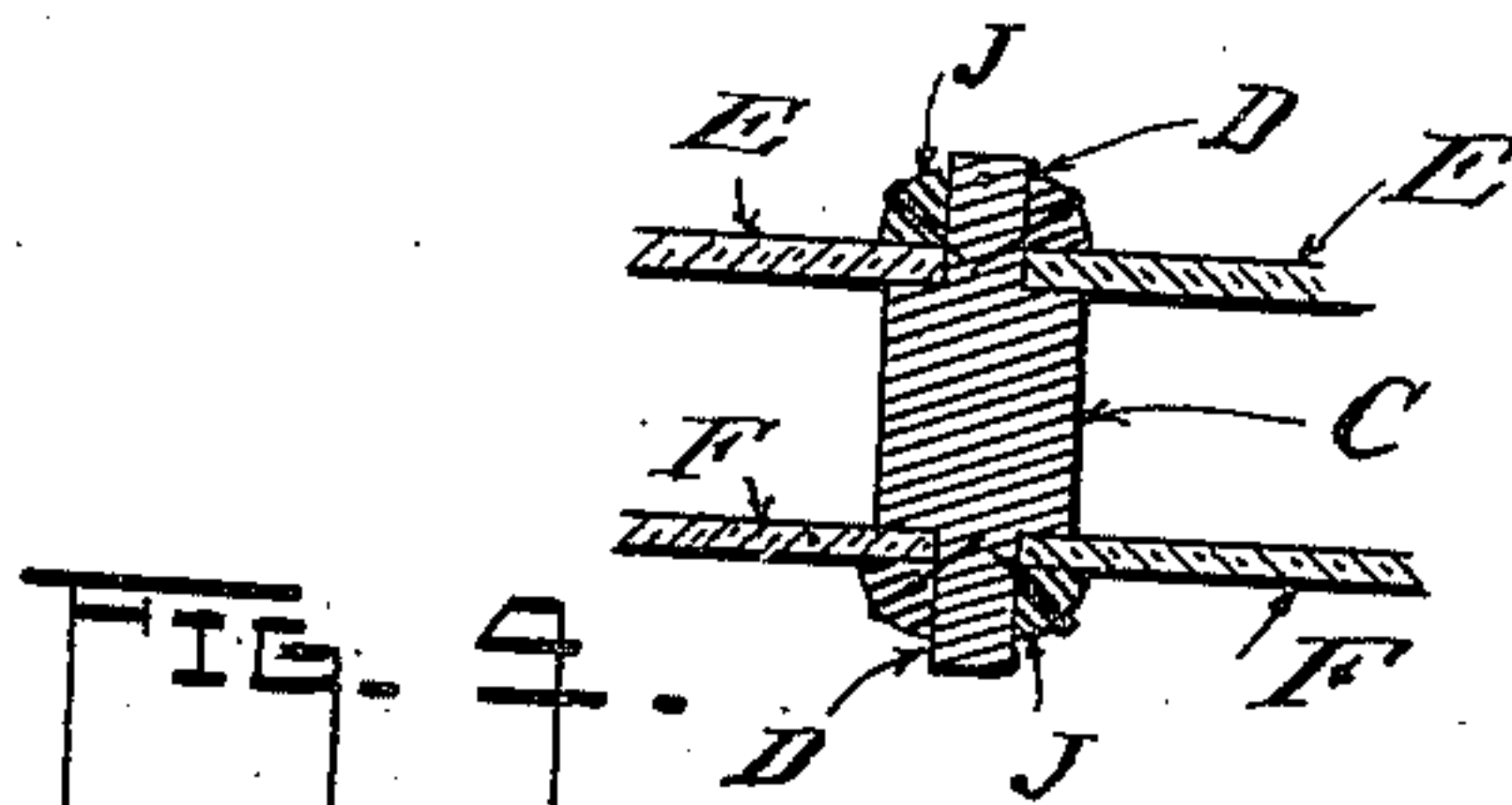
