May 29, 1934. H. F. CLARK ET AL 1,960,805

GLASS SUPPORTING STAND

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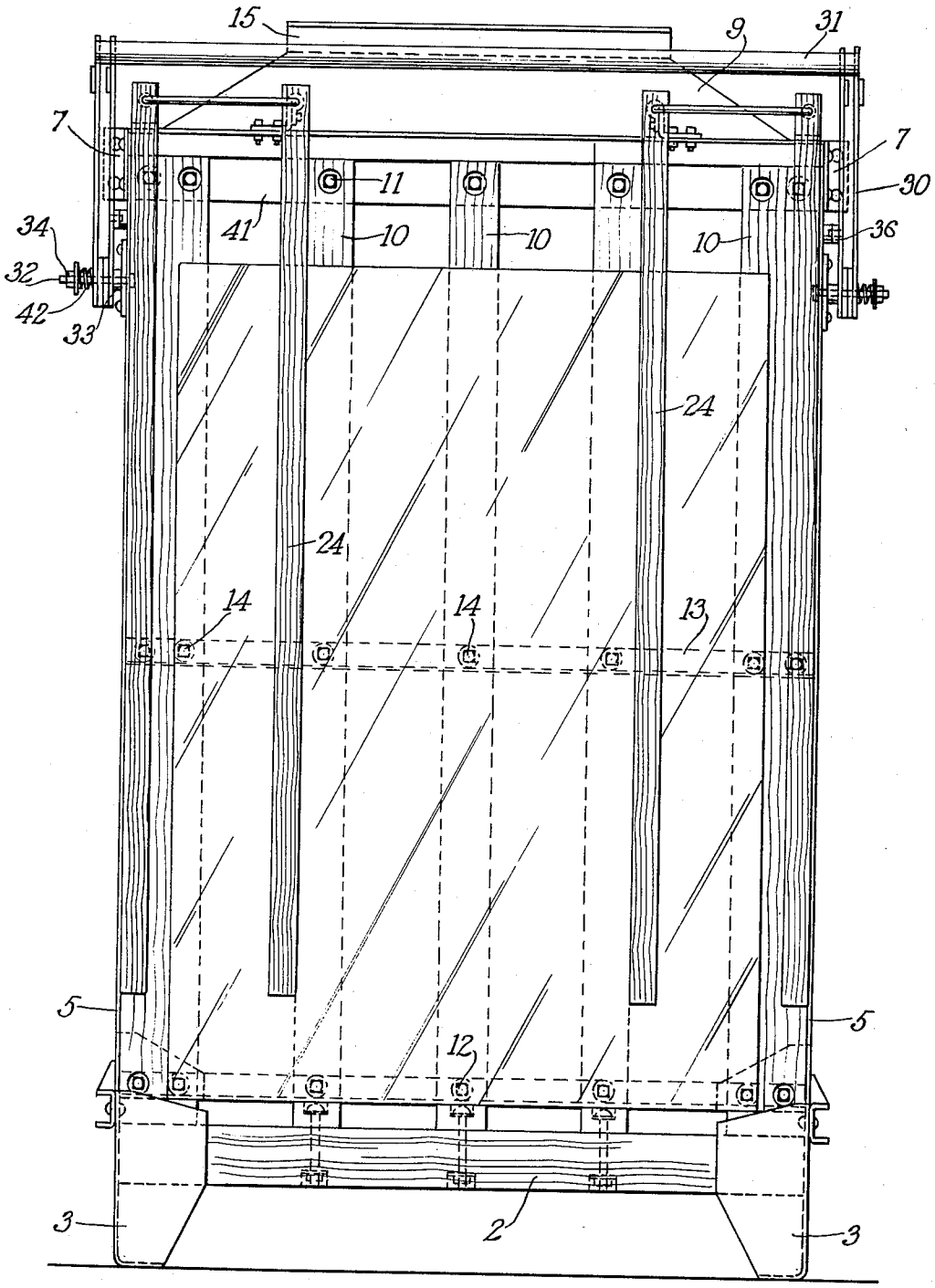


