

No. 709,727.

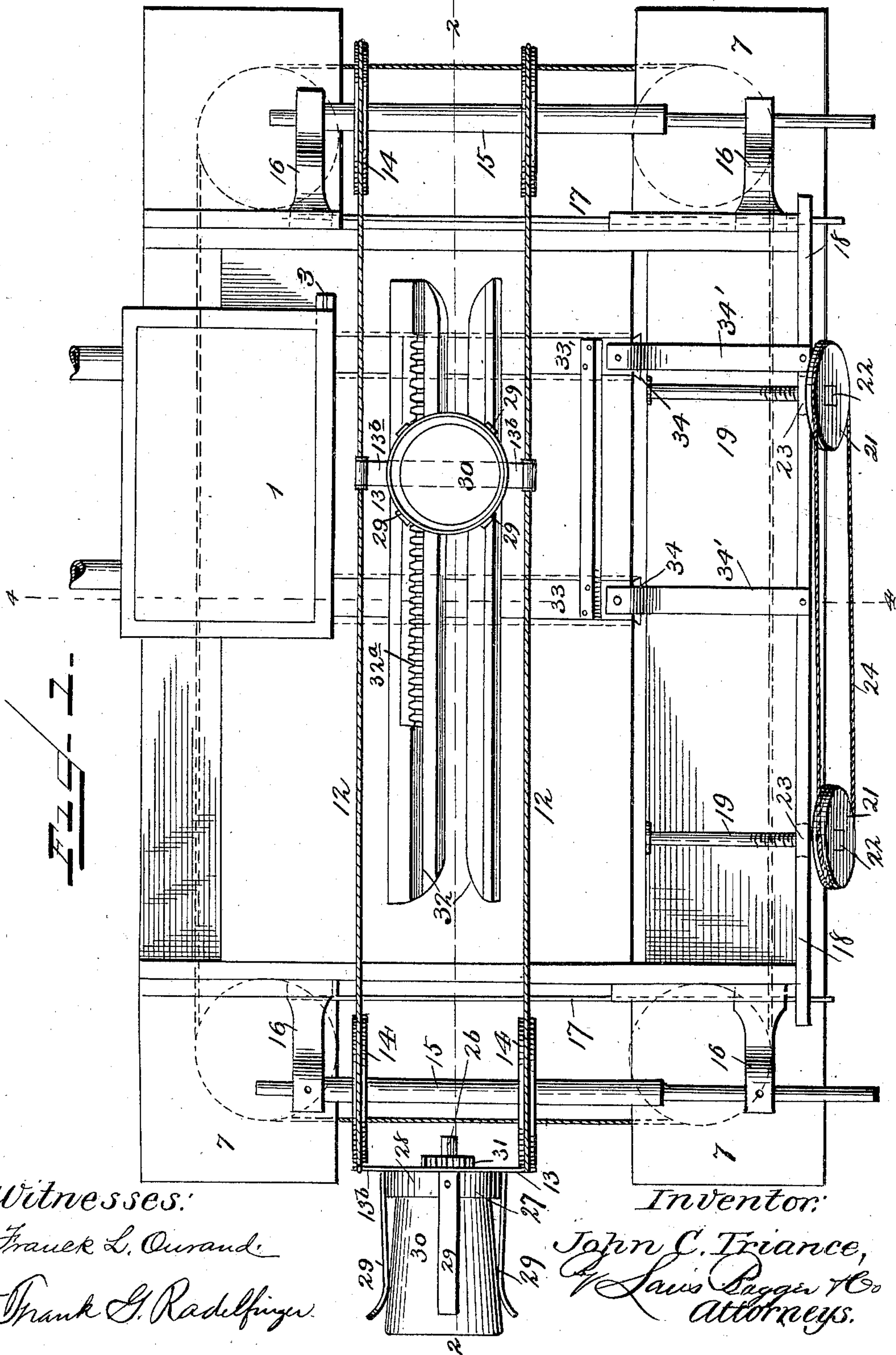
Patented Sept. 23, 1902.

J. C. TRIANCE.  
GLASS MELTING MACHINE.

(Application filed Feb. 20, 1902.)

(No Model.)

