

No. 689,665.

Patented Dec. 24, 1901.

J. WILDING.
FRAME FORMING BRACKET.

(Application filed Feb. 20, 1901.)

(No Model.)

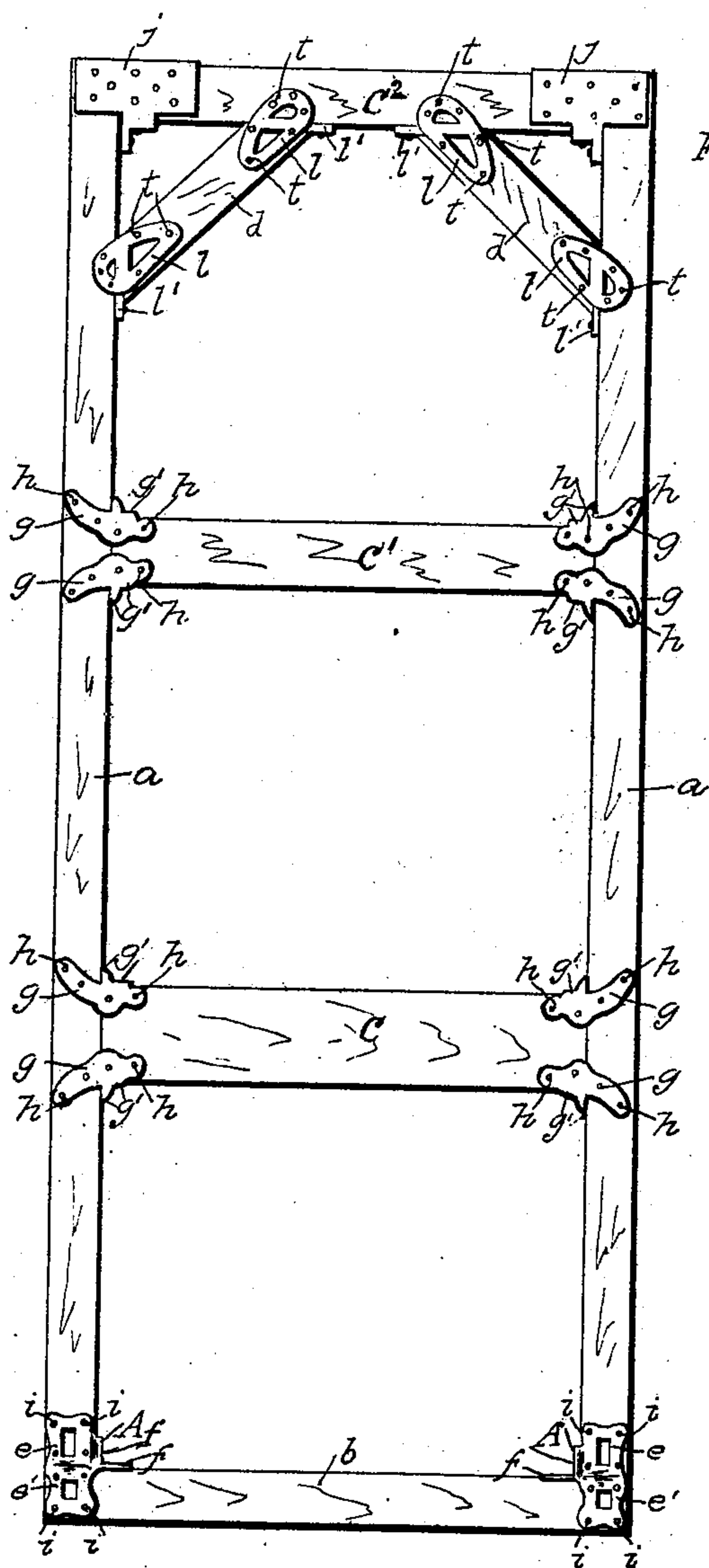


Fig. 1

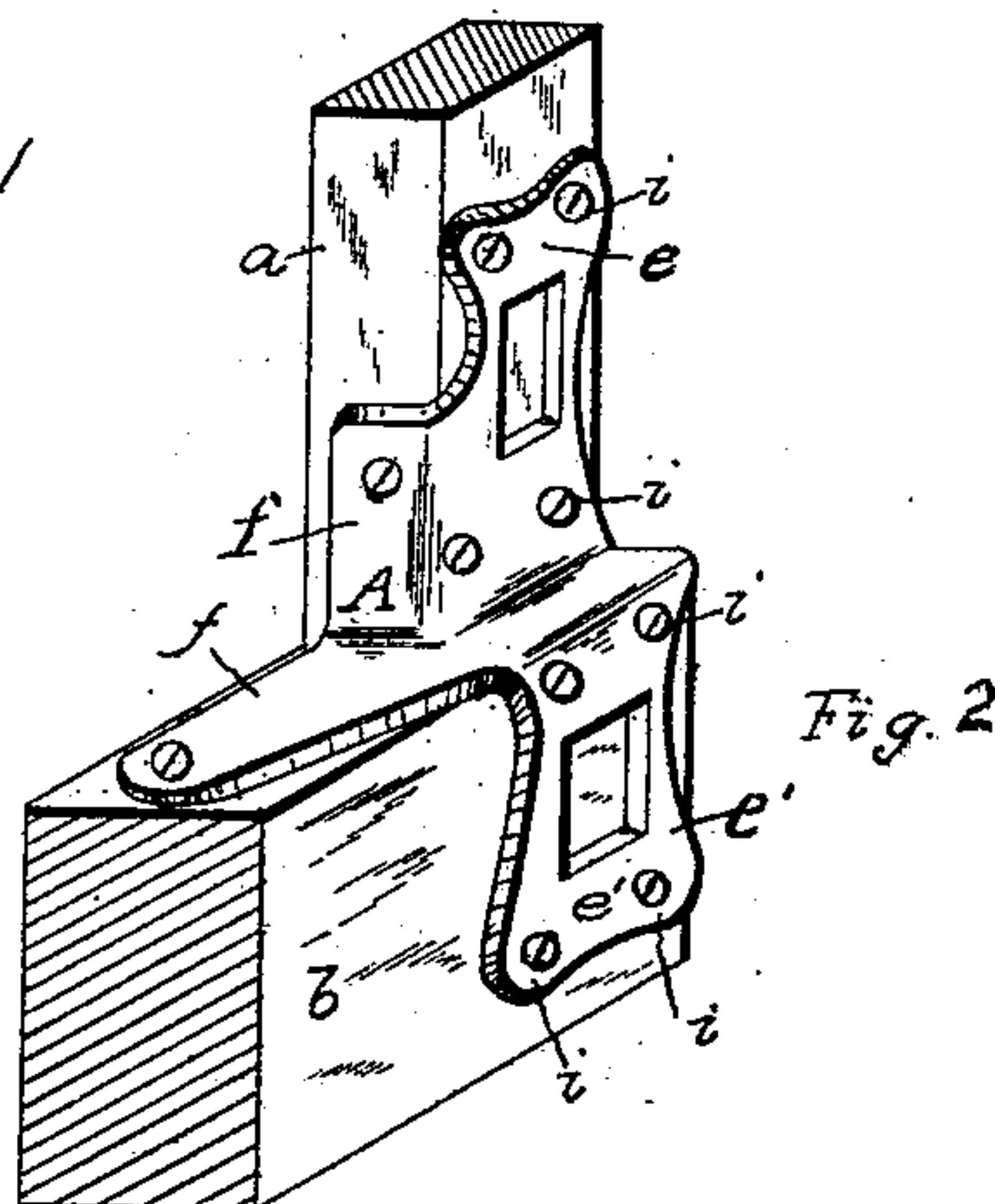


Fig. 2

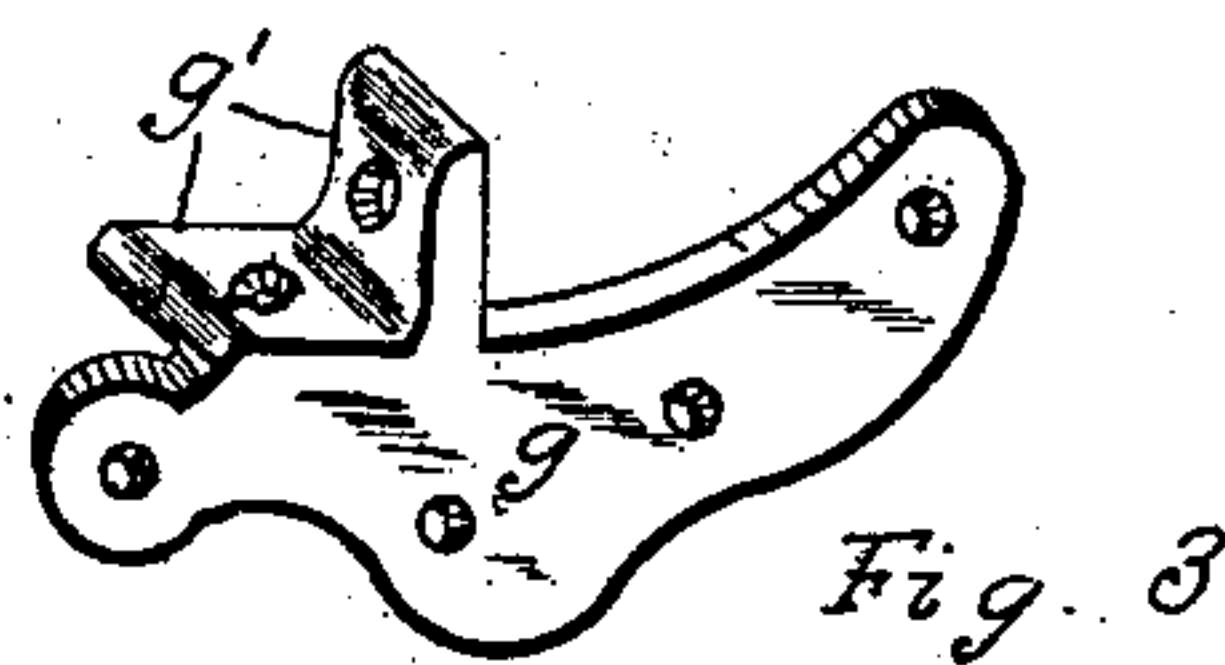


