

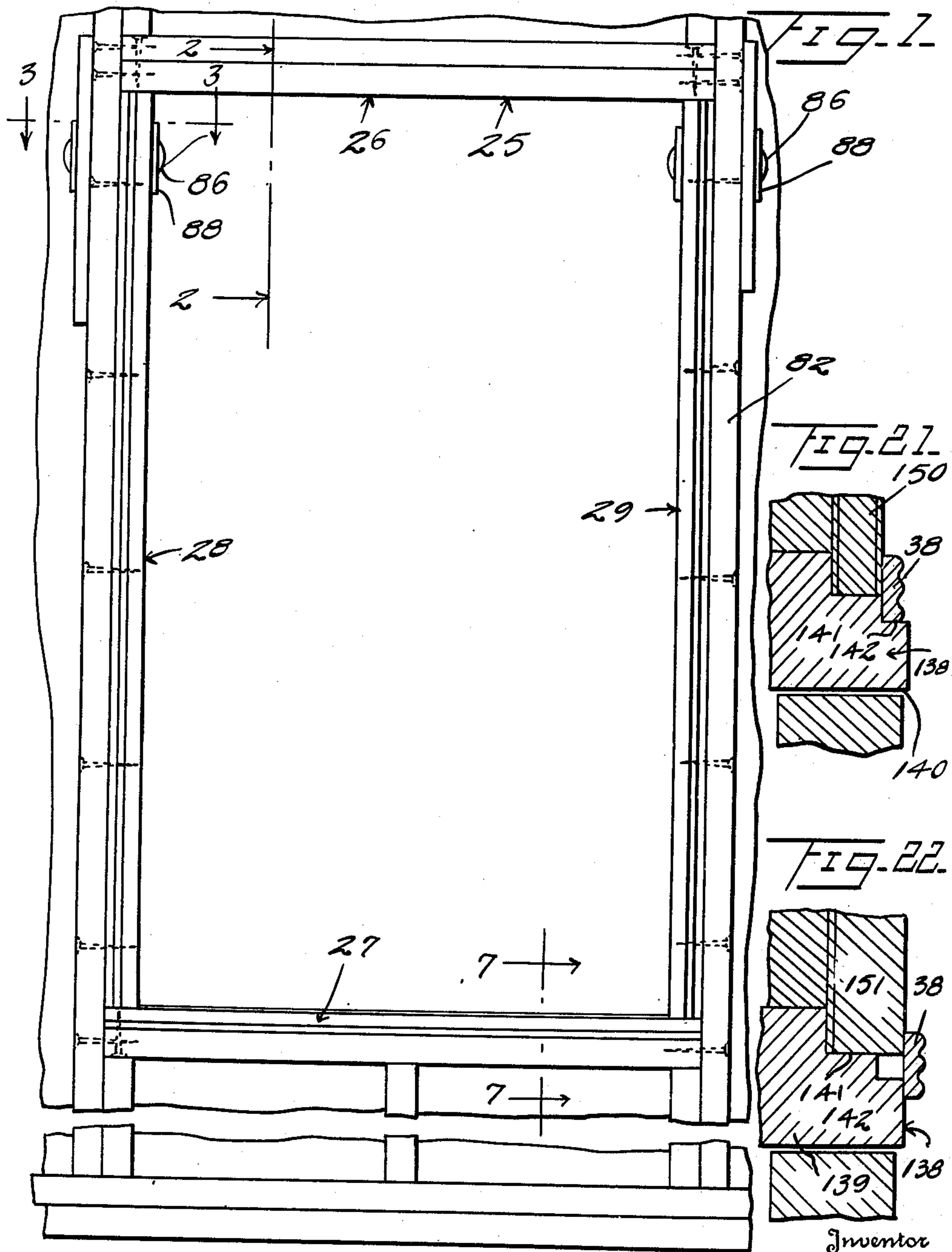
Feb. 6, 1951

F. P. BLANCHARD
DOOR AND WINDOW FRAME

2,540,419