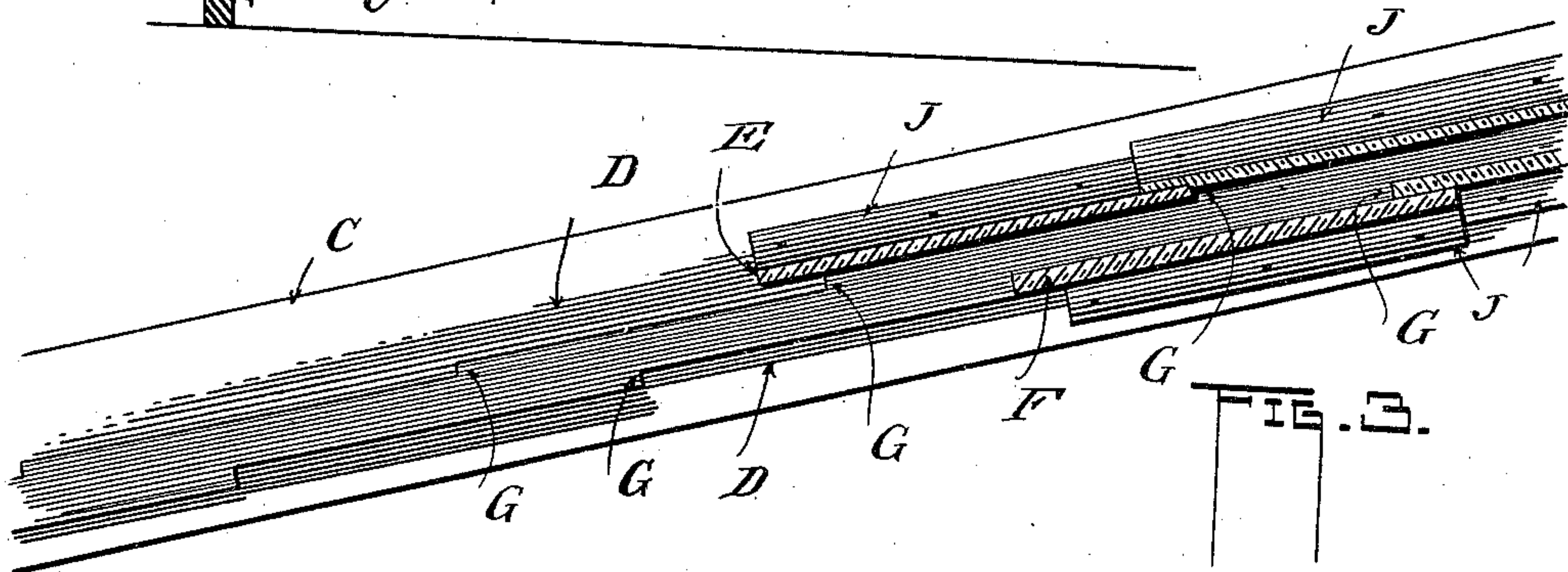
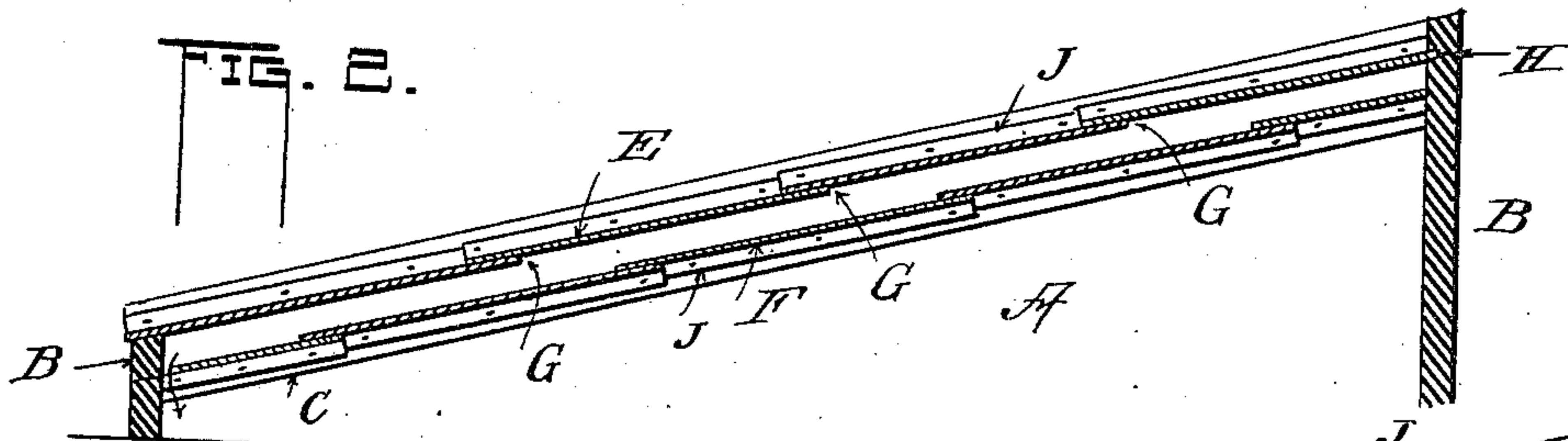