Fig. 3

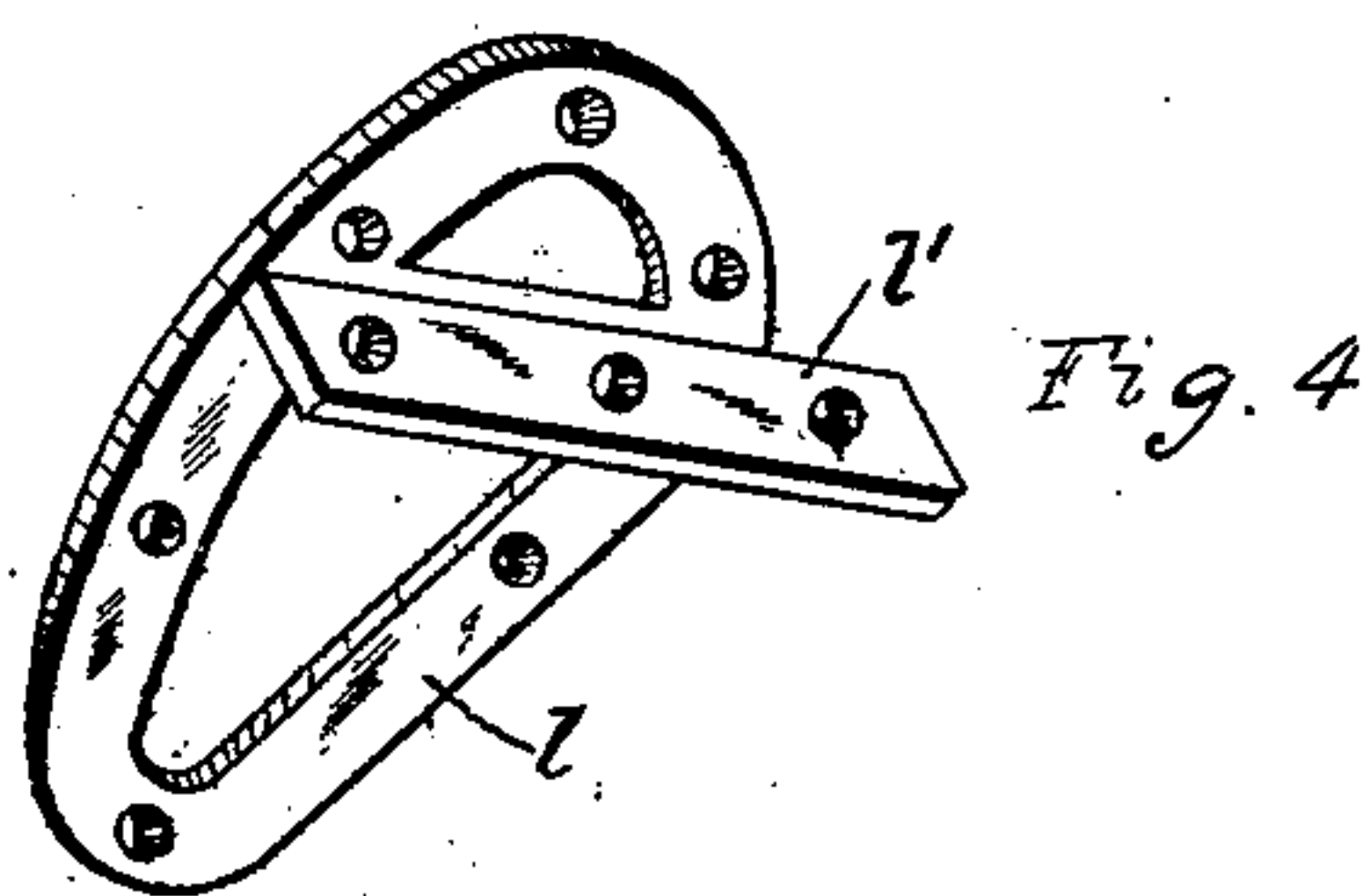


Fig. 4

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FRAME-FORMING BRACKET.

