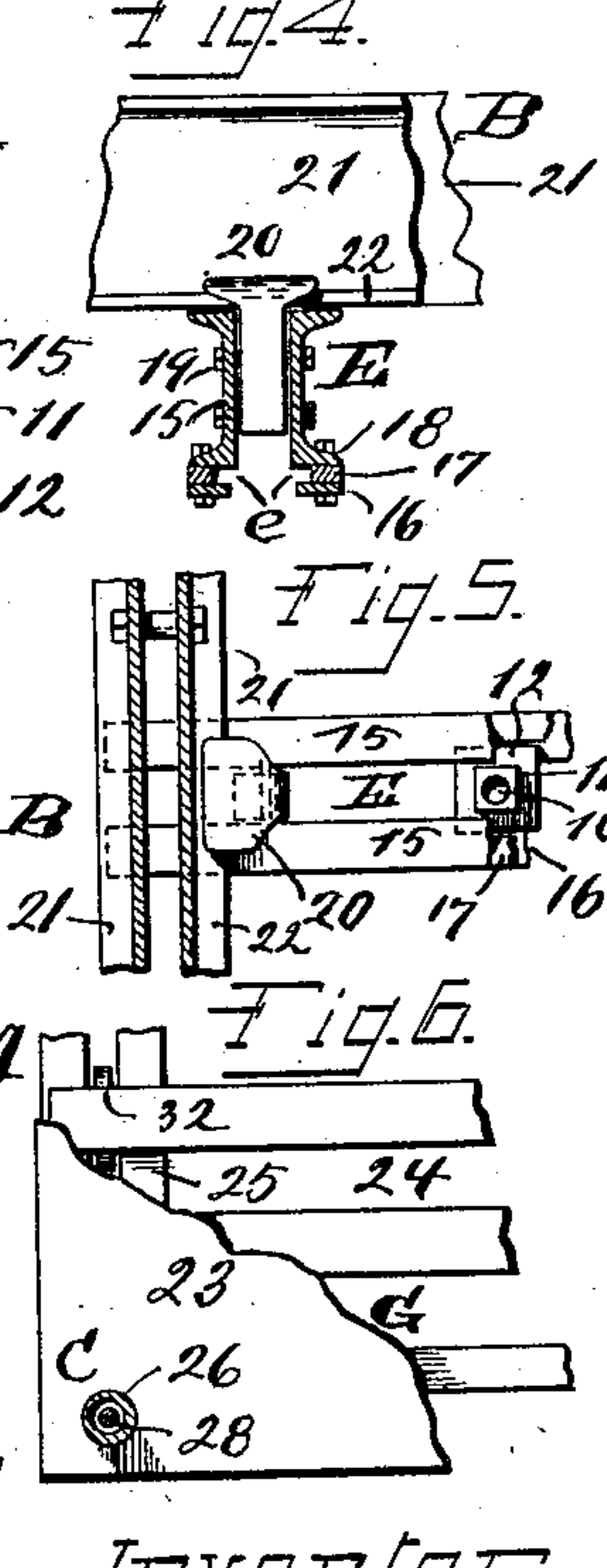