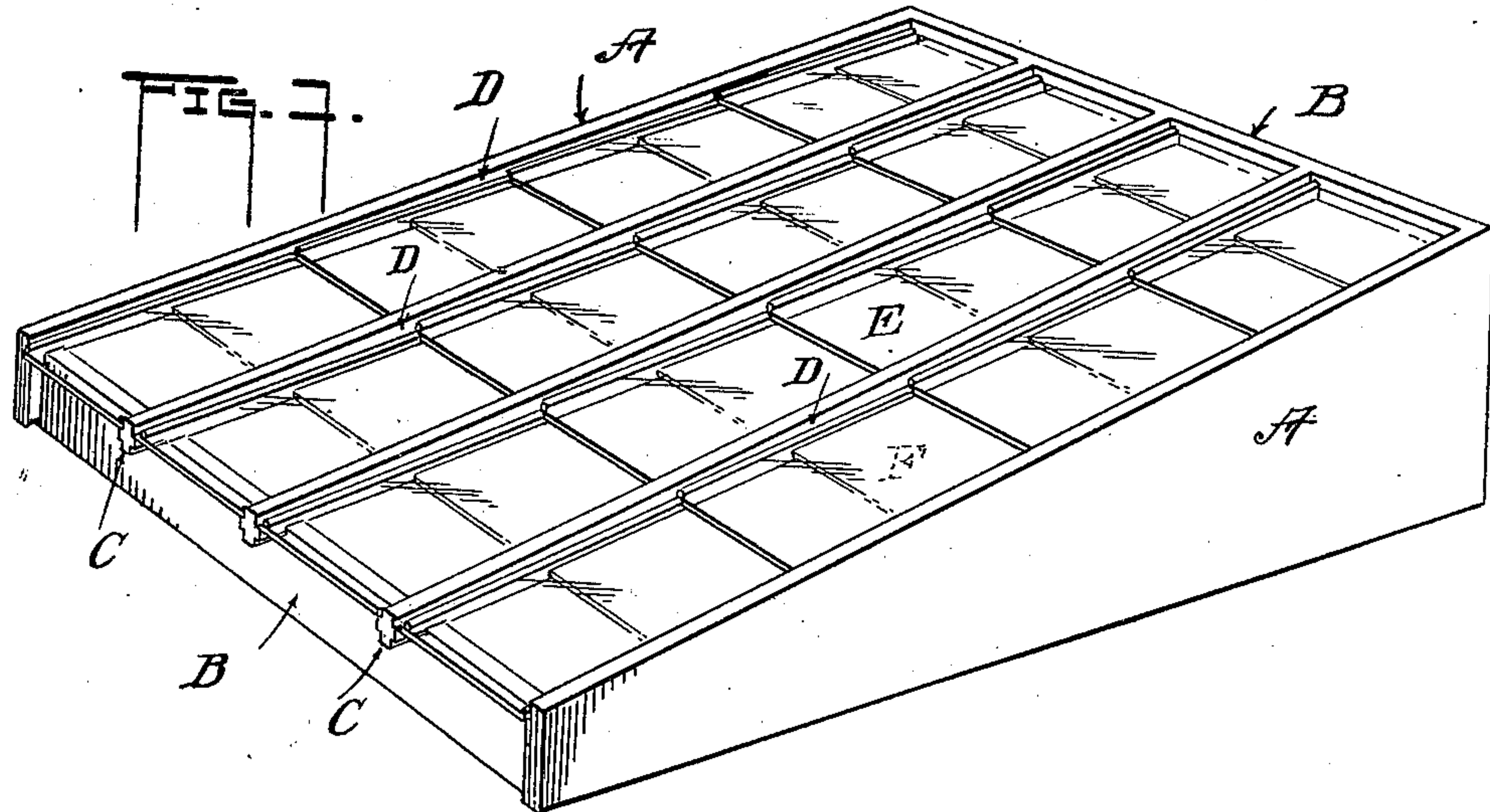


