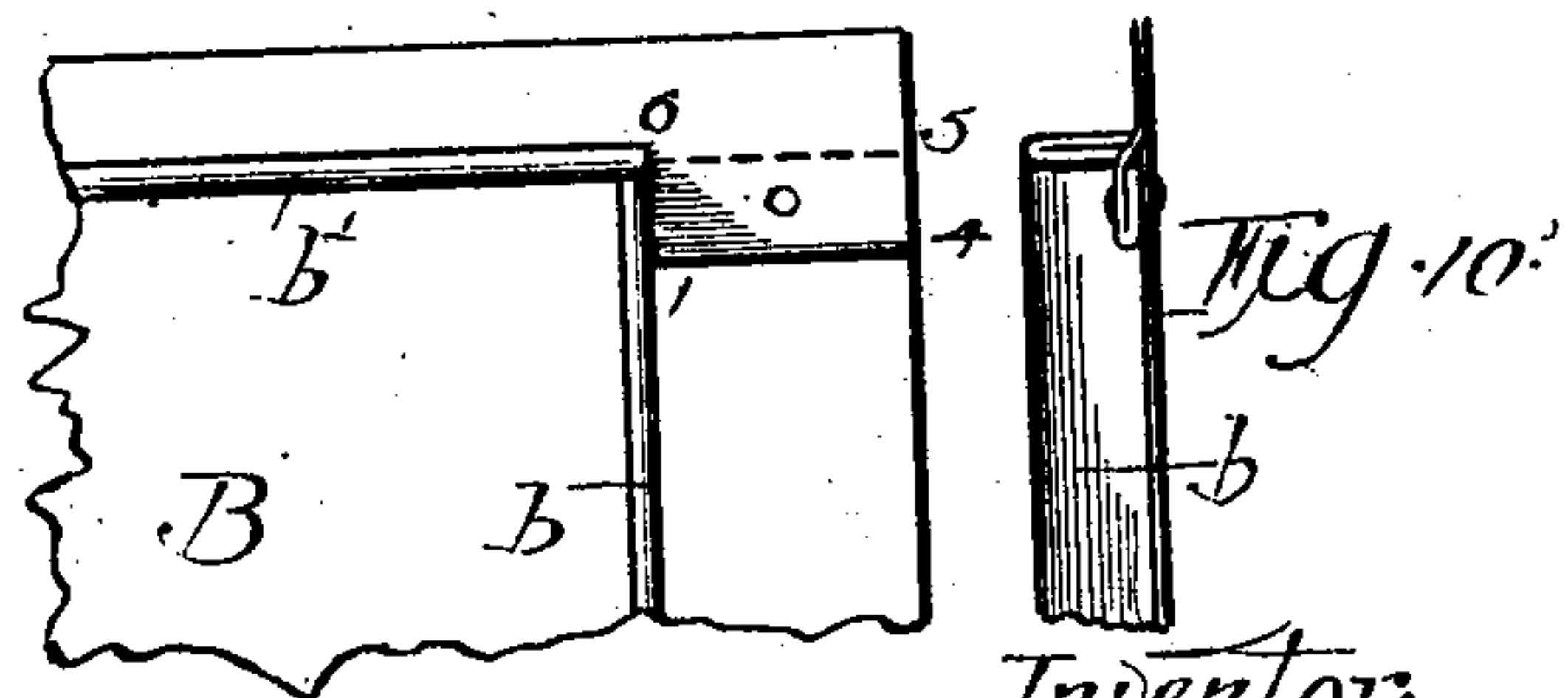
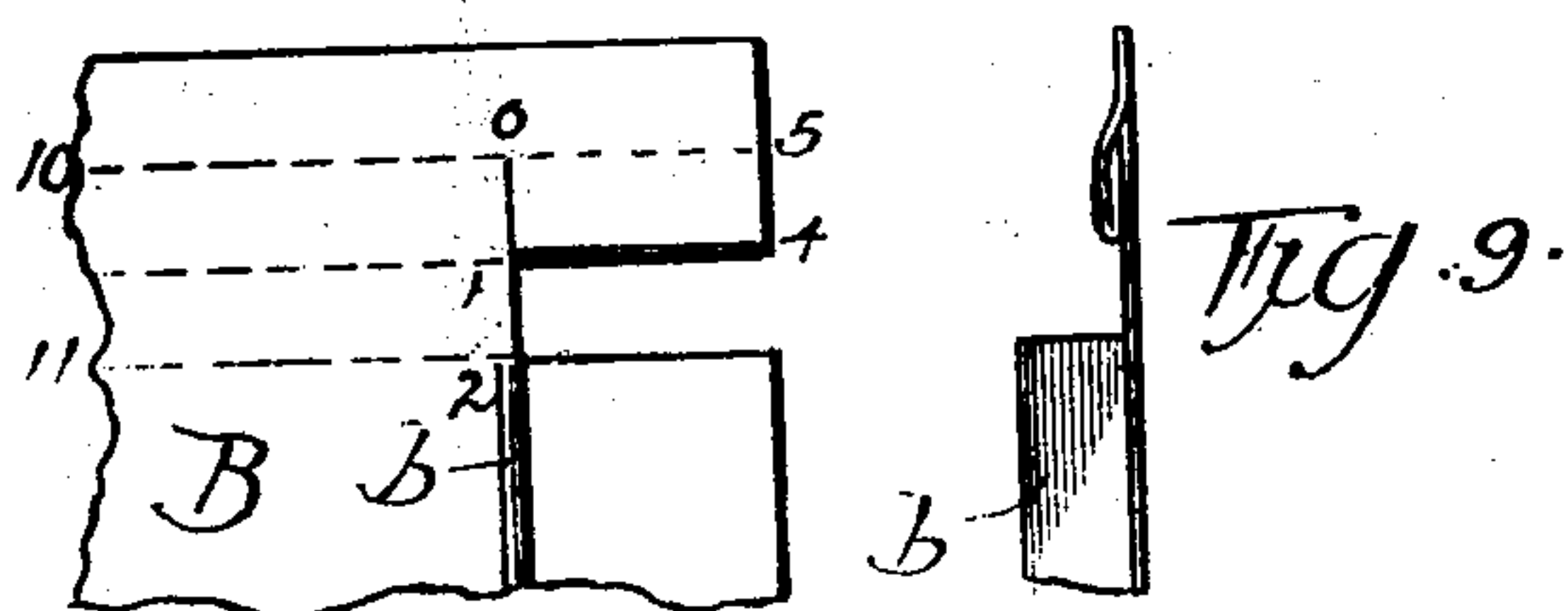
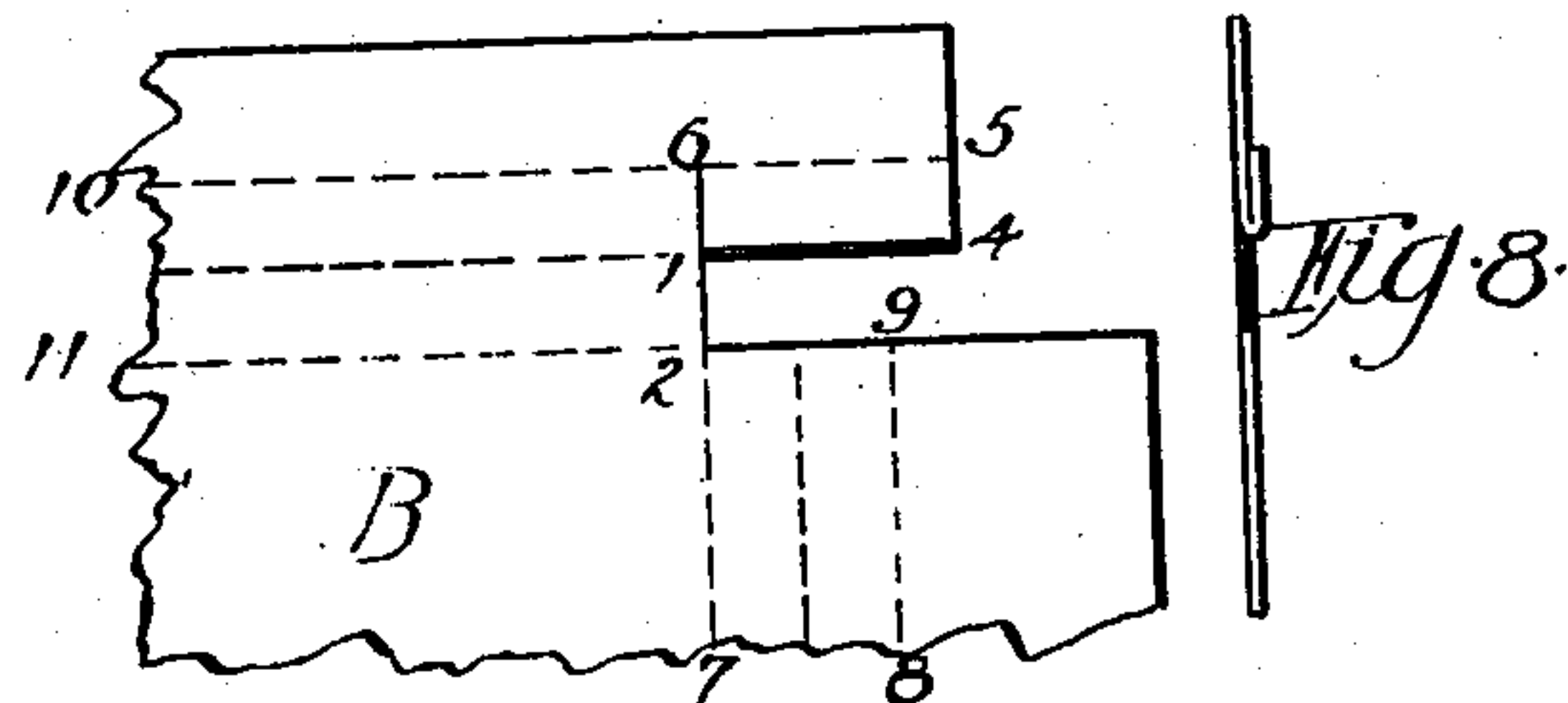