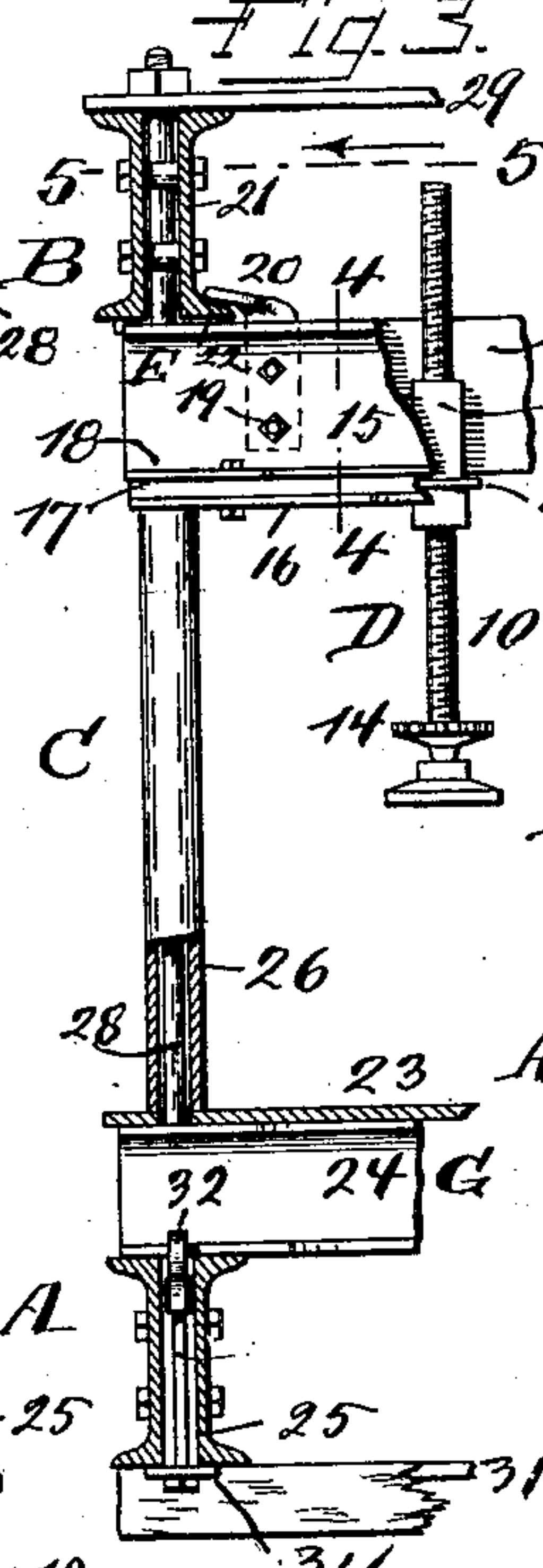
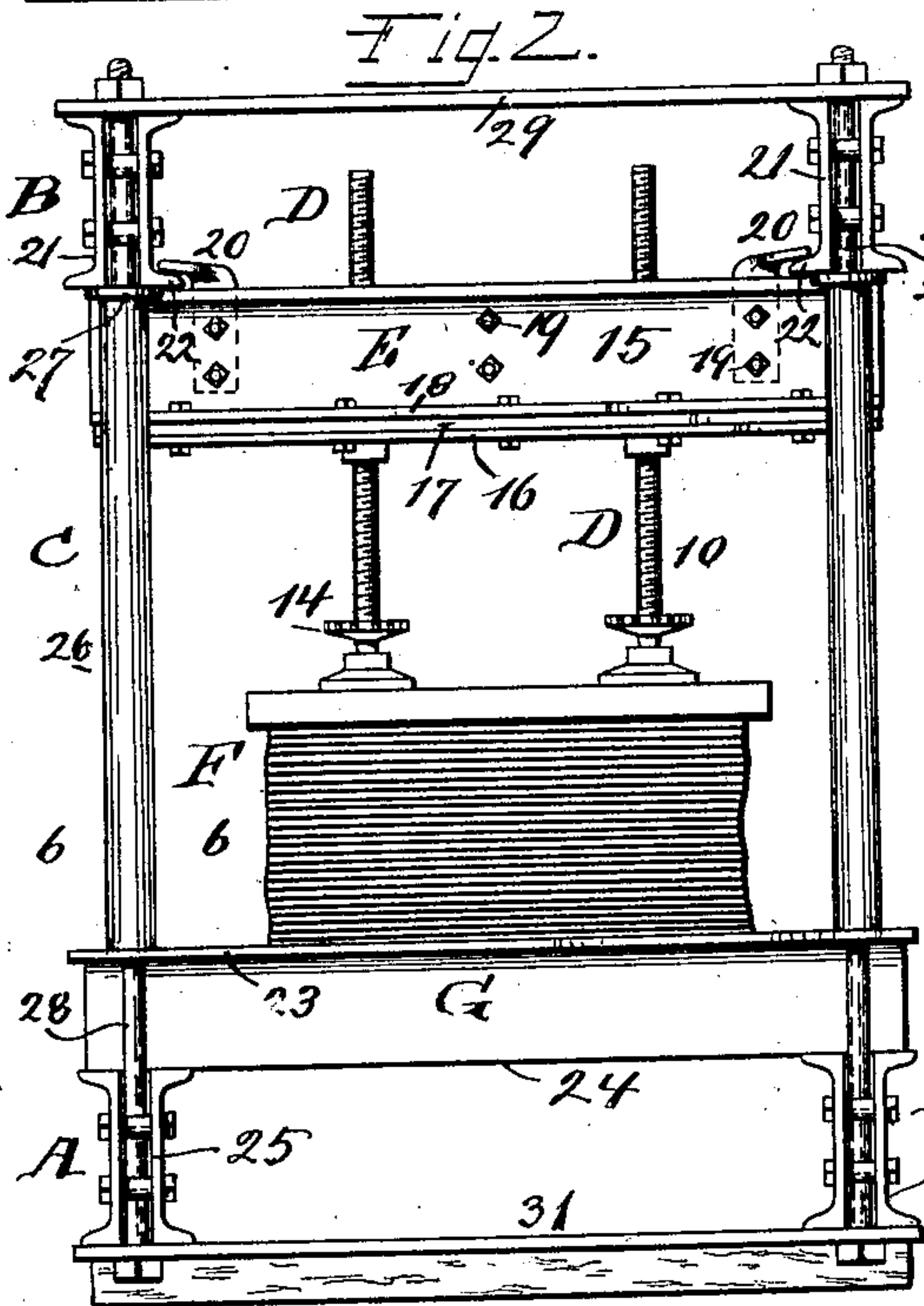
