

No. 672,788.

Patented Apr. 23. 1901.

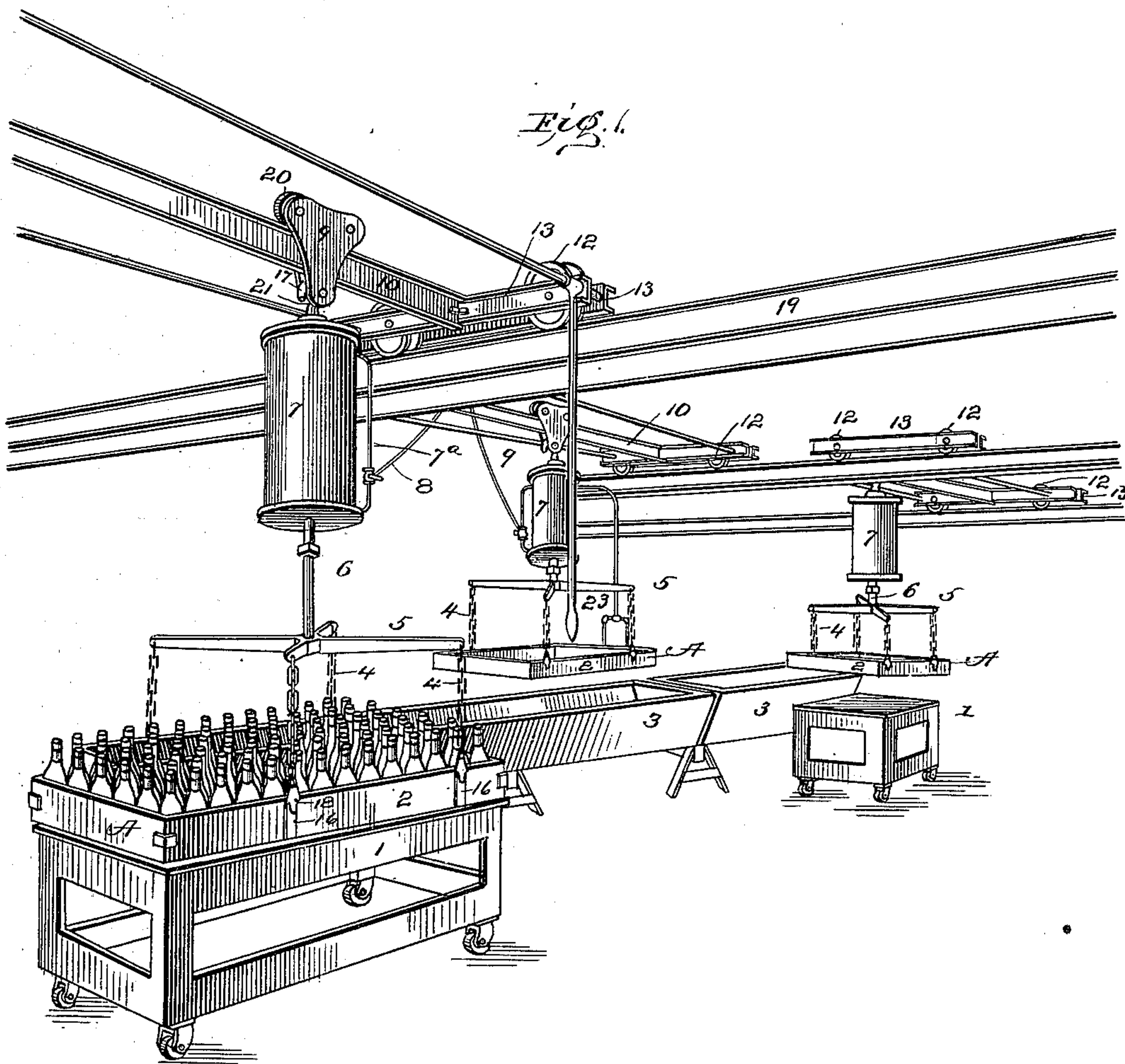
A. LIEBER & A. MEIMBERG.

DEVICE FOR HOISTING AND TRANSFERRING BOTTLED BEER IN
BOTTLING ESTABLISHMENTS.