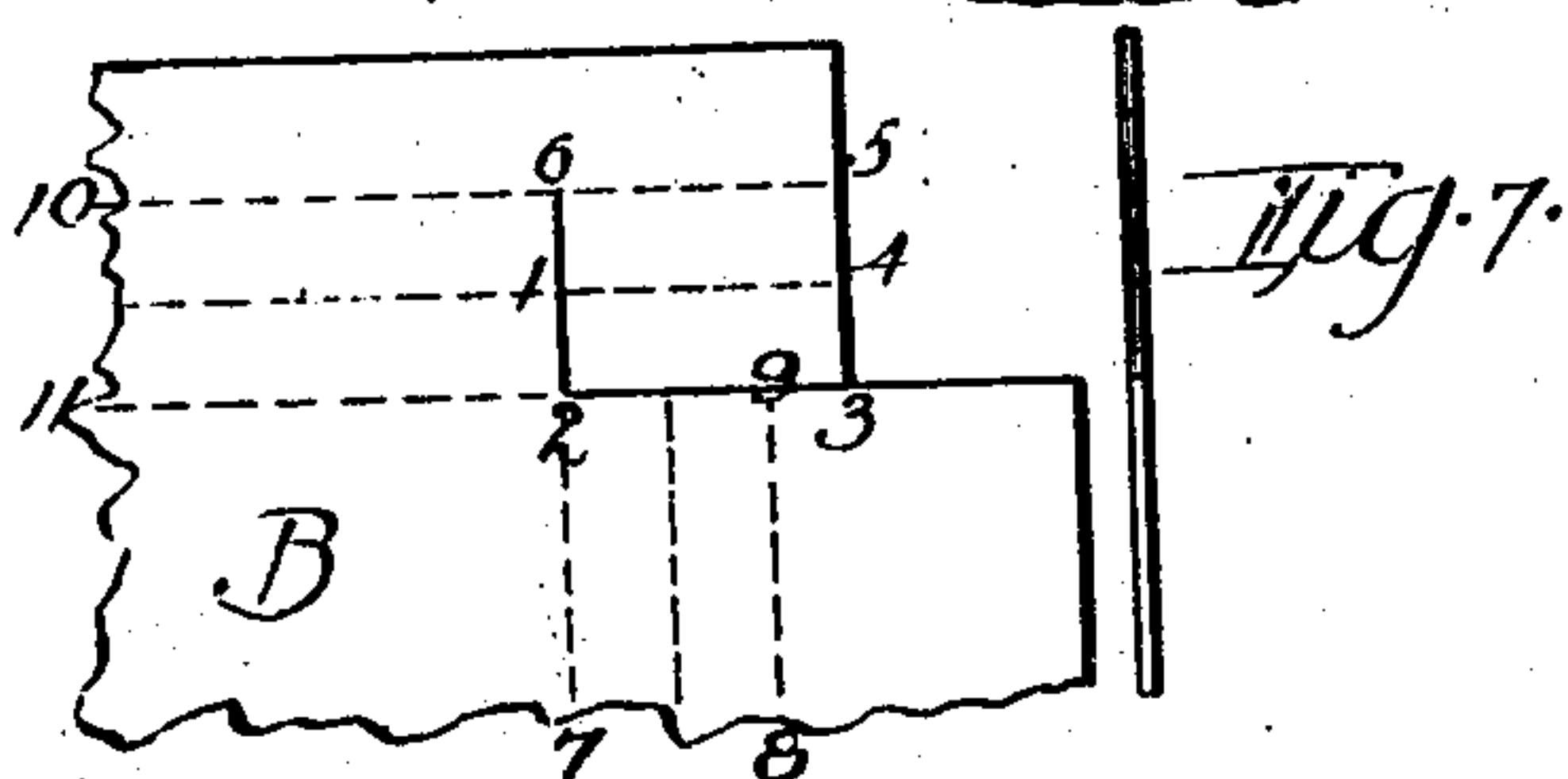
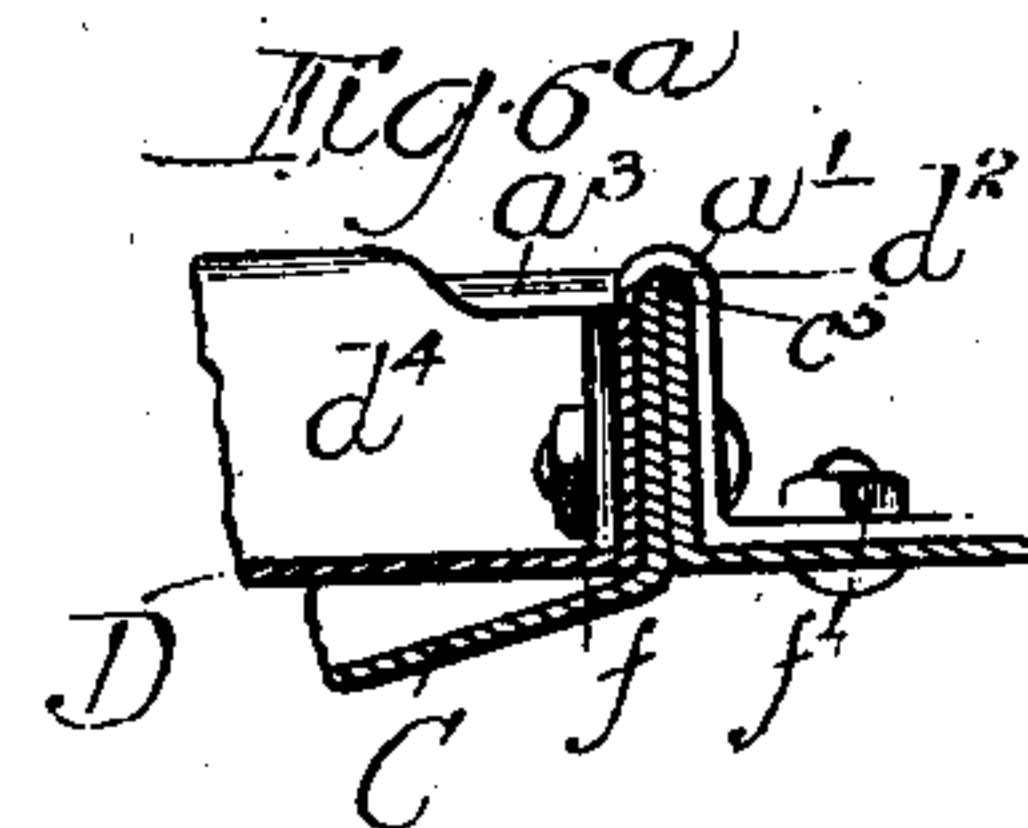
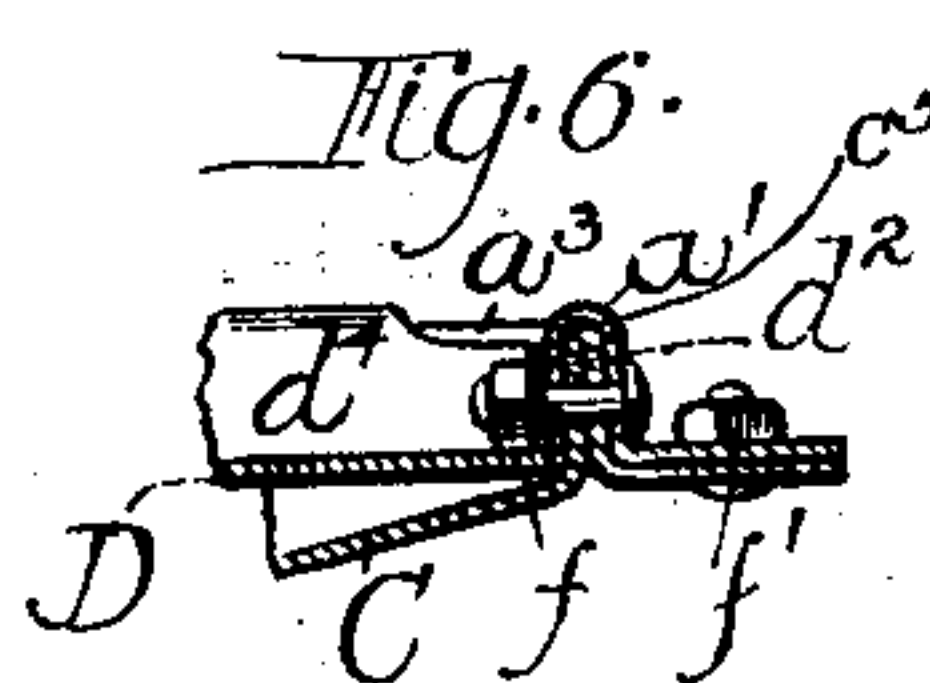