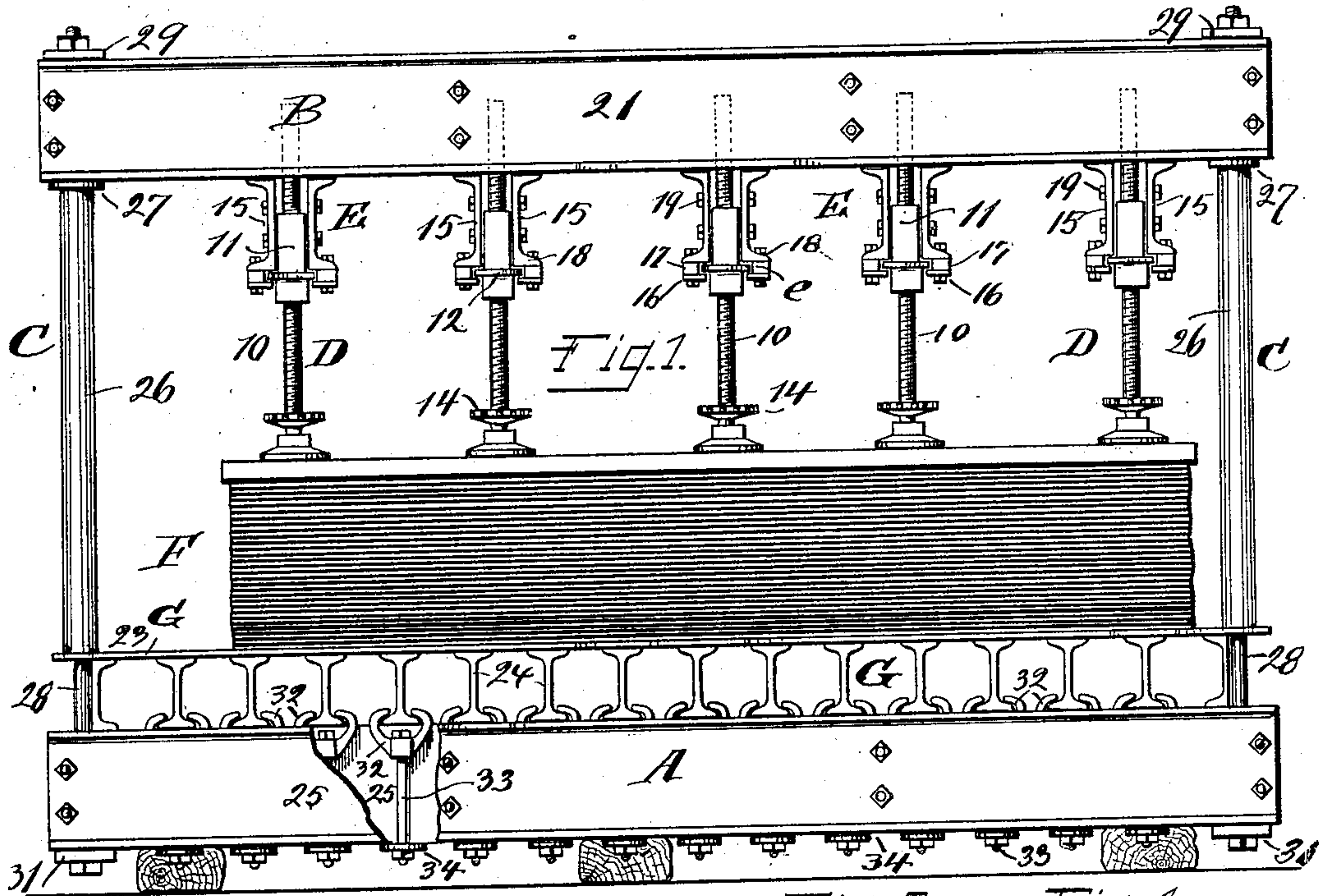