3 Sheets—Sheet I.



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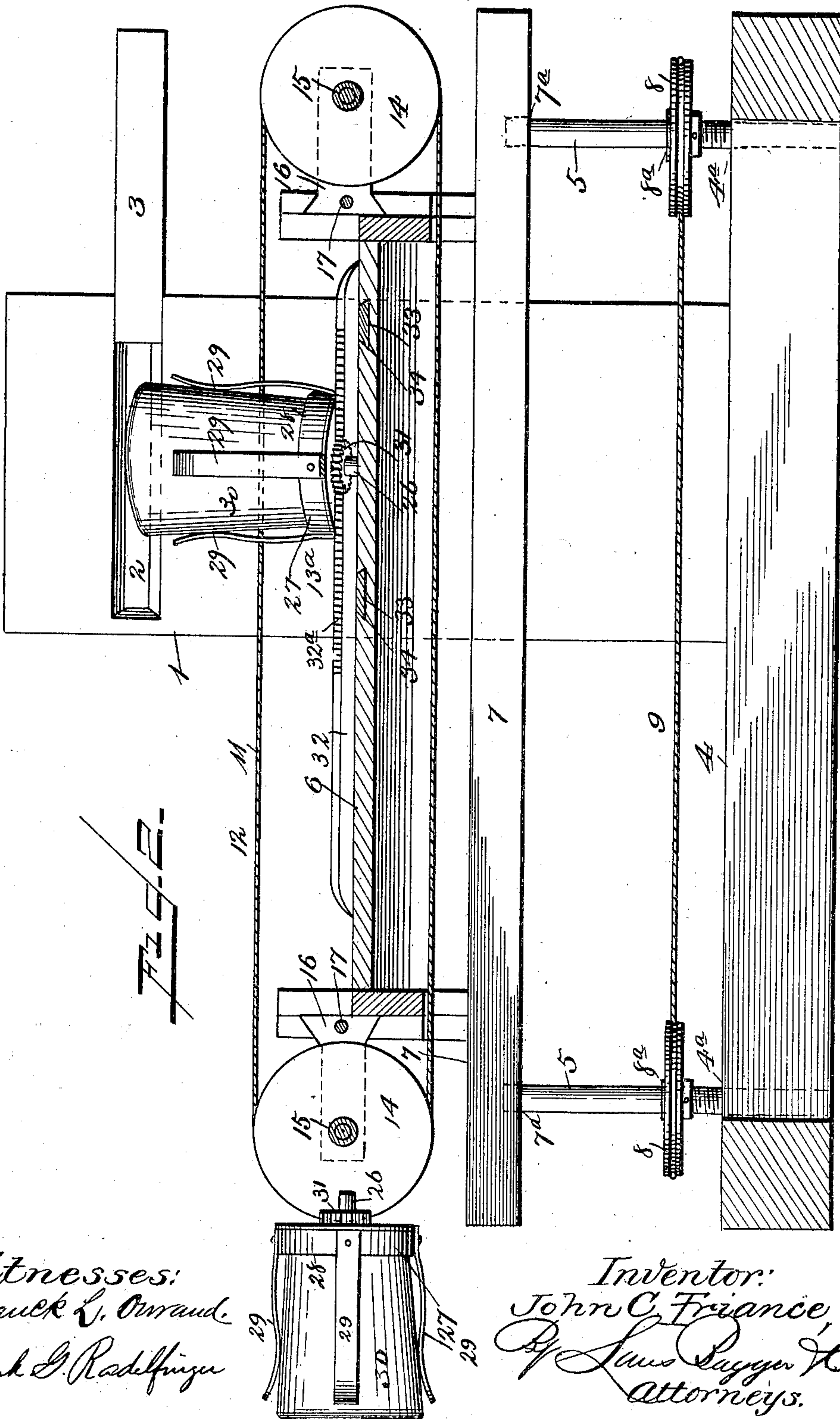