(Application filed July 30, 1900.)

(No Model.)

3 Sheets—Sheet 1.



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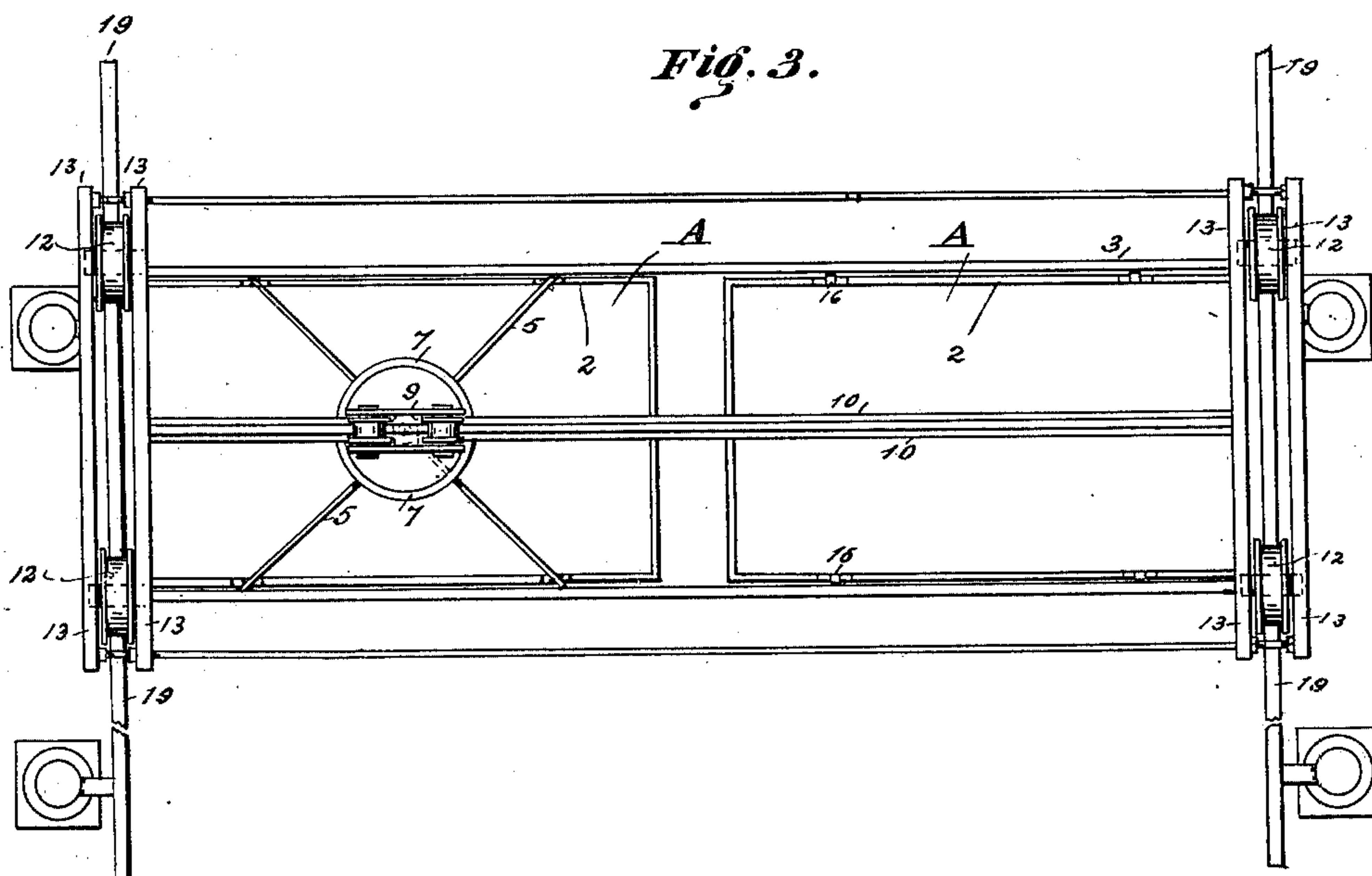
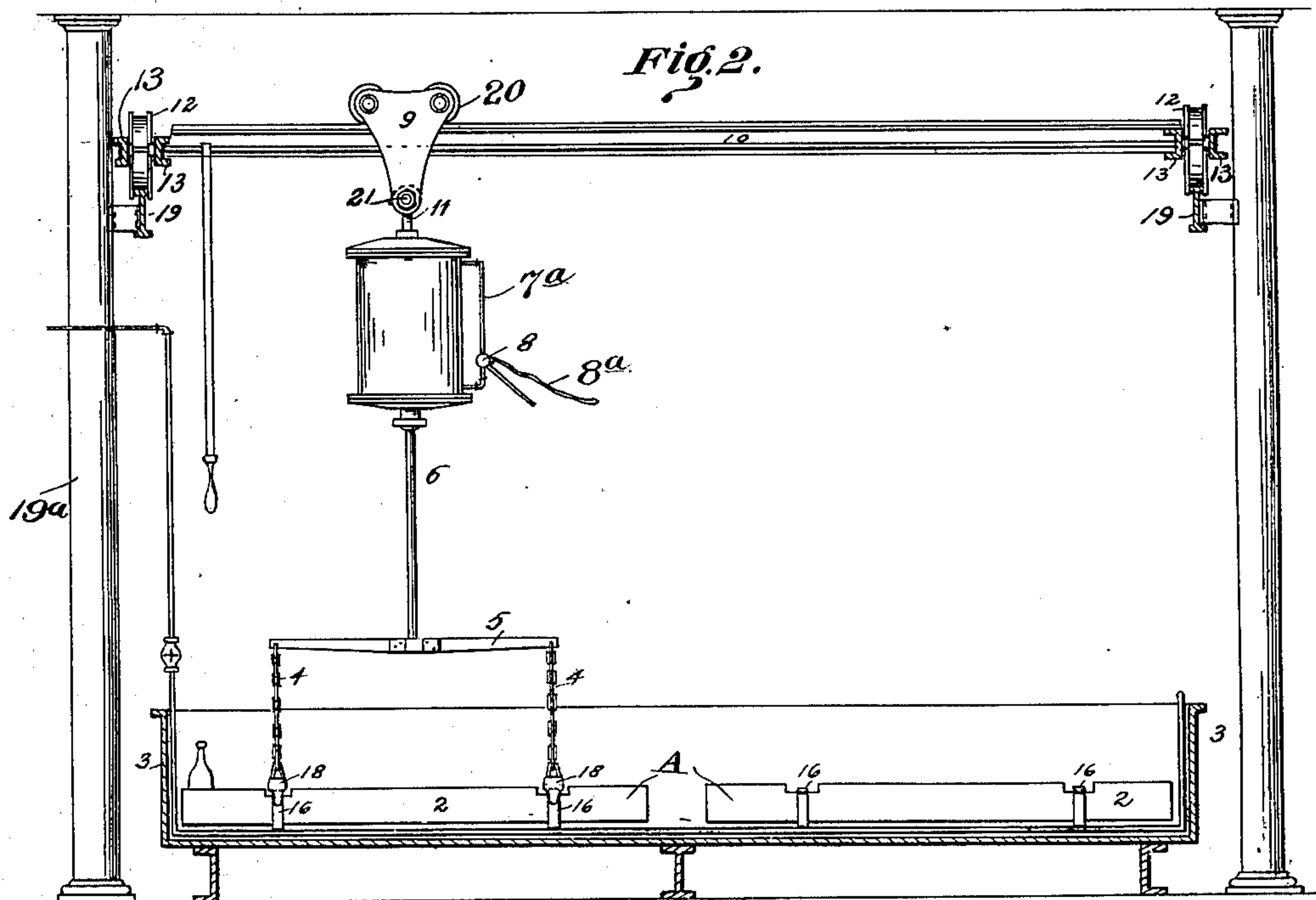
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3 Sheets—Sheet 2.