No. 887,783.

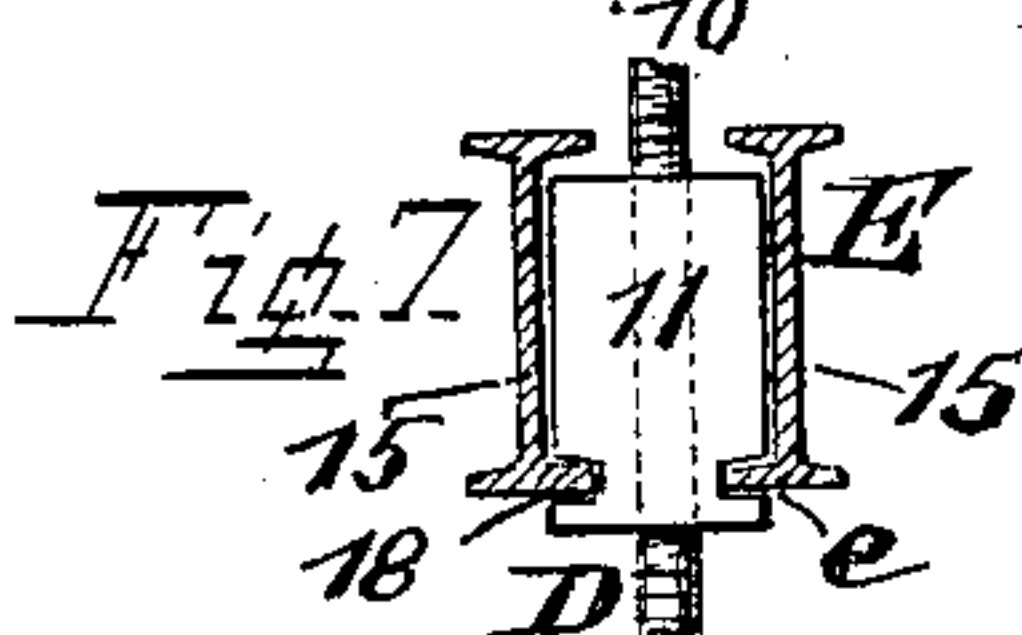
PATENTED MAY 19, 1908.