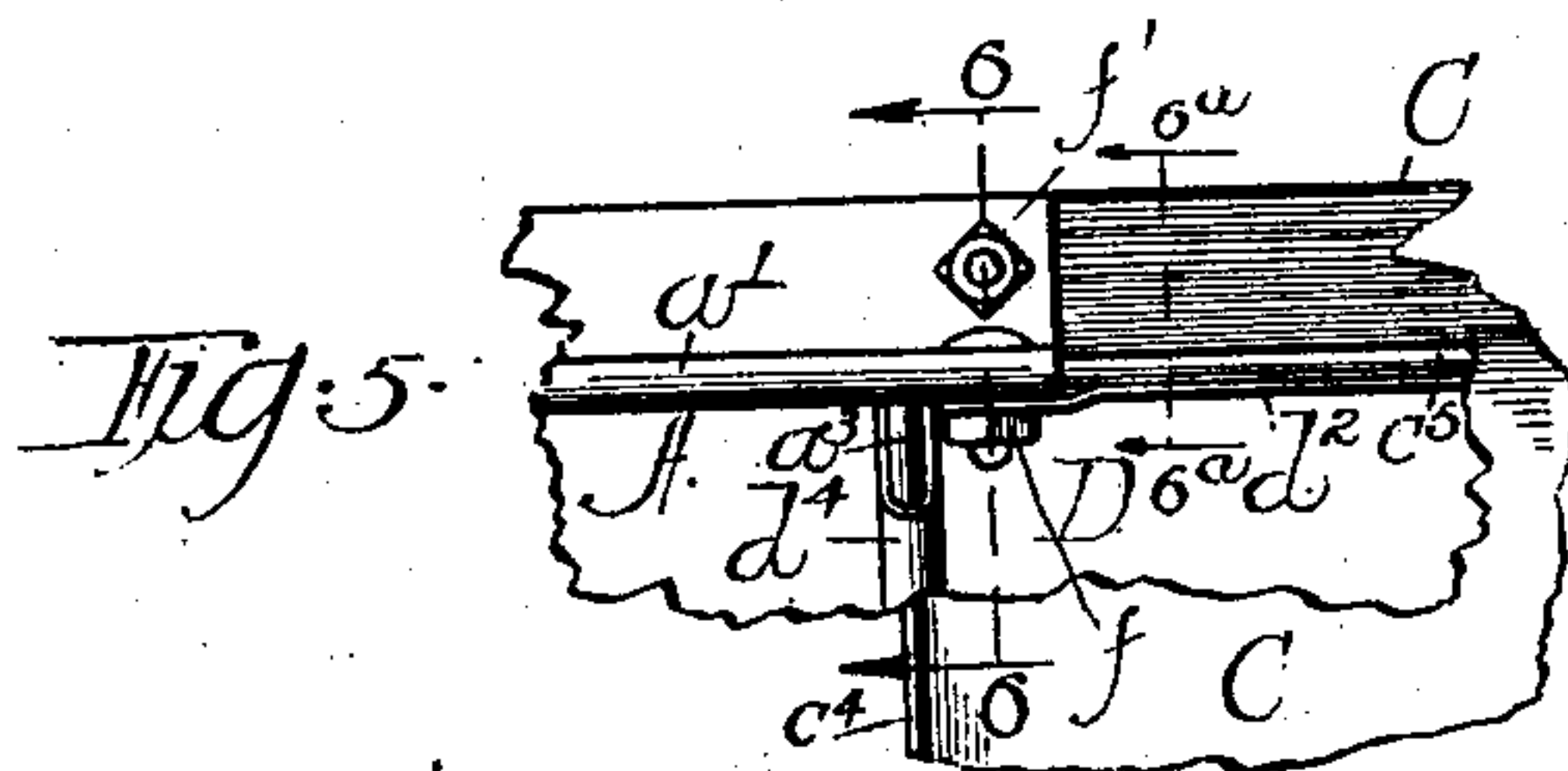
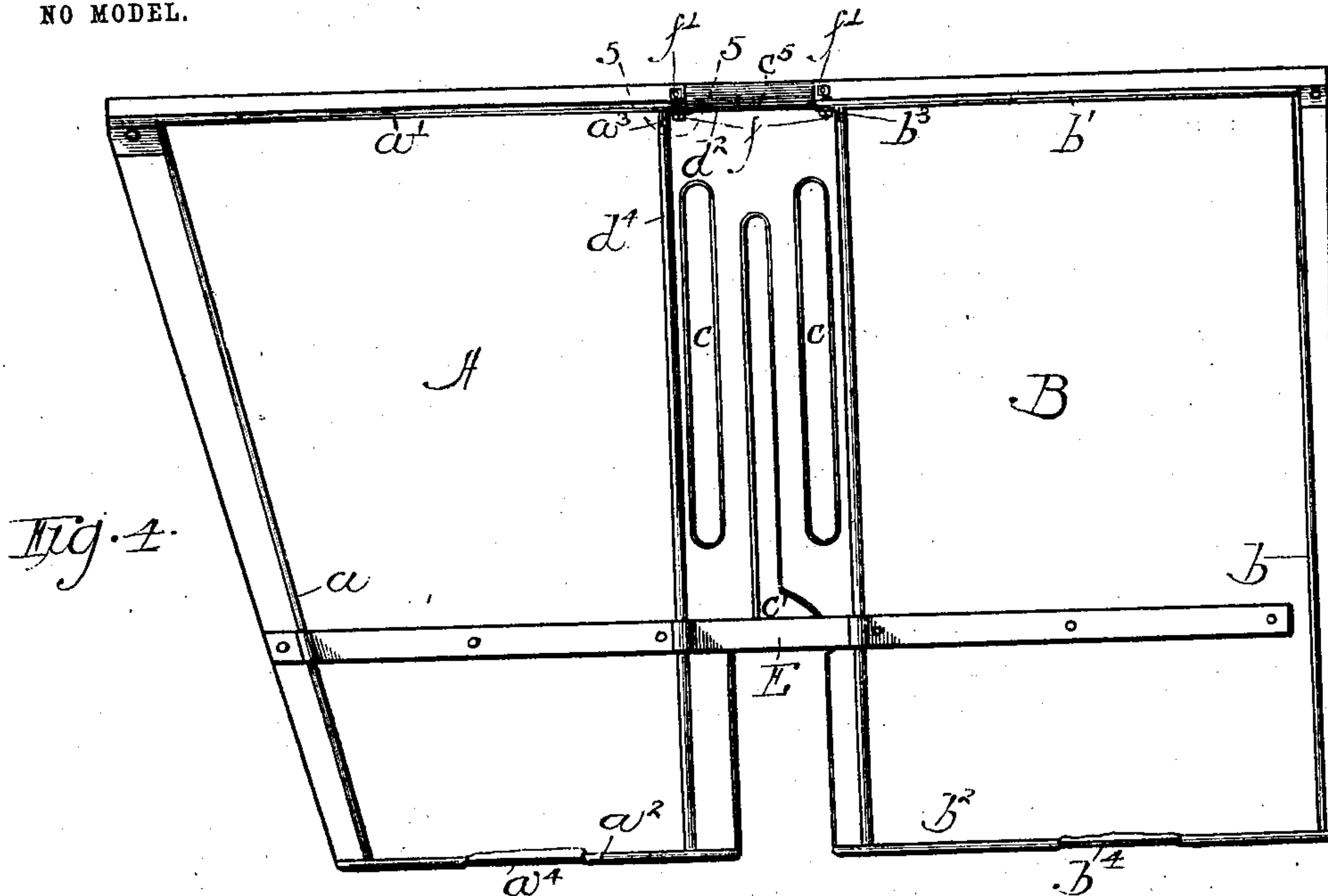
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A. REINHARDT.  
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3 SHEETS—SHEET 2.