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3 Sheets—Sheet 3.

Fig. 4.

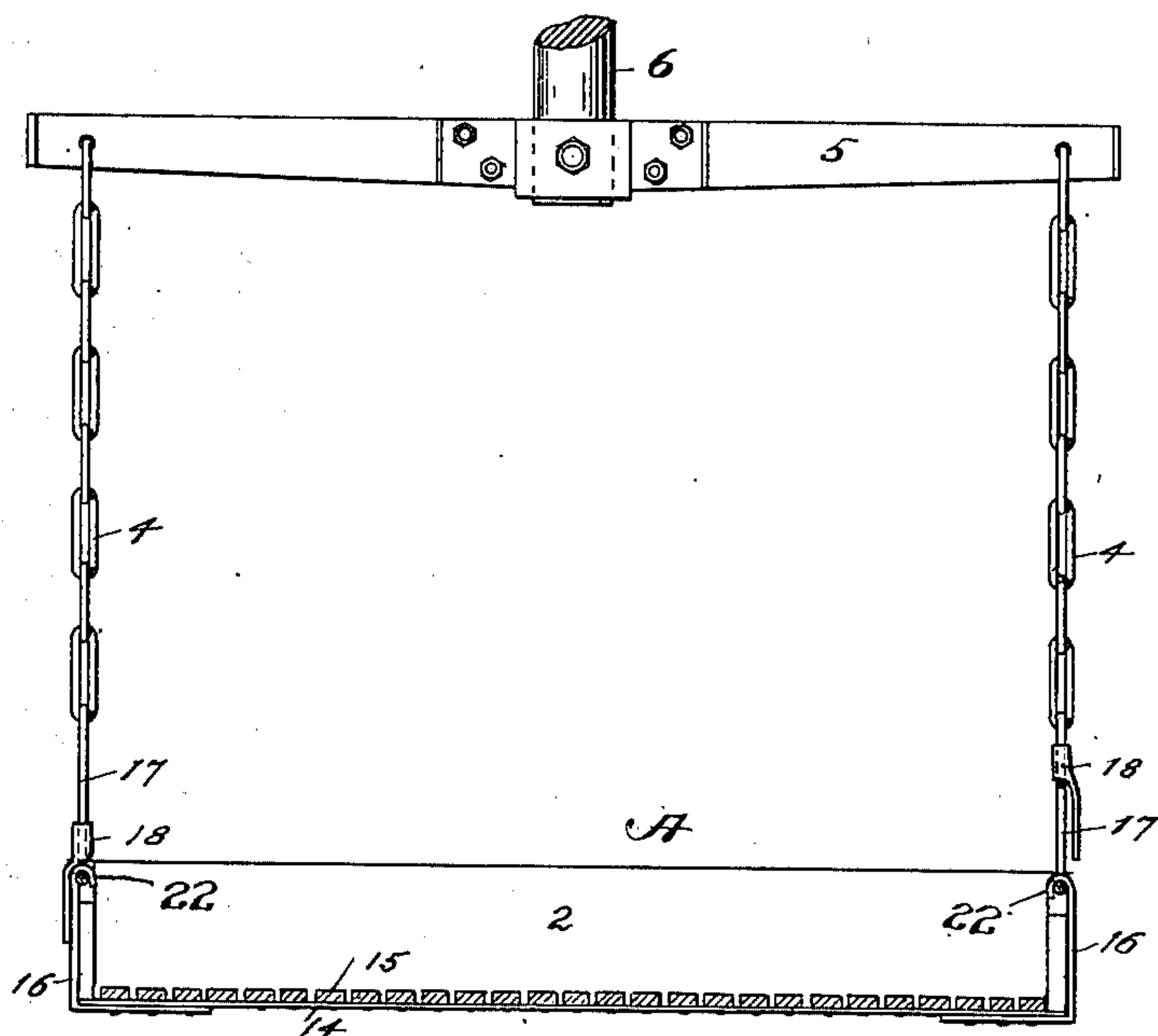


Fig. 5.