Filed Dec. 1, 1947

4 Sheets-Sheet 1



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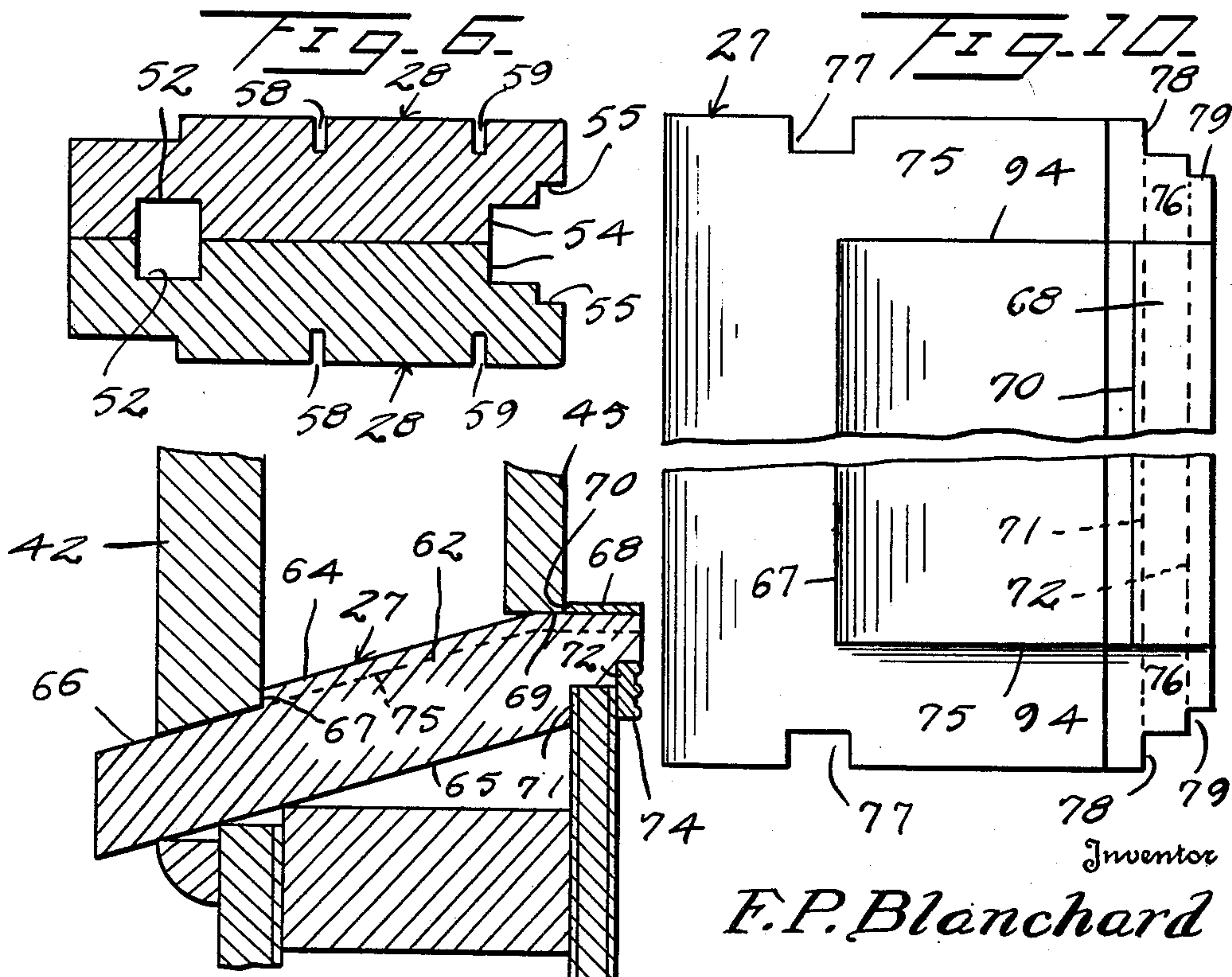