NO MODEL.



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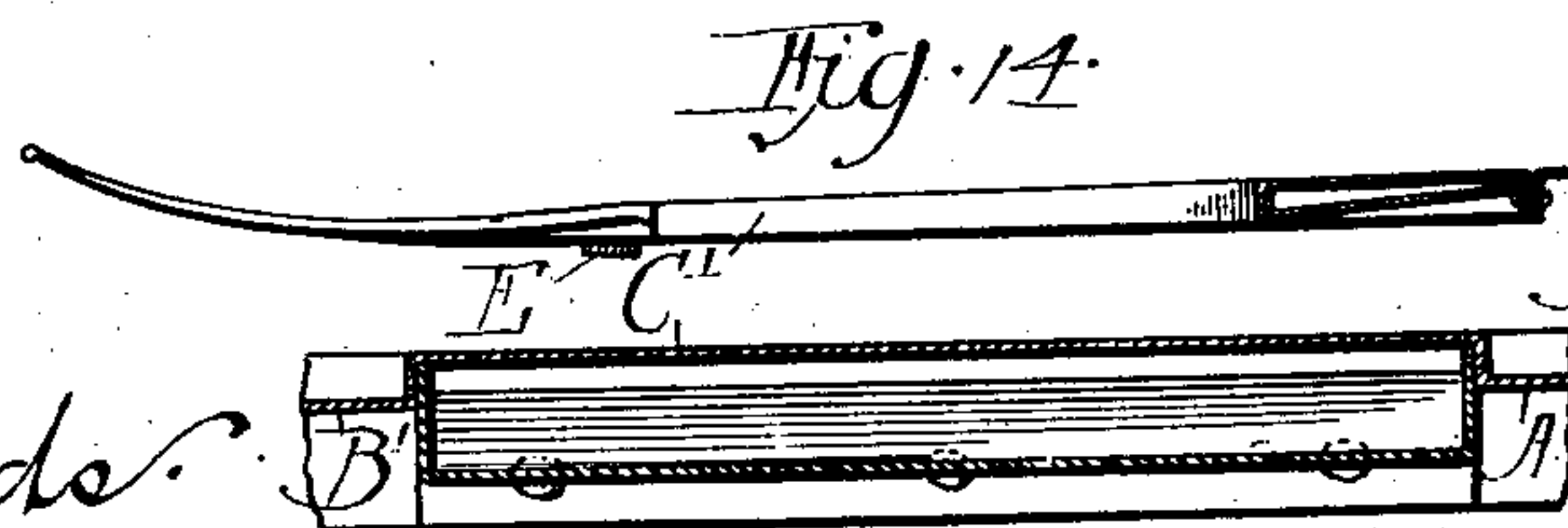