Fig. 1

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Fig. 2

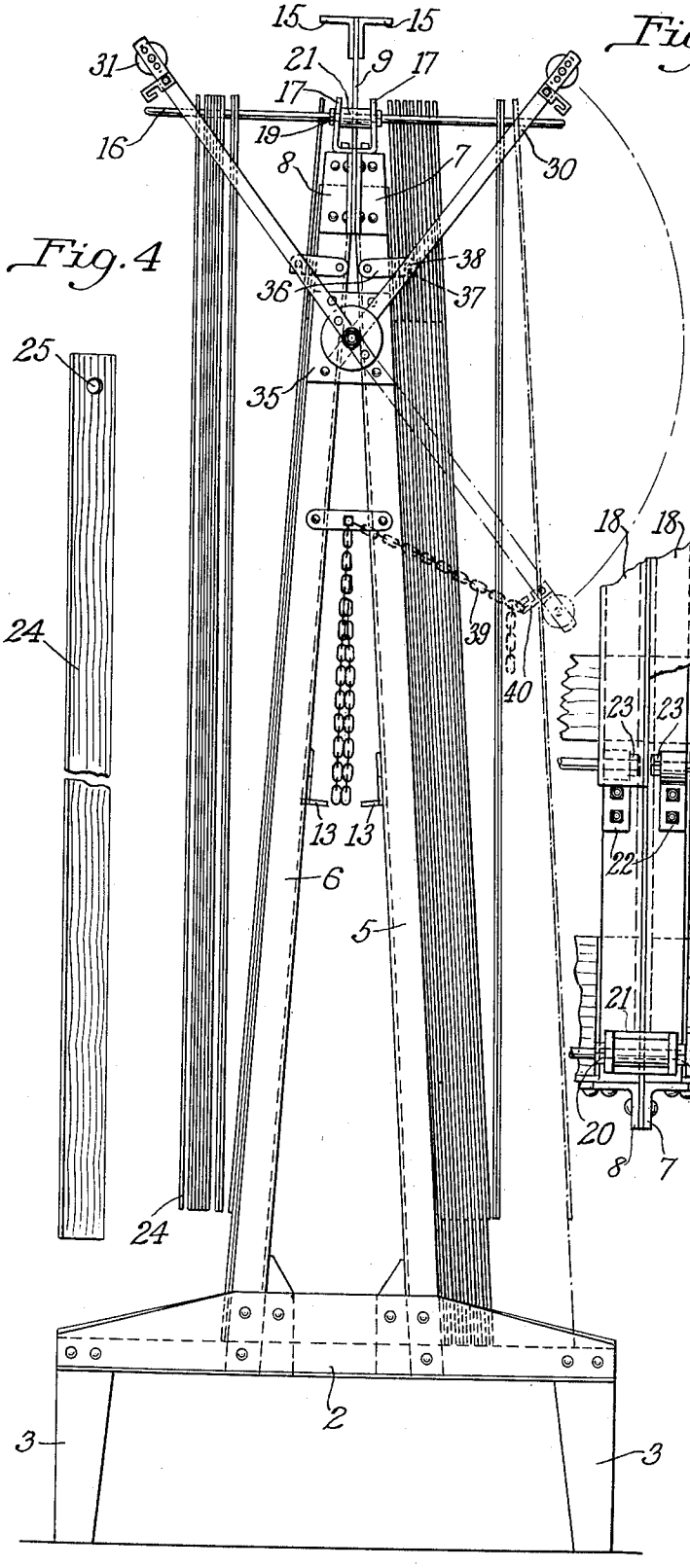
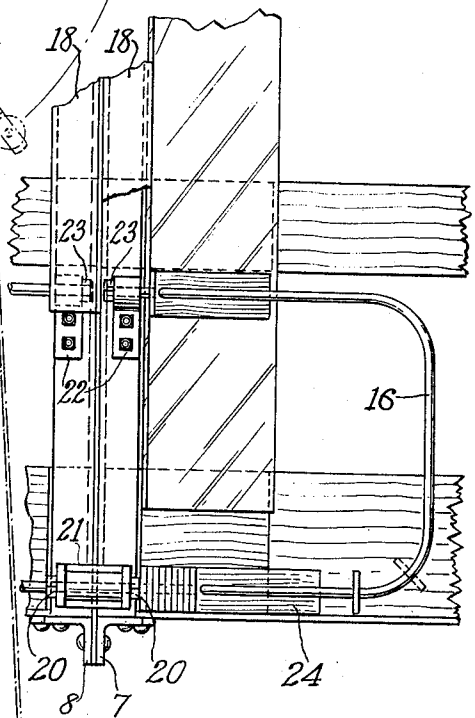