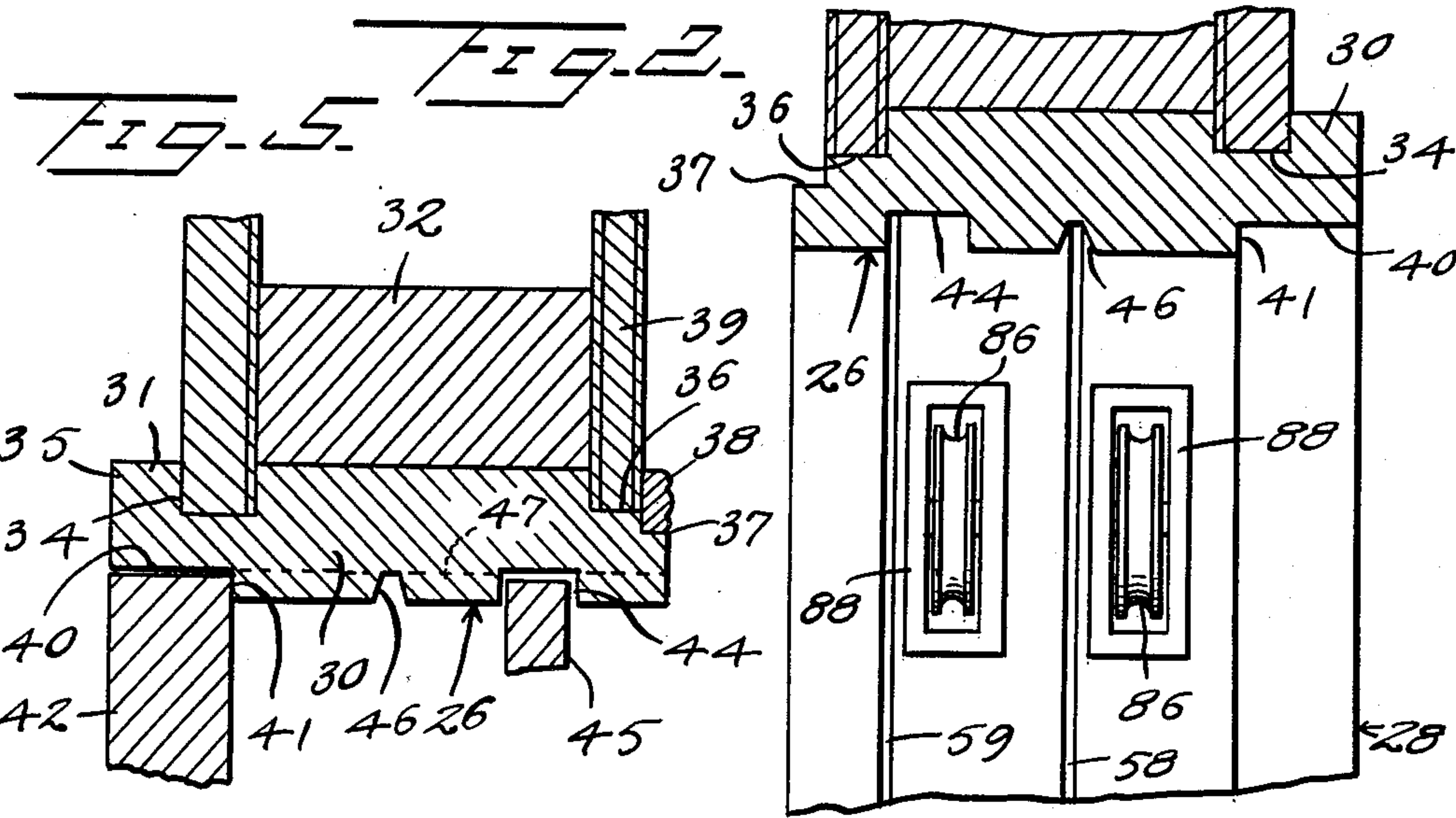
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