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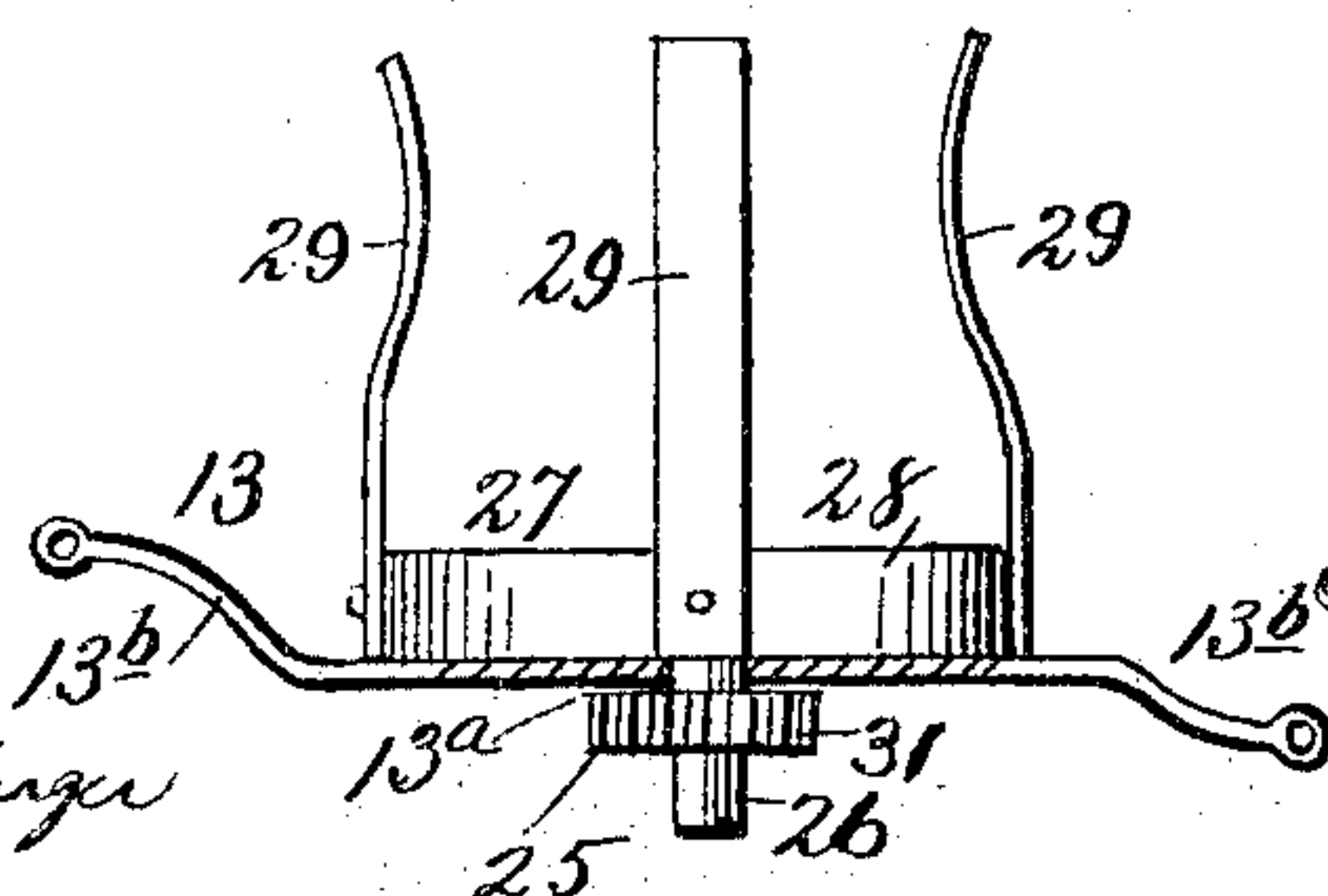
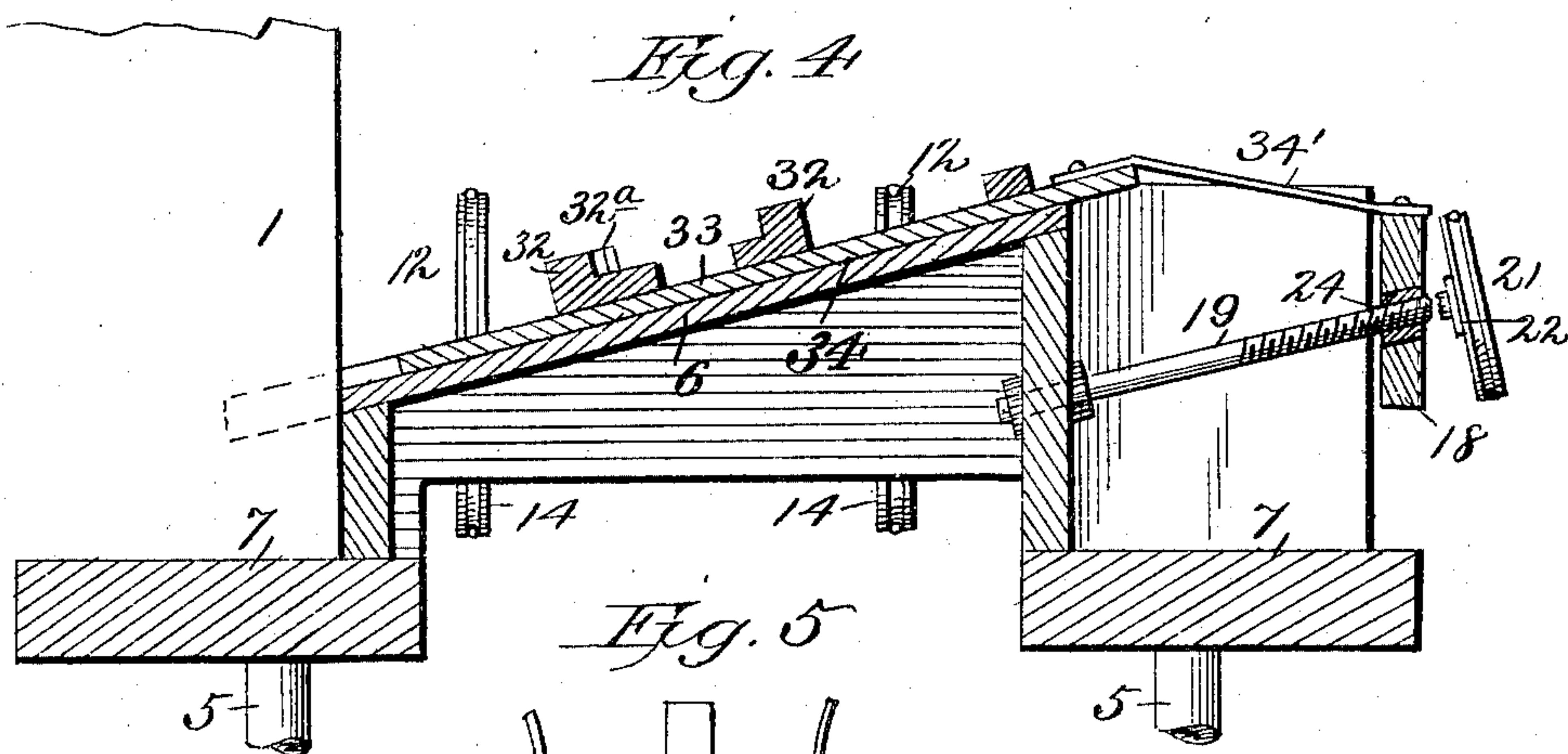