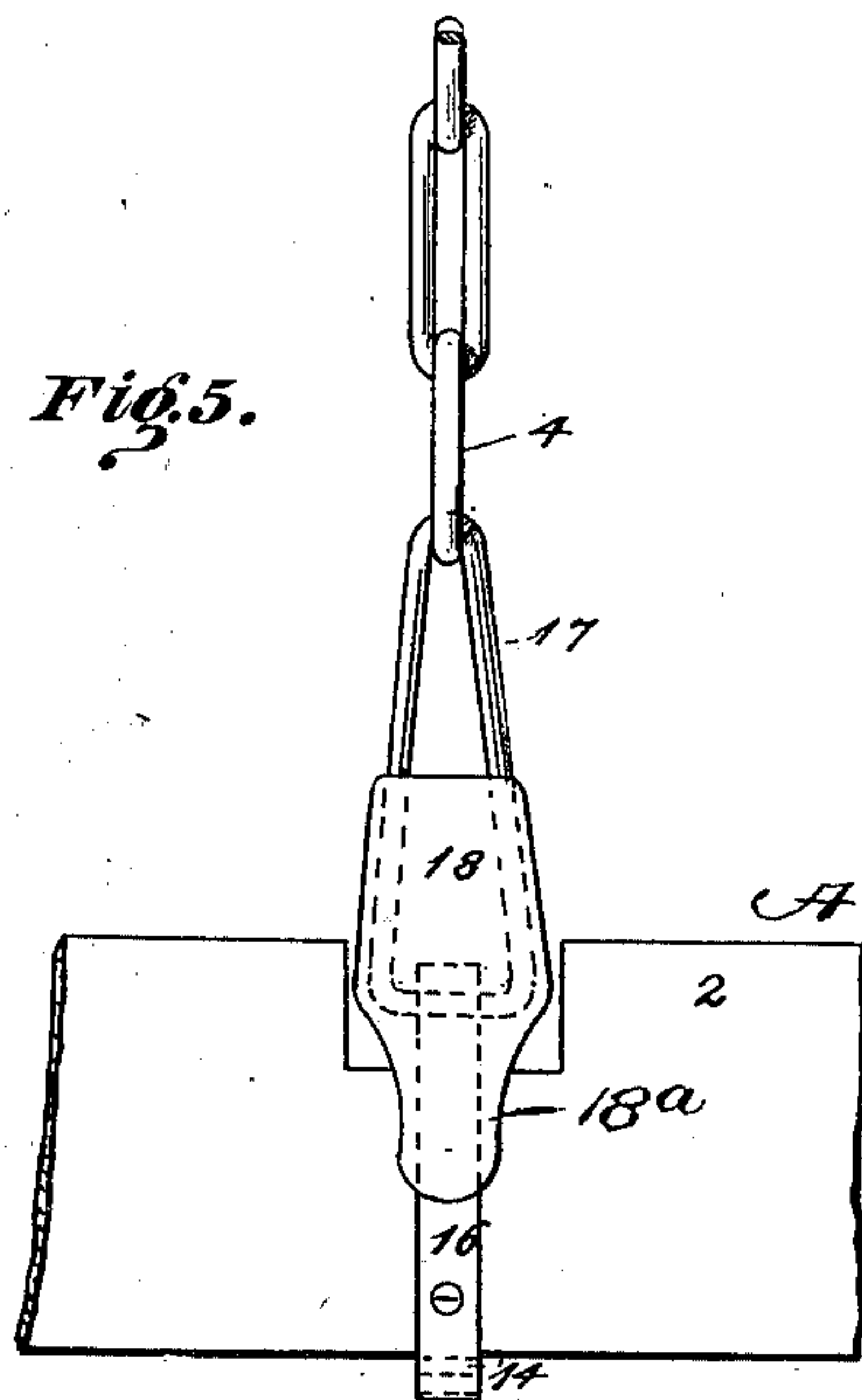