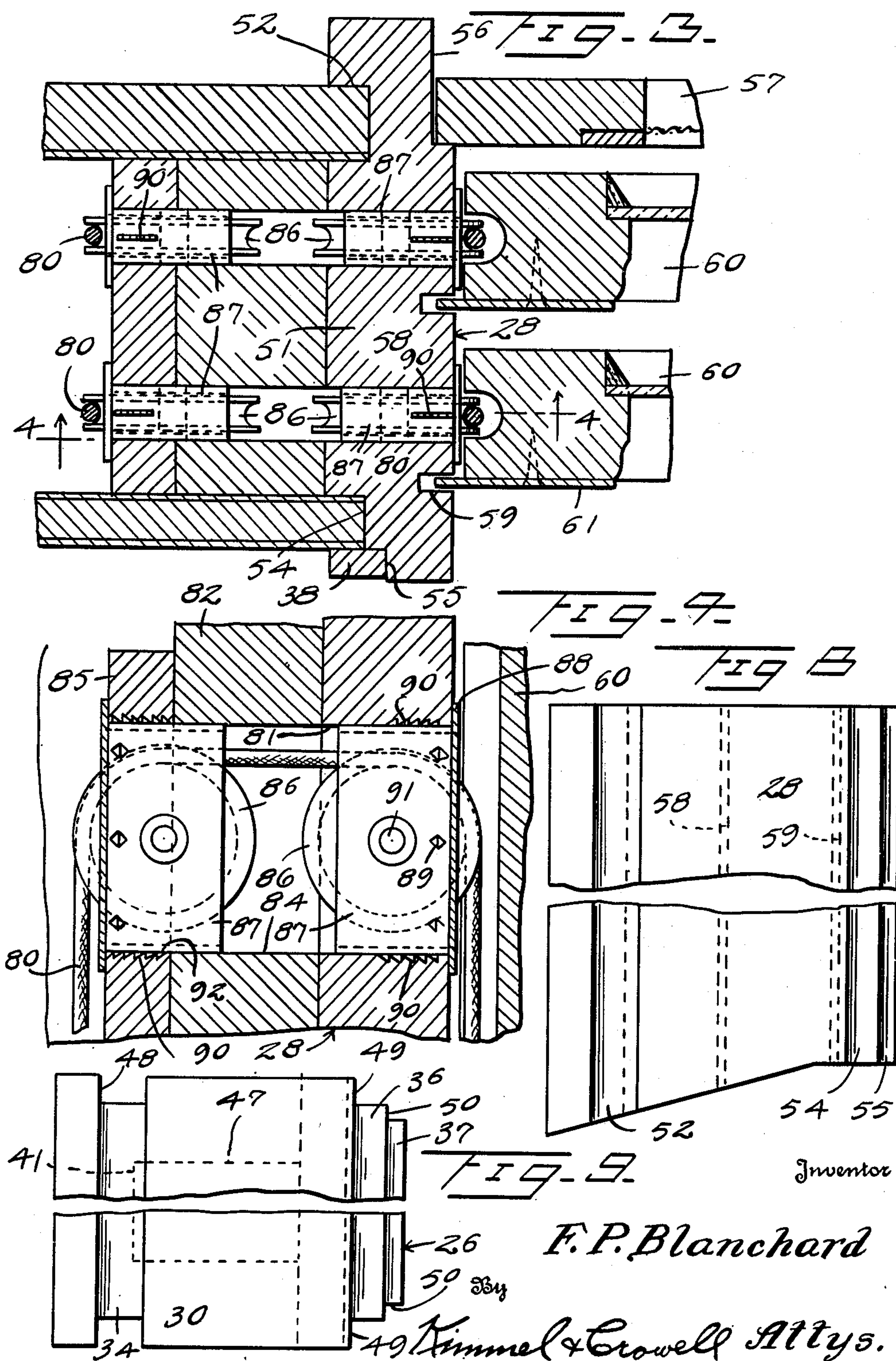
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