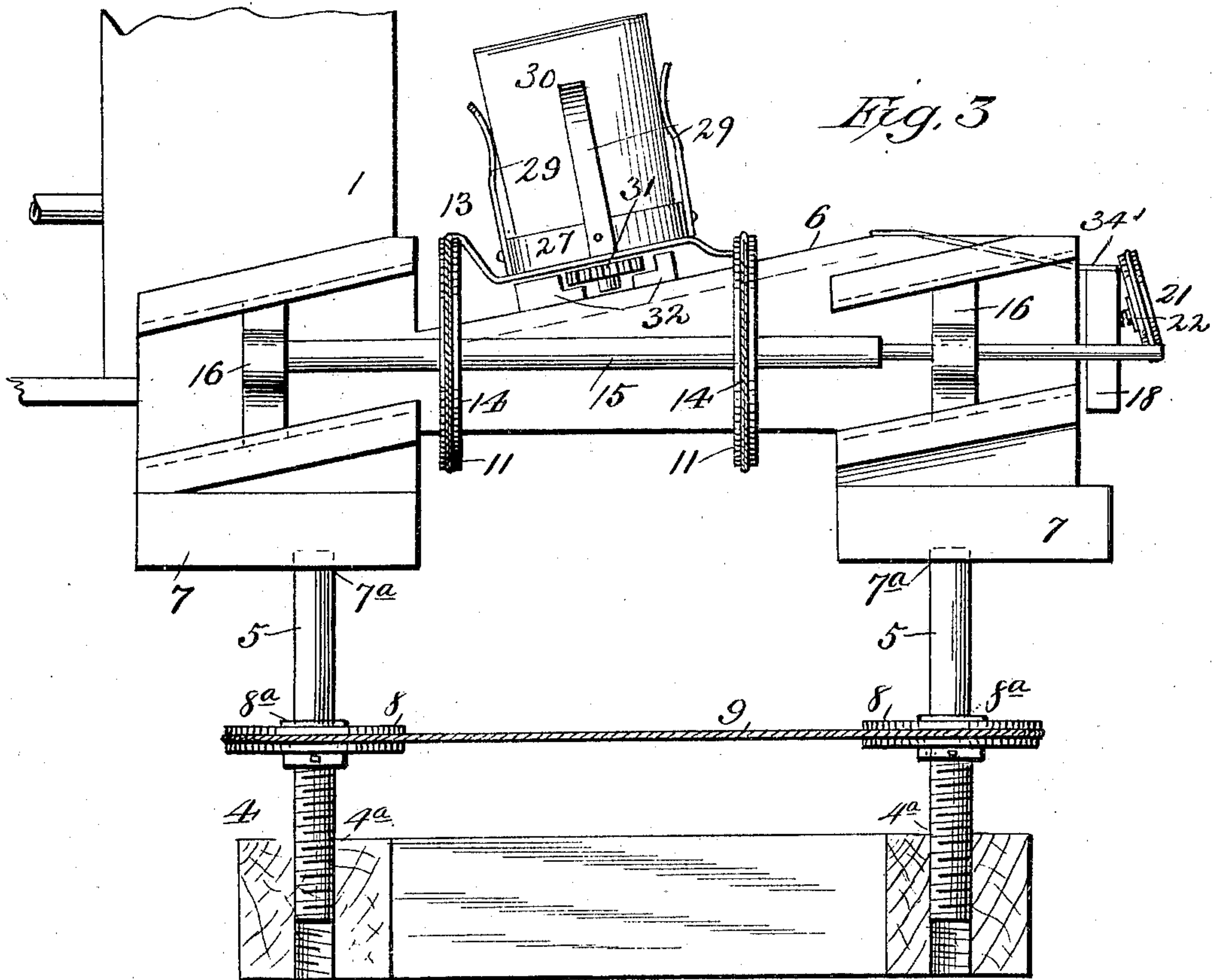
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3 Sheets—Sheet 3.