SPECIFICATION forming part of Letters Patent No. 689,665, dated December 24, 1901.

Application filed February 20, 1901. Serial No. 48,186. (No model.)

To all whom it may concern:

Be it known that I, JOHN WILDING, a citizen of the United States, and a resident of New York, in the county of New York, in the State of New York, have invented new and useful Improvements in Frame - Forming Brackets, of which the following, taken in connection with the accompanying drawings, is a full, clear, and exact description.

10 This invention relates to metallic brackets designed to unite the members of a skeleton frame of the type used in the construction of stage-scenery.

15 The object of this invention is to provide brackets which shall be adapted for uniting frame members of various dimensions in cross-section and to properly sustain said members in their requisite relative positions; and to that end the invention consists in the improved construction of frame-forming brackets hereinafter described, and set forth in the claims.

20 In the accompanying drawings, Figure 1 is a face view of a frame embodying my invention, and Figs. 2, 3, and 4 are enlarged perspective views of the tie-plates or brackets of said frame.

25 $a a$ denote the stiles of the frame; b , the sill; $c c'$, the cross-rails which sustain the stiles at the requisite distance apart, and $d d$ are braces which serve to maintain the frame in proper shape. The said members of the frame I firmly unite by my improved brackets or tie-plates, which are constructed as follows, to wit: The sill b extends across the stiles a and projects from the front faces of the stiles, as clearly shown in Fig. 2 of the drawings. To firmly unite these frame members, I employ on the foot of each stile a bracket 30 A, consisting of a vertically-elongated tie-plate, which is composed of two end sections $e e'$, formed in one piece, and with an offset between them to dispose said sections parallel in different planes and allow them to lie 35 closely and neatly upon the front faces of the stile a and sill b at the aforesaid projecting portion of said sill. Each of said plate-sections is provided with perforations for the reception of screws or nails for attaching the 40 bracket A to the stile and sill, as indicated at $i i$. To more thoroughly brace the junc-

tion of said frame members, I form the upper plate-section e with a vertical flange f , projecting at right angles from said plate-section and lapping onto the side of the stile. 55 The bottom of said flange is formed with a horizontal extension, which lies upon the top of the sill.

For fastening the cross-rails c and c' to the stiles $a a$ I employ on the face of each end 60 portion of each of said cross-rails two separate tie-plates $g g$, applied to the face of the cross-rail and extending divergently from each other and in better bracing positions across the stile and perforated for the recep- 65 tion of attaching screws or nails $h h$. The object of using the two separate tie-plates $g g$ is to adapt them for attaching cross-rails of different widths. To reinforce the union of the cross-rail and stile, I form each of the tie- 70 plates g with flanges $g' g'$, which engage the edges of said cross-rail and stile and are preferably perforated, as shown in Fig. 3 of the drawings, for the reception of attaching screws or nails. The top cross-rail c^2 may 75 be connected to the stiles $a a$ by means of any suitable tie-plates or brackets j .

For attaching the braces $d d$ to the stiles and upper cross-rail I employ metal tie-plates 80 $l l$, placed upon one face of said frame members and lapping onto the corresponding face of the stile a and cross-rail c^2 . These tie-plates I form with a transverse rib l' , which is interposed in the joint between the two ad- 85 joining members and serves to strengthen the union of said parts. The plate l and rib l' are both perforated and fastened to the frame members by screws or nails passing through the perforations, as shown at $t t$. The rib l' is formed with a straight extension to pro- 90 ject beyond the oblique frame members d and permit said rib to be fastened to the upper cross-rail c^2 by a screw or nail passing through said rib extension.

What I claim as my invention is— 95

1. A door-frame having its sill extending across the stiles and projecting from the fronts of said stiles and said members united by vertically-elongated tie-plates, each of which is formed with an offset intermediate 100 its ends to dispose the two end sections of the plate parallel in different planes to lie on the

fronts of its stile and sill and perforated for the reception of the attaching screws or nails, a vertical flange projecting at right angles from the upper plate-section and lapping
5 onto the side of the stile and formed at its bottom with a horizontal extension lying upon the top of the sill as set forth and shown.

2. The combination with two frame members disposed in the same plane and with one
10 of said members extending obliquely from the side of the other, of a tie-plate placed

across the joint of said members at the faces thereof and lapping onto said faces and formed with a rib inserted into the aforesaid joint and extending straight beyond the oblique member and perforated for the reception of attaching screws or nails as set forth. 15

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Witnesses:

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