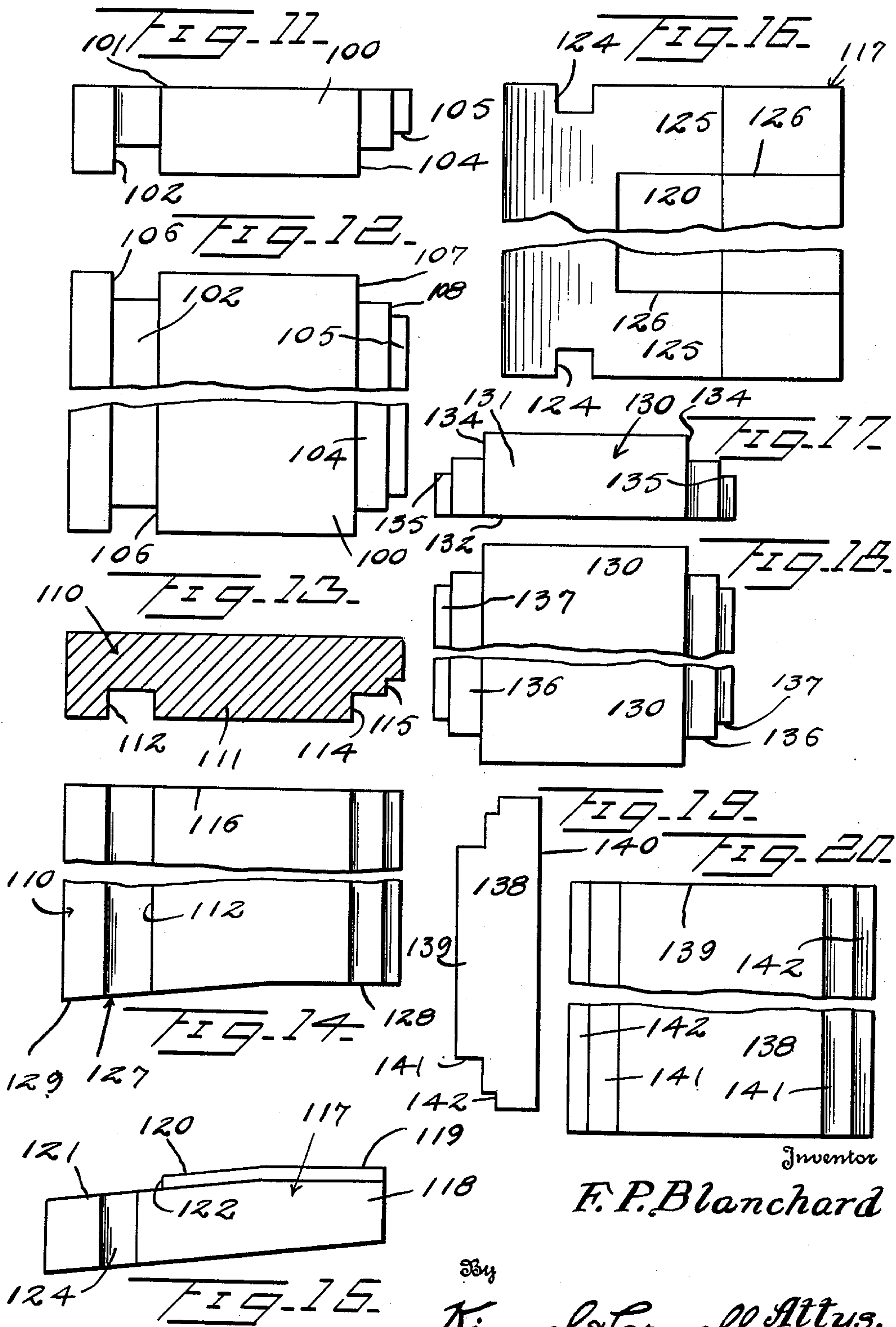
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UNITED STATES PATENT OFFICE