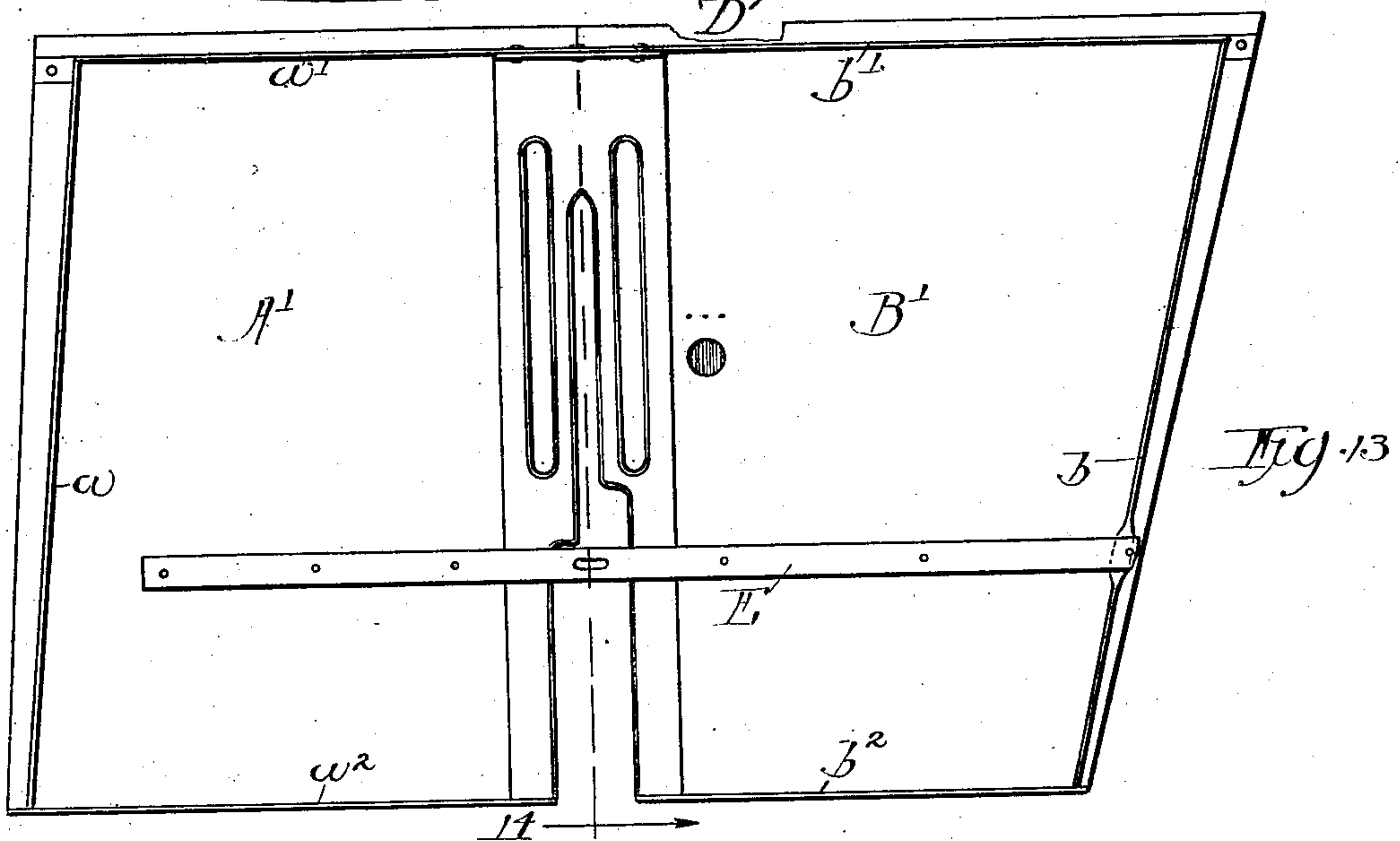
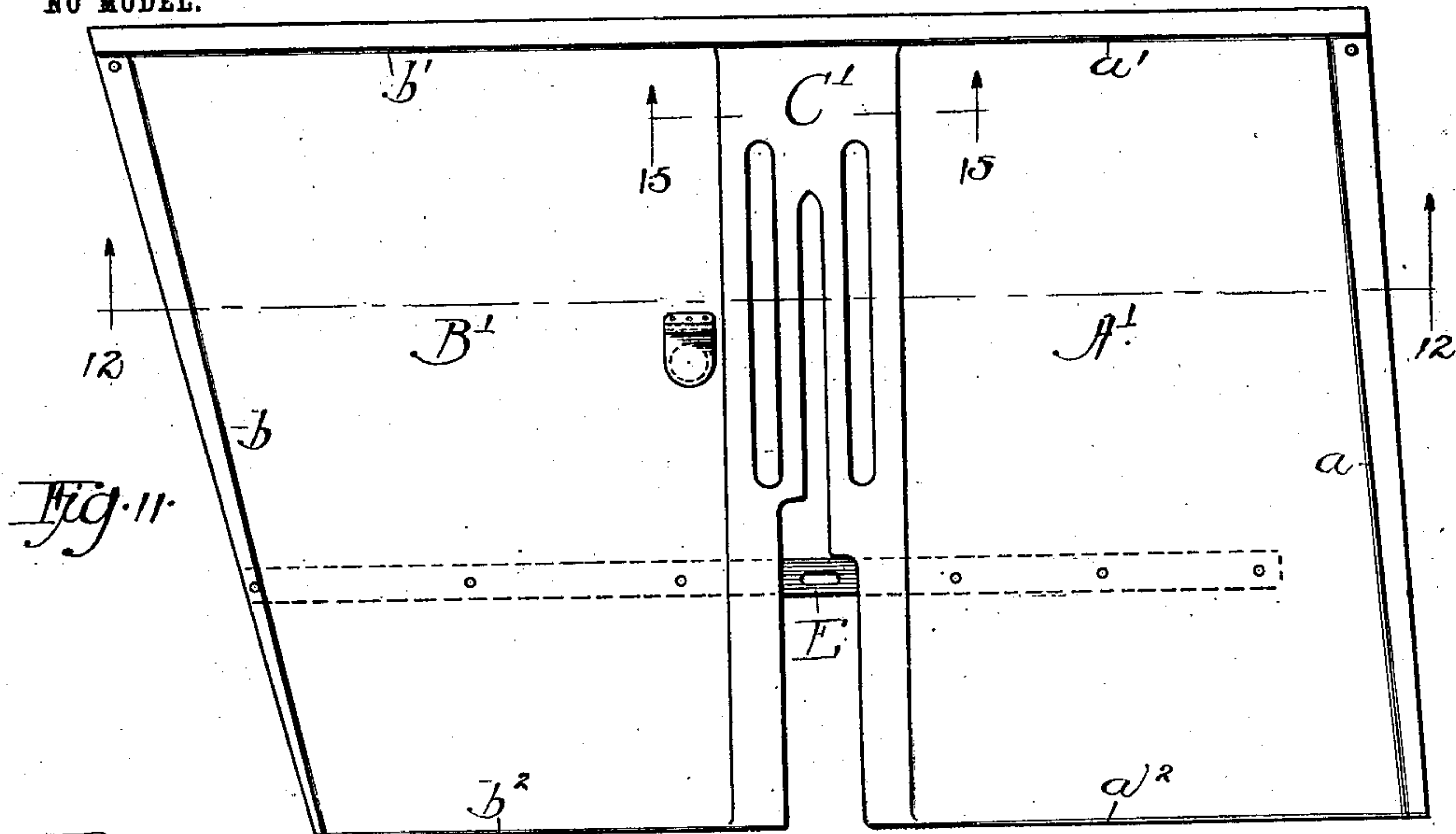
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NO MODEL.