C. E. FRANCIS.
VENEER PRESS.

APPLICATION FILED NOV. 14, 1906.



Witnesses.
Homer Bradford.
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UNITED STATES PATENT OFFICE.

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veneer-press.

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Specification of Letters Patent.

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To all whom it may concern:

Be it known that I, CHARLES E. FRANCIS, a citizen of the United States, and residing at Cincinnati, Hamilton county, State of Ohio, have invented certain new and useful Improvements in Veneer-Presses; and I do declare the following to be a clear, full, and exact description thereof, attention being called to the accompanying drawing, with the reference characters marked thereon, which forms also a part of this specification.

This invention relates to improvements in veneer-presses, of the kind illustrated in a patent issued to me on August 14th, 1894. Presses of this kind are principally intended for holding material to its shape while undergoing certain manufacturing processes. Where used in connection with wood treated with glue, as for instance is done in the manufacture of veneer, they serve to hold the wood to its shape while going through the drying process to prevent it from warping. Such presses consist substantially of a frame comprising a bottom upon which the material rests, a top and pressure-devices provided between them whereby the material is acted upon.

The invention consists of the particular construction of this press and as the same is described in the following specification and pointed out in the claims at the end thereof.

In the accompanying drawing which illustrates this construction Figure 1, is a front-view of such a press complete. Fig. 2, is an end-view of the same. Fig. 3, is part of a vertical cross-section taken between the ends of Fig. 1. Fig. 4, is a vertical section on line 4,—4, of Fig. 3. Fig. 5, is a horizontal section taken on line 5,—5, of Fig. 3. Fig. 6, is a similar section taken on line 6,—6, of Fig. 2. Fig. 7, in a view similar to Fig. 4, shows a modified construction as to the parts involved.

The press-frame consists of the lower opposite frame parts A, A, arranged parallel to each other, the upper top-part B, B, arranged in a similar manner, one each above each of the lower frame-parts A, A, all held together by tie-posts C, between the lower and upper parts. D, are the pressure exerting devices and E, are their carrier-frames whereby they are adjustably supported on the top-parts B, of the press-frame. All these frame-parts, that is those of the press-frame A, and B, and those of the carrier-frames E, are made of structural iron, like

T-irons, I-beams or channel rails, which material is preferable to cast-iron because producing greater strength with less weight and also permitting presses to be made longer and wider, than could be safely done with cast-iron.

Excepting Fig. 7, channel-rails are shown as used in the construction of all the frame-parts.

The lower frame-parts A, A, which serve also as sills to support the floor-construction consist each of two channel-rails 25, 25, arranged parallel and bolted together with a space between them.

The upper frame-parts B, B, consist each of two channel-rails 21, 21, which, with their flanges turned outwardly, are also connected to each other with a space between them.

The work F, to be pressed, is placed upon a floor G, which consists of a floor-plate 23, resting on floor-rails 24, which latter rest on the sills constituted by the lower frame-members A, A.

The entire top-frame of the press with the frames of the pressure devices carried thereby is supported at proper height above the floor by posts one at each corner of the press consisting of tubes 26, which rest on floor-plate 23, and support at their upper ends, the top-frame parts B, B, washers 27, being interposed to catch both rails 21 of each of these frame-parts.