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DOOR AND WINDOW FRAME

Felix P. Blanchard, San Antonio, Tex.

Application December 1, 1947, Serial No. 789,091

2 Claims. (Cl. 20—11)

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This invention relates to window frames, and more particularly to an improved window or door frame so constructed and arranged that it may be readily incorporated as a complete unit into the structure of a building during the construction thereof, with a minimum amount of labor and material expense.

It is an object of this invention to provide an improved window frame of the kind to be more particularly described hereinafter, of sufficient strength to form an integral part of the supporting wall structure of a building without the use of added separate reinforcing wall studs.

Another object of this invention is to provide a frame of this kind which is formed of separate and complete edge members which may be sold as such in a package, or in kit form, whereby the knocked-down or disassembled frame may be conveniently transported to the location of the building construction, and there assembled by securing the separate members together, they being formed to the desired shape and size before shipment.

A further object of this invention is to provide a frame of this kind, having grooves or rabbeted edges for the reception therein of the desired sheathing into the edge of the frame, thereby obviating the requirement for the use of trim about the edge of the frame to provide the finished appearance thereof.

A still further object of this invention is to provide a window and door frame of this kind which may be readily assembled by merely nailing the ends of the component parts thereof to the adjacent part whereby the frame may be assembled with unskilled labor, and the finished frame is such as to form a finished assembly when incorporated into the adjacent building structure without the use of added trim materials.

With the above and other objects in view, my invention consists in the arrangement, combination and details of construction disclosed in the drawings and specification, and then more particularly pointed out in the appended claims.

In the drawings,

Figure 1 is a front elevation from the inside of a window frame constructed according to an embodiment of my invention,

Figure 2 is a vertical section taken on the line 2—2 of Figure 1,

Figure 3 is a horizontal section taken on the line 3—3 of Figure 1,

Figure 4 is a vertical section taken on the line 4—4 of Figure 3,

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Figure 5 is a vertical section of a head jamb used with a casement window,

Figure 6 is a horizontal section of side abutting side jambs used with two adjacent window frames,

Figure 7 is a vertical section taken on the line 7—7 of Figure 1,

Figure 8 is an outside elevation of a side jamb, partly broken away, removed from the assembly,

Figure 9 is a top plan view of the head jamb,

Figure 10 is a top plan view, partly broken away, of the sill,

Figure 11 is an end elevation of a head jamb for an outside door frame,

Figure 12 is a top plan view of a head jamb of an outside door,

Figure 13 is a horizontal section of a side jamb for an outside door,

Figure 14 is an elevation of the outside face of a side door jamb of an outside door,

Figure 15 is an end elevation of an outside door frame sill,

Figure 16 is a top plan view of an outside door frame sill,

Figure 17 is an end elevation of the head jamb of an inside door frame,

Figure 18 is a top face view of the head jamb of an inside door frame,

Figure 19 is an end elevation of the side jamb of an inside door frame,

Figure 20 is an outside face view of the side jamb of an inside door frame,

Figure 21 is a fragmentary detail section of a side jamb of an inside door frame using sheet rock sheathing,

Figure 22 is a fragmentary detail section of a side jamb of an inside door frame using ship lap sheathing, all without changing the width of the jamb.

Referring to the drawings, the numeral 25 designates generally a window frame which is formed of separate side and end members which may be formed before the assembly thereof, providing a type of packaged window frame. The frame 25 is so constructed and arranged that the components thereof may be completely formed at the point of manufacture and shipped in knocked-down form to the location of the job where they may be readily assembled by merely securing the ends of component frame members together. The assembly is such that no skilled work is required and the frame is of such a structure that there is no need for extra frame work for supporting the wall structure about the window.



extending strip 68 along the length thereof. The strip 68 is formed at an angle relative to the surfaces 64 and 65. The strip 68 is adapted to be disposed horizontally relative to a building, while the surfaces 64 and 65 are adapted to be inclined downwardly and outwardly of the wall on which the sill 27 is supported. The strip 68 terminates short of the edge of the horizontal shelf 69, forming a shoulder 70 spaced outwardly from the inner longitudinal edge of the sill 27.

As shown in Figure 7 of the drawings, the shoulder 70 forms a stop for the screen 45 used as in Figure 5, interiorly of the frame with a casement window. The lower surface 65 of the sill 27 is formed along its inner longitudinal edge with a rabbet or recess 71 within which the sheet rock of the inner wall may be engaged. A second rabbet or recess 72 is formed along the longitudinal inner lower edge of the body 62 and the upper edge of the recess 71.

The finishing strip 74 may be engaged partially within the rabbet 72 and partially overlying the sheet rock of the inner wall.

The upper surface 64 of the sill 27 is formed at its opposite ends with a substantially flat downwardly and outwardly inclined surface 75 with which the lower end of the side members 28 and 29 may be abuttingly engaged. The flat surface 75 follows generally the main cross sectional contour of the sill 27, having the forward portion thereof downwardly and outwardly inclined with a substantially horizontal inner surface 76 formed as a continuation thereof.