3 SHEETS—SHEET 3.



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*Fig. 15.*

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# UNITED STATES PATENT OFFICE.

ALBERT REINHARDT, OF CHICAGO, ILLINOIS, ASSIGNOR TO INTERNATIONAL HARVESTER COMPANY, A CORPORATION OF NEW JERSEY.

## GRAIN-DECK FOR HARVESTERS.

SPECIFICATION forming part of Letters Patent No. 754,609, dated March 15, 1904.

Application filed December 14, 1903. Serial No. 185,022. (No model.)

*To all whom it may concern:*

Be it known that I, ALBERT REINHARDT, a citizen of the United States, residing at Chicago, in the county of Cook and State of Illinois, have invented certain new and useful Improvements in Grain-Decks for Harvesters, of which the following is a complete specification.

The object of this invention is to construct a deck of the fewest possible number of component parts, to strengthen the deck with ribs, and form such ribs from an integral portion of the material forming said deck.

Referring to the drawings, Figure 1 represents a plan view of a grain-deck embodying my improved construction. Fig. 2 is a partial transverse section of same, as indicated by the line 2 2 of Fig. 1. Fig. 3 is a similar view taken on the line 3 3 of Fig. 1. Fig. 4 is a view of the deck from the under side. Fig. 5 is an enlarged view of that portion of the deck inscribed by the dotted line 5 5 of Fig. 4. Fig. 6 is a section, as indicated by the line 6 6 of Fig. 5. Fig. 6<sup>a</sup> is a similar section, as indicated by the line 6<sup>a</sup> of Fig. 5. Figs. 7, 8, 9, and 10 are enlarged details of the upper right-hand corner of Fig. 4, showing that portion of the deck as it appears in the successive steps in the formation of the ribs of the deck, and more particularly the manner of effecting the connection of the folds or ribs at the corner thereof. Fig. 7 shows a plan view of the corner of the deck viewed from beneath after being cut and before being folded. Fig. 8 shows a small portion of the cut part or lip turned down and under in a manner clearly indicated in the side view of the same figure. Fig. 9 shows the same after the forward rib has been formed, this edge of the deck being brought flush with the end of the projection turned down and under, as shown in Fig. 8. Fig. 10 shows the upper rib formed, the projection or lip passing over that portion of the deck lying between the forward rib or fold and the edge of the deck. Figs. 11 to 15, inclusive, illustrate a modified construction embodying the features set forth in the invention, Fig. 11 being a plan view of the

deck, Fig. 12 a transverse section on the line 12 12 of Fig. 11, Fig. 13 a view from beneath, Fig. 14 a section on the line 14 14 of Fig. 13, while Fig. 15 is an enlarged partial transverse section of the deck, as indicated by the line 15 15 of Fig. 11.

Heretofore, so far as known to applicant, it has been customary to strengthen the deck with cleats or other rigid members secured thereto, while the deck herein shown has strengthened ribs or folds in the center and sides, the ribs or folds being formed of the material composing the deck and of a sufficient number that the deck may be formed of much lighter material and formed in a single operation, thus greatly reducing the cost both in labor and material.

Figs. 1 to 10, inclusive, illustrate a deck comprised of four parts—viz., the forward and rearward sections and a removable central section consisting of an upper and lower member. Such a construction will enable the upper central member to be replaced with a new one when worn from use.

Figs. 11 to 15 show a modified form of the deck, a form comprised of two parts—viz., the deck proper and the supplemental portion beneath the central part of the deck.

Referring to the drawings, A designates the forward section of the deck for a (left-hand) harvester, B the rearward section of same, C the upper central section which for convenience will be termed the "deck-head" and which is provided with the slot *c* to receive the packers of the machine and the slot *c'* to receive the needle.

D is a supplemental member located beneath the deck-head C, supporting said deck-head and also bracing the two side sections A and B.

To give rigidity to the sheets of metal forming the sections of the deck A and B, folds or ribs are formed therein at or near their margins, the forward and upper ribs *a* and *a'*, respectively, on the section A, and the rearward and upper ribs *b* and *b'*, respectively, on the section B. (See Figs. 1 and 4.) These ribs are formed by simply making a fold in the metal near the margin, the metal being cut and folded at its corners in the manner illus-



trated in Figs. 7, 8, 9, and 10. Referring to these figures, Fig. 7 is an enlarged detail of the upper right-hand corner of Fig. 4 after the sheet metal has been cut, but before it has been folded. The groups formed of three dotted lines parallel with the edge of the metal and with each other in these figures indicate the folding lines. In Fig. 8 the lip of metal inclosed by the lines 1 2 3 4, Fig. 7 has been turned back to a position coincident with the rectangular space 1 4 5 6, as clearly shown in the two views of this figure. In Fig. 9 the rib  $b$  has been formed by producing a fold of the metal lying within the space 2 7 8 9 of Figs. 7 and 8, the line 8 9 becoming coincident with the line 7 2. In Fig. 10 the fold  $b'$  has been produced by folding the metal within the space 2 6 10 11, the line 6 10 becoming coincident with the line 2 11, and the lip of double thickness 1 4 5 6 passing down and over the metal lying between the fold or rib  $b$  and the edge of the deck. In this manner ribs are formed on the edges which constitute the margins of the deck of the sections A and B, with the exception of the lower edges  $a^2$  and  $b^2$ , which are preferably strengthened by rolling or forming a rod or wire  $a^4$  and  $b^4$ , respectively, in the edge of the sheet metal in a manner well known.