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GLAZED FRAME FOR HOTBEDS AND THE LIKE.
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995,594.

Patented June 20, 1911.



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GLAZED FRAME FOR HOTBEDS AND THE LIKE.

995,594.

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Application filed January 20, 1910. Serial No. 539,176.

To all whom it may concern:

Be it known that I, CHRISTOPH A. HAGEMANN, citizen of the United States, residing at Peoria, in the county of Peoria and State of Illinois, have invented certain new and useful Improvements in Glazed Frames for Hotbeds and the Like; and I do hereby declare that the following is a full, clear, and exact description of the invention, which will enable others skilled in the art to which it appertains to make and use the same.

This invention relates to a light or glazed frame for hot beds, forcing frames and the like in which a double tier of glass is used.

The object of the invention is to produce a new structure in a double glazed frame by which any individual pane of glass can be renewed without disturbing any of the others.

A further object is to provide a new structure in a device of the nature described, and particularly in a double glazed frame, in which tight joints may be made and maintained so that the cold will be excluded and so that there will be no crevices for water to enter and freeze and thus cause breakage of the glass; and also that dust will be excluded so that the under tier will be kept clean and also that the frame may be washed with the hose without fear of the water getting upon the lower tier of glass.

Another object is to provide a device of the nature described in which its framing carrying the glass, is notched or stepped to about the thickness of the glass so that each pane or light may be slipped into place beneath the extending and overhanging end of an adjacent glass and lie perfectly flat upon said steps. Also that short pieces or strips commonly called, "stops" can be used and placed upon the edge of each individual pane and lie flat thereon, so that when assembled the entire "frame" will be tight.

A further object is to provide a double glazed frame in which each individual pane of both tiers may be set in position in an easy manner and that any one of them can be replaced easily and quickly and so that no spaces or cracks will be left.

Further objects will appear in the specification.

In the accompanying drawing:—Figure 1 is a perspective view of my improved frame. Fig. 2 is a longitudinal sectional elevation

of the same. Fig. 3 is a side elevation of one of the bars of the frame showing the relation the panes held therein bear to one another, and Fig. 4 is a transverse section of one of the bars showing the manner in which the panes are secured in place.

A indicates the sides of the frame and B the ends of the same, while C indicates the several bars or mullions which extend longitudinal of the frame to support the glass. As in other devices of this type its top surface is inclined in order to shed the rain and to more readily admit the light and sun. The inner surfaces of the sides A and both side surfaces of the bars C are rabbeted for instance, as shown at D, the said bars C being rabbeted both above and below to receive the two tiers of glass the upper tier being indicated at E the lower one at F. A peculiarity of my structure in a cold frame is that the bottoms of the rabbets do not run straight through the full length of the bars but their bottoms are notched or "stepped" as clearly shown in Fig. 3, the depth of each notch being approximately equal to the thickness of the pane that it receives. The length of each notch, however, is somewhat shorter than the length of the pane so that the latter extends beyond the steps indicated at G to overhang the notches a short distance as indicated in the figure just referred to; it being readily apparent that each glass may be slipped into its respective notch beneath the adjacent pane and against the step G. This method of inserting the individual lights or panes can be used when any one of them is to be replaced but in assembling the parts when first built the bottom panes may be placed in position then the next laid thereon and so on with the balance of the panes; the topmost one being inserted in a groove H in the end B adjacent thereto. Strips or stops J are now supplied each of which is about equal in length to the length of the exposed portion of the pane, that is to say, of such a length as to extend from the lower edge of one of them to the lower edge of the next one above it as shown, for instance, in Fig. 3, the lower tier of panes being placed in position in substantially the same way. The pane at the lower end of the frame is preferably separated a short distance from the end B adjacent thereto, as shown, in Fig. 2 so that any condensation

that may be formed in the air space between the two tiers of glass can be liberated.