Braces 29, extend transversely across the ends of these rails of the top-frame and similar braces are provided in like manner below the bottom-rails, the ends of all these braces being perforated. Tie-rods 28, pass through tubes 26, and through the space between the rails 21, 21, of the top-frame B, and that between rails 25, 25, of the lower frames A, A, and also through the perforations in the braces. Beyond these braces projections like heads or nuts, provided on the ends of the tie-rods, serve to complete the press-frame and hold top and bottom parts to each other in opposition to the action of the pressure-devices. The arrangement and use of such tie-rods with nuts at least at one end permits the press to be readily taken apart for shipment and quickly set up, the nuts serving to tightly draw the frame together. Floor-rails 24 in shape of I-beams are held in position on the lower frame - parts A, by means of tie-bolts 33, arranged in the space between rails 25, and at their upper ends engaging anchors 32, which are slipped over

the lower flanges of rails 24. The lower ends of these tie-rods extend through washers 34, which bear against the lower flanges of rails 25, and extend across the space between them. Nuts at the ends of these tie-rods and below the washers serve to draw the anchors down and hold rails 24, in position.

The pressure-exerting devices consists substantially of screws 10, occupying nuts 11, provided with flanges 12, which rest in guide-ways *e*, into which they are movably fitted for the purpose of adjusting the position of the screws with reference to the work *F*, on floor *G*. The work in this case is presumed to be a stack of veneered wood. The screws are operated for pressing or release by means of a suitable wrench applied to notched disks 14, provided on the screws. Nuts 11, are quadrangular and fitted, in a manner to prevent them from turning, in the space between two channel-rails 15, such rails, two in each case, being secured together by bolts 19, to form the carriers *E*, mentioned before.

Guide-ways *e*, are provided on the flanges of the opposite rails 15, in each carrier in which these nuts may be adjusted lengthwise with reference to the carriers and transversely with reference to the press-frame. These guide-ways *e*, are formed by supporting strips 16, which are bolted against the lower flanges 18, of rails 15, with spacing strips 17 between them.

In case *I*-beams are used in the construction of these carriers, their opposite, lower, inner flanges would constitute the guide-ways which support nuts 11, all as shown in Fig. 7. The same effect would be obtained by reversing the channel-rails shown in Fig. 4, in a manner to have their flanges 18, inside and opposite each other.

Brackets 20, are provided, one near each end of carriers *E*, which project over and rest on the inner, opposite flanges 22, of the inner rails 21, whereby said carriers with the pressure-exerting devices are supported on the top-frame of the press. This support is an adjustable one, so that a carrier with its screws may be moved lengthwise with reference to the press-frame to suit the position of the work. The ends of rails 15, which compose a carrier, continue beyond the brackets which support these latter and extend under the flanges of rails 21, which compose the top-frame of the press, so that, when the pressure is on, a substantial resistance, corresponding in each case to the full cross-sectional area and profile height of rails 15, as well as of rails 21 is presented.

Brackets 20, are at no time subjected to any strain or pressure, they merely supporting the weight of the carriers. They, in addition to their function for supporting carriers *E*, serve also to space rails 15, which compose these carriers, they extending between them, those of bolts 19, which are at

the ends of the carriers to hold rails 15 together, holding also the brackets between these rails.

It will now be noted that there are two adjustments as to position of the pressure-screws, with reference to the work. First each screw may be adjusted on its carrier, laterally with reference to the press-frame, and second, all the screws on a carrier may be adjusted by means of the latter on the top-frame, longitudinally with reference to the press-frame.

Having described my invention, I claim as new:

1. In a press-frame, the combination of a top-frame, parallel bottom frame-members, consisting each of two parallel, spaced rails, floor-rails resting on these rails, anchors provided between the rails constituting the bottom frame-members which engage these floor-rails, bolts whereby these anchors are held to the bottom-frame-members, a floor-plate resting on these floor-rails, and means for holding top and bottom-frames to each other.

2. In a press, the combination of pressure-exerting devices, supports for them, a floor-plate, flanged floor-rails on which it rests, longitudinal frame-members on which they are supported at their ends, the said members consisting of spaced, parallel rails, anchors in this space which are slipped over the flanges of the floor-rails, tie-bolts engaging these anchors, washers at the lower ends of these bolts which bear against the underside of these rails and across the space between them and through which the lower ends of the tie-bolts extend, and nuts engaging the tie-bolts below these washers serving to draw the anchors down to hold the floor-rails in position.