On the inner edge of the deck-sections A and B or on those edges adjacent to the members C and D of the deck-head downward folds or ribs  $a^3$  (see Fig. 2) are formed, the opening being above, and in these folds are inclosed the lateral downward-turned edges  $c^4$  of the upper member C of the deck-head. This member C is provided with the slots  $c$  and  $c'$  for the purpose before mentioned, the metal displaced in the formation thereof being pressed through to form downwardly-projecting annular flanges  $c^2$  and  $c^3$  about such slots. The member D is provided with slots to register with the slots  $c$  and  $c'$  in the member C, the material displaced in the formation thereof, as in the said member C, being formed into annular flanges  $d$ , surrounding such slots and of a size slightly larger than the flanges  $c^2$  and  $c^3$ . The effect of this will be to permit the annular flanges  $d$  to telescope the flanges  $c^2$  and  $c^3$ , making a very rigid construction of the members C and D and with very light material. The lower member D is provided on its lateral edges with U-shaped folds  $d'$ , adapted to engage the folds  $a^3$  and  $b^3$  of the deck-sections A and B, respectively.

Extending transversely of the deck on its lower side and beneath is the tie-bar E, conforming in outline to the surface presented thereto by the deck, as shown in Fig. 3.

The upper end of the deck-head member C is provided with a fold  $c^5$ , which abuts the downturned edge  $d^2$  on the upper end of the lower deck-head member D. The fold  $c^5$  at its ends is inclosed by the folds  $a'$  and  $b'$  of the

deck portions A and B, respectively, the connection with both being the same. The connection of the fold  $c^5$  with the section A is shown in Figs. 5, 6, and 6<sup>a</sup>. The parts are fastened together with the bolts  $f$  and  $f'$ , the bolt  $f$  securing the rib or fold portions of the deck, while  $f'$  secures the overlapping margins between the folds  $a'$  and  $b'$  and the upper edge of the deck. By removing these bolts the parts of the deck C and D can be slipped out from between the deck-sections A and B.

Figs. 11, 12, 13, 14, and 15 show a modified or alternative form involving the principles of construction set forth in the deck already described. The modification consists in constructing the deck of two instead of four parts and, in effect, dispensing with the removable deck-head. A' and B' represent the rearward and forward portions of the deck and are formed of a single piece, the part C' being also integral with the adjacent portions A' and B'. The slots for the packers are formed in the manner already described, the annular flanges surrounding the slots being made from the material in the formation of the slots. The supplemental support D' beneath the portion C' is slotted to register with the slots in the said portion C', the annular flanges surrounding said slots telescoping with each other, as previously described and as clearly shown in Fig. 12. The ribs or folds are formed on either side and on the upper side of the deck, as shown and described in the preferred form set forth.

What I claim as my invention, and desire to secure by Letters Patent, is—

1. A grain-deck for harvesters having ribs or folds formed of and integral with the material constituting the deck, the ribs or folds being formed at or near the edge of the said deck on the upper, the right and the left hand sides thereof, substantially as described.

2. A grain-deck for harvesters having ribs or folds formed of and integral with the material constituting the deck, the ribs or folds being formed at or near the edge of the said deck on the upper, the right and the left hand sides thereof, and a wire formed in the lower edge of said deck, substantially as described.

3. A grain-deck for harvesters comprising a forward section provided with marginal folds on three edges thereof, a rearward section also provided with marginal folds on three edges thereof, and a slotted, central removable deck-head connected to and intermediate of the said forward and rearward sections, substantially as described.

4. A grain-deck for harvesters comprising a forward and a rearward section provided with marginal folds and a slotted, central and ribbed deck-head intermediate of and connected with the said forward and rearward sections, substantially as described.

5. A grain-deck for harvesters comprising a forward and a rearward section provided with



marginal folds and a slotted central and removable deck-head intermediate of the said forward and rearward sections with which it connects, substantially as described.

5 6. A grain-deck for harvesters comprising a forward and a rearward section provided with marginal folds, and a slotted and removable central deck-head consisting of a corresponding upper and lower member intermediate of  
10 and connected with the said forward and rearward sections of said deck, substantially as described.

7. A grain-deck for harvesters comprising a forward and a rearward section having marginal folds on the upper, right and left hand  
15 sides thereof, a slotted and removable central deck-head consisting of a corresponding upper and lower member, the said upper member having its lateral edges turned down and  
20 gripped by the inner folds of the adjacent forward and rearward sections of said deck, the said lower member of the deck-head having slots and flanges to register with the corresponding slots and flanges of the upper member, and having U-shaped folds on its lateral  
25 edges inclosing the folds on the adjacent edges of the forward and rearward sections of said deck, substantially as described.

8. A grain-deck for harvesters comprising a  
30 forward and a rearward section, each provided with marginal folds, and a slotted and removable central deck-head consisting of a member intermediate of and connected with the said forward and rearward section of said  
35 deck, and a tie-bar rigidly securing together the forward and rearward sections of the deck near the lower edge thereof, substantially as described.

9. A grain-deck for harvesters consisting of  
40 a forward, a rearward and a central section, the said forward and rearward sections being provided with marginal folds opening upwardly, and the central section having downwardly-turned edges which are gripped by the adjacent folds of the said forward and rearward  
45 sections, and means for securing the three

sections in a relatively fixed position, substantially as described.

10. A grain-deck for harvesters consisting of a forward, a rearward and a central section, 50 the said forward and rearward sections being provided with marginal folds opening upwardly, and the central section comprising an upper and a lower member, the said upper member having its lateral edges turned down- 55 wardly and gripped by the adjacent marginal folds of the forward and rearward sections of the deck, the said lower member of the central section fitting to the said upper member and engaging and inclosing the adjacent folds 60 of the forward and rearward sections of the deck, and means for securing the several parts in a relatively fixed position, substantially as described.

11. A grain-deck for harvesters consisting 65 of a forward, a rearward and a central section, the central section being comprised of an upper and a lower member, the said forward and rearward sections being provided with marginal folds which engage the upper and lower 70 members of the central section, the said upper and lower members of the central section having formed on their upper edges ribs or folds which engage each other and are themselves engaged by the folds or ribs on the upper 75 edge of the rearward and forward sections of said deck, the several parts being held in a relative fixed position by bolts, substantially as described.

12. A grain-deck for harvesters consisting 80 of a forward, a rearward and a central section, the several sections being provided with marginal folds on their edges, the folds on the adjacent edges of which serve to form connecting means for the said sections, and means 85 for holding the several sections in a relatively fixed position, substantially as described.

ALBERT REINHARDT.

In presence of—

TONIS H. ALFEDS,  
J. C. WARNES.