It is to be noted that in my structure the edges of the panes lie flat upon the ledges in which the notches are formed and that each stop or strip J being made in a short length can lie flat upon its respective pane so that no crevices whatever are left. The stops are secured in place by any good means, as for instance, non-corrodible brads, although the means of fastening is not material to the present invention.

The structure described provides an absolutely air-tight frame and one in which any one glass can be replaced without disturbing any of the others which is a matter of considerable importance and that can be appreciated by gardeners and others making use of this type of device.

Relative to the short strips constituting the stops J it may be stated that I may use a single stop having one edge notched or stepped to correspond with the steps formed by the panes and if desired felt or other yielding material may be employed between the strips and the panes and upon the bars C as well, where the glass rests. Another advantage in employing the separate strips or one having the steps is that each step or shoulder acts as a stop for the ends of the panes and prevents the latter from slipping down if they have a tendency to do so.

I do not, of course, confine myself in my improvement to a double glass frame since those having a single tier can be supplied with it as well and in substantially the same way.

A "double" frame constructed in the manner described with a series of notches above and below the bars, or mullions, to form tight joints with closely lying stops and in which any individual glass can be replaced in either tier without disturbing its neighbors merely by lifting the glass from its position, is the real purpose of my invention and a distinct advance in that particular branch of the art to which my invention belongs since a bar or mullion having a notched or stepped recess in its upper and lower sides gives the advantages named which others do not possess. I am aware of a certain "double" frame device but it is complicated in structure and hardly practicable—it being necessary also to move all of the glasses of a tier in order to replace one of them.

As distinguished from the devices of the art my forcing frame, in which the two series of lights or panes are used, are placed upon a framing member notched on its opposite or upper and lower surfaces and each light or pane is individually held by a stop, the panes of the under tier being held up against this said framing member by said stop while the upper tier of panes is held in the same way

from the opposite direction or so that a stop removed from a pane of either tier will admit of the removal of that pane and the substitution of another. It is necessary in constructing frames for hot beds to provide two tiers of glass in order to guard against freezing the growing plants and it becomes absolutely necessary to provide for the removal of any one pane of either tier without the necessity of removing any other pane of the series and in order to be able to do this the arrangement must be such that the means for holding each individual pane of the upper series must be removable from above while those for the lower series must be removed from below since it would be quite impractical to remove any pane of the upper series to reach one of the lower and herein, then, lies the advantage of my structure.

I claim:

1. A glazed frame of the character described comprising a framing having opposite facing members each having an upper and a lower side and each said side having a series of notches forming a series of steps, an individually-removable pane of glass lying in each notch of the series, the panes of each series of notches forming an upper and lower tier with an intervening air space, and a separate device secured to each of the members to engage and hold each of the panes in its respective notch and adapted each by its removal to permit removal of a given pane from its notch.

2. A glazed frame of the character described comprising a framing having opposite facing members each having an upper and lower side and each said side having a series of notches forming shoulders, an individually removable pane of glass lying in each notch of each series, each pane overhanging an adjacent notch, each notch being of a depth at one end substantially equal to the thickness of a pane of glass whose upper surfaces are substantially flush with the bottom of the notch next above it, and a stop for each pane of each series of notches for holding said panes and adapted by the removal of any one of them to permit the removal of the pane held thereby, said pane being removed from the side at which the stop is secured.

3. A forcing frame consisting of the combination of two facing members provided each with a series of notches in its upper and lower side, said notches adjoining one another, those of the lower series being inverted relative to those of the upper series, a transparent plate seated in each of the notches of each series and each at one end overhanging an adjacent notch and overlying the margin of the plate lying in said notch, and a member lying upon the margin of each plate, each of the members holding the two series of plates adapted to be separated

arately removed to liberate the plate held by
it whereby to admit of replacing any given
plate of either series of plates without dis-
turbing the others, the upper plates being
5 removable from above, the lower being re-
movable from beneath the members com-
posing the frame.

In testimony whereof I affix my signature,
in presence of two witnesses.

CHRISTOPH A. HAGEMANN.

Witnesses:

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Copies of this patent may be obtained for five cents each, by addressing the "Commissioner of Patents,
Washington, D. C."