A notch 77 is formed at the opposite ends of the sill 27 for registry with the grooves 52 of the side frame members near the front edge. A notch 78 is formed at the opposite ends of the inner edge of the sill 27 for registry with the rabbets 54 of the side frame members, and a notch 79 is formed adjacent the notch 78 for registry with the rabbets 55. The rabbets 37, 55 and 79 form a peripheral recess about the frame 25, within which the trim material may be engaged when desired. The rabbets 36, 54 and 71 form a larger recess about the frame 25 outwardly of the recess formed by the rabbets described above, within which the adjacent edges of the inner surface of the wall may be engaged with the frame 25.

The grooves 34 and 52 form a peripheral groove about the frame 25 for engagement of the inner surface of the wall with the frame to form a complete attached structure. As the edges of the wall adjacent the frame 25 terminate substantially within the frame members, the use of added trimming material is not necessary, although it may be added by incorporation of the trim material in the extreme inner peripheral groove as described above. The notches at the ends of the head member and sill provide for the continuation of the recesses and grooves about the periphery of the frame.

In the use of double hung windows in the frame 25, it is necessary to provide means for supporting the counterbalance for the windows 60. Normally such windows are counterbalanced by a sashweight, not shown in the drawings, connected to the windows themselves, by a flexible member or cord 80. The side frame members 28 and 29 are formed adjacent the upper ends thereof with an opening as 81 extending there-through from the inner face through the outer face. The openings 81 on opposite side frame members are substantially in alignment through the inner confronting faces of the side jamb

members. As the side members 28 and 29 normally abut vertical supporting members as 82 in the assembly of the frame to a wall, the vertical members 82 must also be provided with an opening as 84 therethrough, in registry with the openings 81.

A plate as 85 may be supported on the side of the member 82 opposite from the jamb member, for providing sufficient space for the attachment of the pulley members to be described hereinafter. The cord 80 for supporting the windows 60 is trained over a pulley 86, rotatably supported within the opening 81 of the jamb members 28 and 29. For supporting the pulley 86, I have provided a tubular sleeve member 87 engageable in the opening 81. The tubular member 87 may be rectangular in cross section and is formed with a peripheral right angularly disposed flange 88 about one end thereof.

Tangs as 89 may be struck from the body of the tube 87 along the vertical sides thereof for penetrating engagement within the frame member 28 for holding the tube 87 against sliding in the opening 81. A series of vertical barbs as 90 are fixed to or formed on the upper and lower flat surfaces of the tube 87. The barbs 90 are directed inwardly and upwardly relative to the jamb member 29 for penetrating the jamb member at the upper and lower ends of the tube. The tangs 89 and the barbs 90 rigidly secure the tube 87 within the opening 81 of the side member 28.