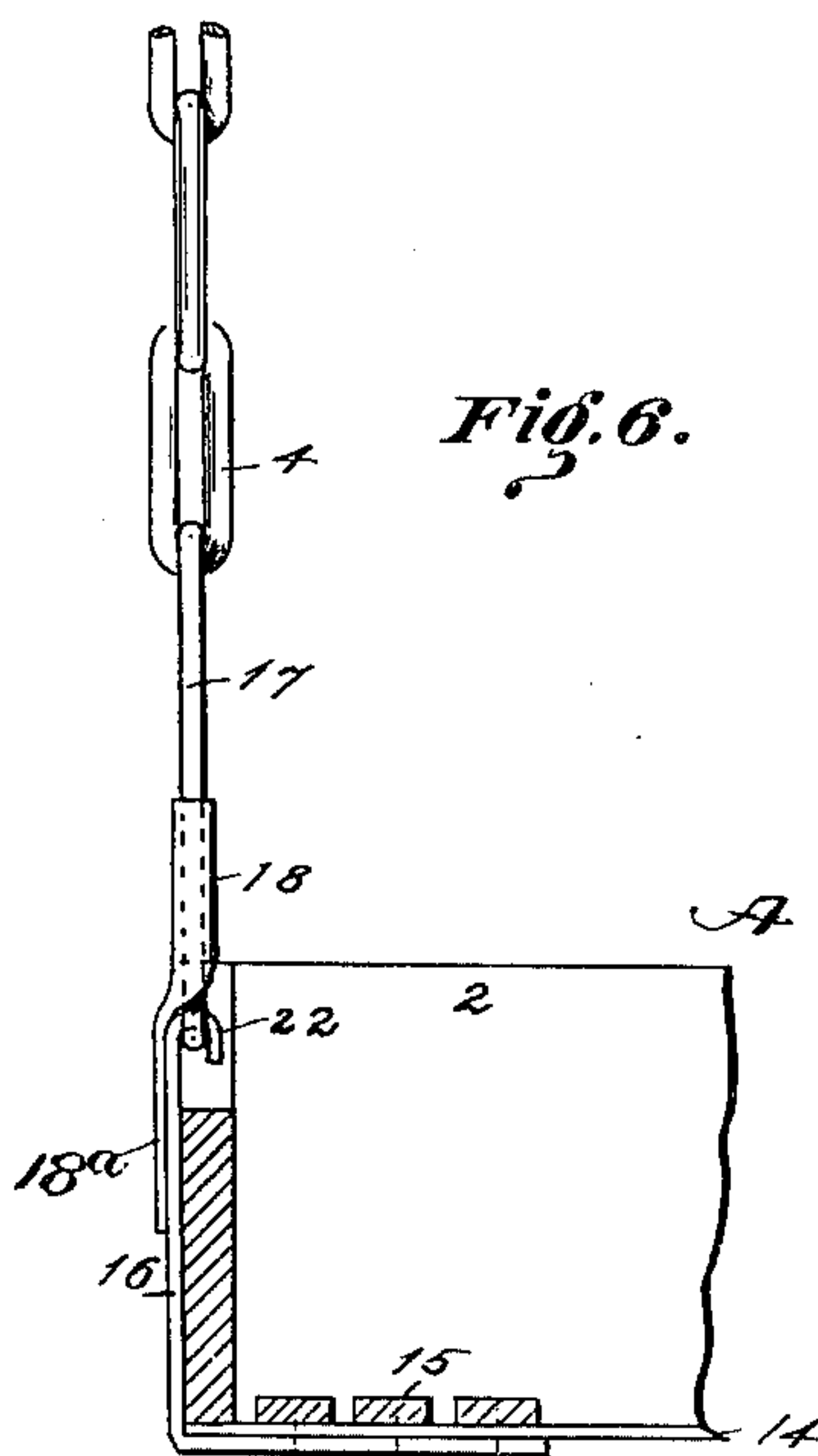