Fig. 4

Fig. 3



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GLASS SUPPORTING STAND

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Application February 20, 1931, Serial No. 517,183

6 Claims. (Cl. 49—14)

Our invention relates to glass handling apparatus, and more particularly to stands for supporting the sheets of glass.

In the method of handling drawn glass, shown and described in the co-pending application of Lonnie J. Pierce, Serial No. 518,170, it is desirable to have a glass supporting stand which is adapted to support a plurality of sheets of glass and which has attached thereto means for separating the glass sheets and means whereby they may be clamped in place thereon. It is desirable that the separating means and the clamping means be of such a character as to permit the stand with the sheets thereon to be moved and dipped in the washing tank without interference therefrom.

By our invention we provide an improved glass supporting stand adapted to support a plurality of sheets of glass and which has attached thereto and advantageously located thereon improved means whereby the sheets may be separated and improved means for clamping the sheets in place on the stand.

We further provide a stand of such construction that it may be readily transported by an overhead conveyor or by the usual lift truck.

In the accompanying drawings, in which we have shown for purposes of illustration only, a preferred embodiment of our invention,

Figure 1 is a side elevation of the stand which we provide;

Figure 2 is an end elevation of the stand shown in Figure 1;

Figure 3 is a plan view of one end of the stand; and

Figure 4 is a side elevation of a separating strip.

The stand shown in the drawings comprises a base indicated generally by reference character 2 having a plurality of legs 3 attached thereto. At each end of the base, angles 5 and 6 are spatially located thereon and attached thereto and extend upwardly therefrom. Angle irons 7 and 8 are provided at the upper ends of the angles 5 and 6 respectively and serve to join the upper ends of the angles 5 and 6. A plate 9 is provided at the top of the stand and extends longitudinally thereof and is attached between the angles 7 and 8 on each end of the stand. Vertical strips 10, preferably of wood, are provided on each side of the stand and form an open back therefor. These vertical strips 10 on each side of the stand are bolted to cross bars 41 at the top of the stand by means of bolts 11 which are counter-sunk in the strips and are fastened to the base of the stand by means of bolts 12 which are likewise counter-sunk in the strips. The vertical strips 10 are supported near the center thereof by means of bars 13 which are fastened thereto by bolts 14 which are counter-sunk in the strips. These bolts are all counter-sunk in order to prevent them from coming into contact with sheets of glass which are placed on the stand.

Angles 15 are attached to the upper part of the plate 9 and are used for the purpose of picking up the stand for transporting the same.

Means for separating the sheets of glass placed on each side of the stand is provided at each end thereof. The separating means on each end comprises a round bar 16 which is formed into a substantially rectangular shape. The bar 16 on one side thereof is attached to the top of the stand by means of angle irons 17 which are attached to bars 18 which extend longitudinally of the stand. The angle irons 17 have openings 19 therein adapted to receive the bar 16. The bar 16 is provided with threaded portions adapted to receive the nuts 20 which prevent the bar 16 from moving in the angle irons 17. A bushing 21 is also provided on the bar 16 and placed between the angle irons 17 in order to prevent the upper ends thereof from being drawn together by the nuts 20. The ends of the bar 16 are fastened to the top of the stand by means of yokes 22 which are in turn fastened to the longitudinally extending bars 18. The ends of the bar 16 are threaded for cooperation with nuts 23 which prevent the ends thereof from being withdrawn from the yokes.

A plurality of separating strips 24 having openings 25 therein adapted to receive the bar 16 are placed on the bar or arm 16 on each side of the center of the stand. When the separating strips are in inoperative position they are located on the outermost side of the bar 16. After a sheet of glass is placed on the stand, a separating strip 24 is taken from the outermost side of the bar 16, moved thereon to the inner side where it comes into engagement with a sheet of glass, and separates the sheet from the others when placed on the stand. As separating means is provided at each end of the stand and on each side thereof, two strips 24 may be used for separating each sheet of glass placed on the stand.