3. In a rectangular press-frame, the combination of parallel top- and bottom-frame members, each member consisting of parallel, flanged rails spaced apart, a floor provided on the bottom frame-members, upright tubes whereby the top-frame-members are supported above the floor, tie-rods passing through these tubes and through and beyond the spaced rails of top and bottom frame-members and means at the projecting ends of the tie-rods which, by bearing against the flanges of the rails thereat, serve to hold the press-frame together.

4. In a rectangular press-frame, the combination of parallel top and bottom frame-members, each member consisting of parallel, flanged rails spaced apart, a floor provided on the bottom frame-members, perforated washers under the flanges of the rails of the top-frame members, upright tubes under these washers whereby the top-frame members are supported above the floor, tie-rods passing through the space between the bottom-frame members, through

the tubes, the washers above them and through the space between the rails above these washers, and means at the ends of these tie-rods to hold the engaged parts together.

5 5. In a rectangular press-frame, the combination of parallel top and bottom frame-members, each member consisting of parallel flanged rails spaced apart, floor-rails resting
10 on the bottom-frame-members, a rectangular floor-plate on these floor-rails, upright tubes at the corners of this plate which support the top-frame-members, and tie-rods which pass through these tubes and extend above,
15 through, and beyond the space between the rails of the top-frame and also below the floor-plate and through the space between floor-rails and between bottom-frame members and means at the projecting ends of the
20 tie-rods to hold the parts of the press-frame together.

6. In a rectangular press-frame, the combination of parallel top and bottom frame-members, each member consisting of parallel, flanged rails spaced apart, a floor provided on the bottom frame-members, upright tubes whereby the top-frame-members are supported above the floor, transverse
25 braces arranged across the ends of the rails above the rails of the top-frame and below those of the bottom-frame, the ends of these braces being perforated which perforations register in each case with the space between the rails mentioned, tie-rods passing through
30 these tubes, through the spaces between the rails constituting top and bottom frame-members and also through the perforated braces beyond these frame-members and means at the ends of these tie-rods which, by
35 engaging the braces, hold the press-frame together.

7. In a press, the combination of a work-supporting floor, parallel top-frame members consisting each of flanged-rails, means
45 to hold these frame-members in a fixed position above the floor, pressure-exerting devices, carriers on which they are supported,

these carriers being longer than the distance between the top-frame-members and extend below them on each side and brackets on
50 the upper side of these carriers and between their ends which, by projecting over and engaging the flanges of the rails of the top-frame-members support the carriers thereon.

8. In a press, the combination of a work-
55 supporting floor, parallel top-frame-members consisting each of flanged rails, means to hold these frame-members in a fixed position above the floor, pressure-exerting devices consisting essentially of nuts and
60 screws, carriers consisting each of two flanged rails attached to each other with a space between them adapted to receive the nuts mentioned, the rails composing these carriers being longer than the distance between opposite top-frame-members and extend under
65 the flanges of the rails composing them, and brackets between the ends of these carriers which, by reaching over the flanges of the rails mentioned, support these carriers.

9. In a press, the combination of a work-supporting floor, parallel top-frame-members consisting each of flanged rails, means to hold these frame-members in a fixed position above the floor, pressure-exerting
75 devices consisting essentially of nuts and screws, carriers consisting each of two flanged rails attached to each other and brackets between the ends of these carriers, which are connected between the rails composing said
80 carriers, thereby spacing them apart for reception of the nuts mentioned and, extending also above these carriers, and projecting over the flanges of the rails of the top-frame-members thereat, support the carriers in a manner that the ends of the rails, of which they consist, project under the flanges of the top-frame-members on which they are supported.

In testimony whereof, I hereunto set my signature in the presence of two witnesses.

CHARLES E. FRANCIS.

Witnesses:

C. SPENGEL,
T. LE BEAU.