Fig. 6.



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UNITED STATES PATENT OFFICE.

ALBERT LIEBER AND AUGUST MEIMBERG, OF INDIANAPOLIS, INDIANA.

DEVICE FOR HOISTING AND TRANSFERRING BOTTLED BEER IN BOTTLING ESTABLISHMENTS.

SPECIFICATION forming part of Letters Patent No. 672,788, dated April 23, 1901.

Application filed July 30, 1900. Serial No. 25,253. (No model.)

To all whom it may concern:

Be it known that we, ALBERT LIEBER and AUGUST MEIMBERG, citizens of the United States, residing at Indianapolis, in the county of Marion and State of Indiana, have invented new and useful Improvements in Devices for Hoisting and Transferring Bottled Beer in Bottling Establishments by Means of Air-Hoists and Transverse Carriers, of which the following is a specification.

Our invention relates to an improvement in the means for handling of large quantities of bottled beer for the purpose of "pasteurizing." During the operation of this process the bottled beer has to be transferred in trays by means of trucks from the place of filling to the pasteurizing-tanks. Arriving at the tanks, the trays loaded with bottled beer must be elevated, so that the tray may be moved over the steaming-tank and then lowered into the same. It has been customary heretofore to perform these operations by means of hand or chain-hoists, necessitating the employment of a large number of men.

Our invention comprehends, in addition to the pasteurizing tank or tanks and the trays in which the bottled beer is contained while being transported and pasteurized, a raising and lowering means which travels on overhead tracks and carries the beer to position over the tank in which it is to be pasteurized and from said tank after it (the beer) has been pasteurized. The raising and lowering means preferred by us comprises a cylinder having therein a piston-head and provided with a piston-rod having means by which a tray is detachably connected therewith. Said cylinder is also provided with means by which a suitable means or medium, preferably compressed air, is conveyed thereto for the purpose of actuating the piston and raising and lowering the tray with its contained bottles of beer. The construction is preferably such that the compressed air enters the cylinder at points which are both above and below the limits of travel of the piston-head and is conveyed to the inlets by pipes which have their contiguous ends joined by a valve-casing having a suitable valve, actuable to cause the compressed air to enter the upper part of the cylinder in order to drive the piston downward,

and thereby lower the tray, with its contained bottles of beer, into the pasteurizing-tank or onto a truck after the beer has been pasteurized and to cause the air to enter the lower port in the cylinder when it is desired to raise the piston, and thereby lift the tray and beer from a truck or from said pasteurizing-tank. This means of raising and lowering the trays, with their contained bottles, by compressed air or other suitable fluid admitted below and above the piston-head, respectively, has especial advantages in the handling of bottled goods, as the action of the piston in both directions of its travel is cushioned by said fluid, and said piston, together with the parts carried thereby, is caused to move slowly, steadily, and without jar, whereby the liability of breaking the bottles is reduced to a minimum and is materially less than it would be if the piston were caused to descend by gravity. The means adopted for detachably connecting the hoisting device with the trays are of peculiar construction and include pendent eyes or loops carried by said device to engage hooks on the trays, together with a slidable or movable safety device adapted to prevent accidental disconnection of the parts from each other.

Other novel features are embodied in the complete embodiment of the invention, which will appear hereinafter.

In the accompanying drawings, illustrating the invention, Figure 1 is a perspective view of part of the interior of a plant for pasteurizing beer embodying our improvements. Fig. 2 is a detail view which illustrates the construction of the conveying means and the pasteurizing-tank, the latter being shown in section. Fig. 3 is a plan view of the parts shown in Fig. 2. Fig. 4 is a detail view intended principally to show the construction of the tray and the means for connecting the hoisting device therewith, said tray being shown in section; and Figs. 5 and 6 are a front and side view, respectively, of the means by which the tray is detachably connected with said hoisting means.

Similar reference characters designate similar parts in the several views.

A designates the tray which contains the bottled beer while the same is being trans-