After the sheets of glass are placed on the stand, it is necessary to clamp them thereon, so that the stand can be transported; otherwise the sheets would fall off the stand and break. The clamping means which we provide for each side of the stand comprises a pivotally mounted bar 30 at each end of the stand, said bars being joined by a roller 31 preferably of wood. The

arms 30 on each end of the stand are attached to the stand by means of bolts 32, bushings 33, nuts 34, and plates 35, the latter of which is bolted to the vertical bars 5 and 6. A spring 42 is provided between the nut 34 and the arms 30 on each end of the stand for the purpose of preventing the arms and the cross piece 31 thereon from falling down while glass is being placed on the stand. By virtue of the spring, the arms can be placed and will remain in any position desired. A latch 36 having an opening 37 therein adapted to cooperate with a pin 38 on each arm is provided for each arm so that each arm may be retained in a raised position while sheets of glass are being placed upon the stand.

After a sufficient number of sheets of glass have been placed on each side of the stand, the arms 30 are lowered to the position shown in dotted lines in Figure 2. The arms 30 may be held in this position by means of chains 39 which may be fastened over hooks 40 on each arm. With the arm fastened in the position shown in dotted lines in Figure 2, the stand may be transported without fear of the sheets of glass falling off the stand.

While we have shown and described a preferred embodiment of our invention, it is to be understood that it is not limited thereby but may be otherwise embodied or practiced within the scope of the following claims.

We claim:

1. A glass supporting stand comprising a main frame adapted to support a plurality of sheets of glass, and means for clamping the sheets of glass on the stand, comprising pivotally mounted arms on either end of the stand, and a cross piece connecting said arms.

2. A glass supporting stand comprising a main frame, a plurality of sheets of glass thereon, means for clamping the sheets of glass on the stand, comprising pivotally mounted arms on either end of the stand, a cross piece connecting said arms, and means for fastening the arms in clamping relationship relative to the sheets of glass.

3. A glass supporting stand comprising a frame adapted to support a plurality of sheets of glass, a substantially U-shaped arm on each end of the stand, means on said arms movable into and out of position for spacing the sheets of glass relatively to each other, and means for clamping the sheets on the frame comprising pivotally mounted arms on either end of the stand, a cross piece connecting said arms, and means for fastening the arms in clamping relationship relative to the sheets of glass.

4. A glass supporting stand comprising a main frame adapted to support a plurality of glass sheets, a substantially U-shaped arm adjacent each end thereof, each of said arms being positioned on the frame above the upper edge of the glass sheets thereon with the leg portions thereof horizontally spaced, one of said leg portions being positioned above and between vertical planes passed through the vertical edges of the glass sheets and the other leg being outside said planes, the open end of the U-shaped arms being attached to the frame, and means slidably mounted on said arms adapted to be moved therealong from an inoperative position at one side of the glass sheets to an operative position for spacing glass sheets placed thereon.

5. A glass supporting stand comprising a main frame adapted to support a plurality of glass sheets, a substantially U-shaped arm carried by said frame, said arm being positioned on the frame above the upper edge of the glass sheets thereon with the leg portions thereof horizontally spaced, one of said leg portions being positioned above and between vertical planes passed through the vertical edges of the glass sheets and the other leg being outside said planes, the open end of the U-shaped arm being attached to the frame, and means slidably mounted on said arm adapted to be moved therealong from an inoperative position at one side of the glass sheets to an operative position for spacing glass sheets placed on the frame.

6. A glass supporting stand comprising a main frame adapted to support a plurality of glass sheets, a substantially U-shaped arm adjacent each end of the frame, each of said arms being positioned on the frame above the upper edge of the glass sheets thereon with the leg portions thereof horizontally spaced, one of said leg portions being positioned above and between vertical planes passed through the vertical edges of the glass sheets and the other leg being outside said planes, the open end of the U-shaped arms being attached to the frame, and vertically extending means on said arms movable horizontally therealong into and out of position for spacing the sheets of glass relatively to each other, and means for clamping the sheets on the frame.

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