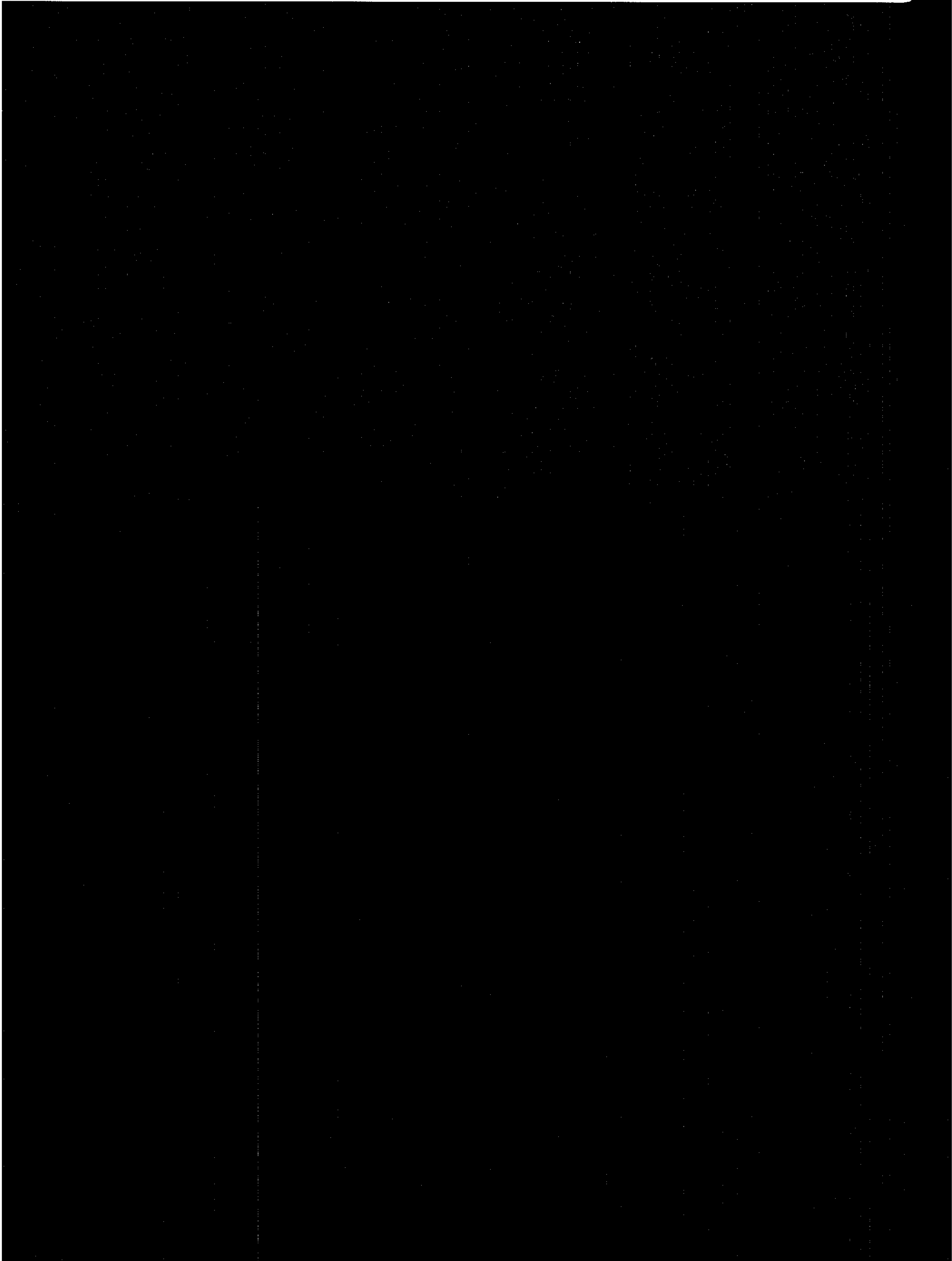
An axle as 91 is supported transversely of the tube 87 and the pulley 86 is rotatably mounted on this axle. The cord 80 is trained upwardly from the windows 60 and over the pulley 86 where it may then descend to the sashweight.

As shown in Figure 4, where the walls are of a total thickness greater than the diameter of the pulley 86, more than one of such pulleys must be used. For this purpose the plate 86 is formed with an opening 92 therein, in registry with the openings 84 and 81. A second pulley 86 is carried by a reversed tubular member 87 in confronting relation to the first tubular member, for carrying the cord 80 across the width of the wall. While the pulley 86 is of a diameter greater than the thickness of one of the side members as 28, when the frame 25 is incorporated within a building and fastened to vertical members of the wall, a plurality of pulleys and their supporting members 87 must be used.

The frame members 26, 27, 28, and 29, while described in their assembled relation, are placed in this relation by simply nailing the vertical side members 28 and 29 to the horizontal end members 26 and 27. The vertical members are correctly positioned relative to the horizontal members by the snug engagement of the vertical members against the shoulder 47 of the head jamb member and the shoulder 94 on the sill member. The shoulder 94 is formed by the lowering or smoothing of the outer end of the sill member to provide the surface 75 above described.

In Figures 11 to 20 there is shown members of a door frame formed in a manner similar to the window frame described above. In Figures 11 and 12 there is shown a head jamb member 100, formed with a flat lower surface 101. The head jamb member 100 is formed with a groove 102 extending along the length thereof on the upper surface, spaced inwardly from the outer edge thereof. The head jamb member 100 is adapted particularly for use with an outside door.

The outer wall covering of ship lap is adapted



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registry with the grooves of said side jambs, and means securing each of said jamb members to an adjacent jamb member.

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