ported to and from the pasteurizing-tank 3 and while it is in said tank. Said tank 3 is or may be of the ordinary construction. The plant shown in the drawings comprises a number of trays and transporting means therefor, all of similar construction, respectively, so that a description of one will suffice for all. The tray A is formed of side pieces 2, which may be of wood, and a bottom formed of slats 15, spaced suitable distances apart and supported upon metallic strips 14, which are attached to the ends of the tray. The tray is also provided with L-shaped straps 16, having their lower ends secured to strips 14 and their upper ends formed to provide hooks 22, which hooks are adapted to be engaged by loops 17 at the ends of chains 4. In order to prevent accidental disconnection of the loops 17 and hooks 22, a safety-buckle is mounted on one of the parts and is movable into engagement with the other part. The safety device shown in the accompanying drawings comprises a slide 18, formed of sheet metal and having its edges bent so that it incloses the loop 17 and provided with a depending portion adapted to engage the hook end of the contiguous strap 16, and thereby prevent relative movement of the loop and hook. In order that the slide may be most reliably held in its lower position, to which it is adjusted when in use, and may be readily raised to permit disconnection of the loop and hook, said loop is preferably triangular in shape and has its base presented to said hook, and the upper portion of the slide is similarly formed, as clearly shown in Fig. 5. The chains 4 depend from the ends of the arms of a cross-head 5, which latter is bolted or otherwise firmly secured to the lower end of a piston-rod 6. Said rod extends into a cylinder 7 and has within said cylinder a piston-head acted on by the power fluid employed to raise and lower the piston, and thereby raise and lower the tray suspended therefrom. The cylinder is also provided with a pipe 7^a, which conveys the power fluid, preferably compressed air, thereto, and the respective ends of said pipe open into said cylinder at places above and below said piston-head through inlet-ports with which the cylinder is provided. Said pipe has at a suitable place a valve-casing 8, which contains a valve. There will be suitable hose or other air-conveying pipes (indicated best at 8^a, Fig. 2) connecting the valve-casing with a suitable compressed-air reservoir. The construction will preferably be of that well-known type wherein the valve may be manipulated to permit the air to pass under the piston-head for moving the load upward and to pass above said piston-head to move the load downward, so that the piston will be cushioned in both directions of its travel, so as to prevent breakage of the bottles with which the tray is loaded. Said cylinder 7 is pivotally suspended, as indicated at 21, from a wheeled frame 9, which straddles an eye-beam 10, formed to provide a track

upon which the wheels of said frame may run, thus providing for an adjustment of the cylinder and the parts carried thereby in a direction lengthwise of the tank 3, and each end of said eye-beam 10 is suitably fixed to the inner member of a wheeled frame consisting of two flanged irons 13, supporting wheels 12 between them, which wheels traverse tracks provided by suitable eye-beams 19, which are supported by suitable pillars or by any other suitable means, whereby the trays may be rapidly and easily adjusted in a direction at right angles with that afforded by the wheeled frame 9, above referred to.

In the operation of the apparatus the tray is filled in one portion of the plant with bottled beer to be pasteurized and is loaded on a truck 1, on which it is conveyed to a place adjacent to a pasteurizing-tank, at which place it is coupled to the hoisting means. Air is now admitted beneath the piston-head, thus lifting the tray from its truck and elevating it to a height above the pasteurizing-tank. The carrying means are now adjusted on the beams 19 to a place over said tank by the operator, who grasps a handle 23, provided for this purpose, and is then adjusted to a place over an unoccupied portion of said tank on the track 10. Air is then admitted above the piston-head, so as to lower the tray into the tank, after which the loops 17 are uncoupled from the hooks 22 and the tray, with its contained bottles, allowed to remain in the tank until the beer is pasteurized. When the beer has been subjected to the action of the pasteurizing medium the required length of time, its tray is recoupled to the hoisting and carrying means, and the apparatus is operated to place it on a truck 1 provided therefor, and it is conveyed away on said truck.

A plant equipped with the apparatus above described will be enabled thereby to handle a maximum amount of goods with very little manual labor and without liability of loss due to breakage of bottles, thus materially reducing the proportionate running expenses of the plant.

Having thus described our device for handling bottled beer during the pasteurizing process and its advantages, what we claim as new, and desire to secure by Letters Patent, is the following:

1. The chain 4, loop 17, hook 22, with safety-buckle 18, cross-arms 5, in combination with tray 2.

2. In a pasteurizing apparatus, the combination with a pasteurizing-tank, a tray for containing the bottled liquid to be pasteurized, and a means constructed to raise and lower said tray, of devices for detachably connecting the tray with the raising and lowering means, said connecting means embracing hooks on one part, loops on the other part, and adjustable safety-buckles which engage said hooks and loops and prevent accidental disconnection thereof.

3. The combination with a pasteurizing-

5 tank, and a hoisting and lowering means, having triangular loops, of a tray having hooks to engage said loops, and slides adapted to said loops and adjustable thereon to also engage said hooks, so as to prevent accidental disconnection of the loops and hooks, substantially as described.

Signed by us at Indianapolis, Indiana, this 19th day of July, 1900.

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