Witnesses:  
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# UNITED STATES PATENT OFFICE.

JOHN C. TRIANCE, OF ROCHESTER, PENNSYLVANIA, ASSIGNOR OF TWO-THIRDS TO MATHEW J. FENTZEL AND JOHN A. DOCKTER, OF TARENTUM, PENNSYLVANIA.

## GLASS-MELTING MACHINE.

SPECIFICATION forming part of Letters Patent No. 709,727, dated September 23, 1902.

Application filed February 20, 1902. Serial No. 94,944. (No model.)

*To all whom it may concern:*

Be it known that I, JOHN C. TRIANCE, a citizen of the United States, residing at Rochester, in the county of Beaver and State of Pennsylvania, have invented new and useful Improvements in Glass-Melting Machines, of which the following is a specification.

My invention relates to what are technically known as "glass-melting machines" and are used for melting the rims of tumblers, so as to give them a rounded edge, and thus prevent cutting the lips when using the same.

In the manufacture of tumblers as they come from the mold there is a projecting flange formed integral with the rim, which is detached therefrom by pressing a wire tightly against the tumbler at the proper point and rapidly rotating the latter. The friction causes the wire to become red-hot and correspondingly heating the tumbler. By now cooling the tumbler at such point the glass will break and said projecting portion will drop off, but will leave the edge or rim sharp, so that if used in such condition would be liable to cut the lips of the user. The tumblers are then ground to remove any uneven parts and are then ready for the melting operation.

The object of the present invention is to provide an improved machine for automatically carrying tumblers in front of a furnace and continuously rotating the same while so moving, so that the edge or rim will be melted and rounded.

Means for adjusting the height and position of the tumbler to adapt the device for different sizes of glasses also form a part of my invention.

The novel construction used by me in carrying out my invention is fully described in this specification and claimed, and illustrated in the accompanying drawings, forming a part thereof, in which—

Figure 1 is a plan view of my machine. Fig. 2 is a longitudinal section on the line 2 2, Fig. 1. Fig. 3 is an end elevation of the same. Fig. 4 is a transverse section on the

line 4 4, Fig. 1. Fig. 5 is a detail of one of the tumbler-holders.

Like numerals of reference designate like parts in the different views of the drawings.

The numeral 1 designates a furnace having a slit 2 therein, through which the flames issue. The length of this slit for tumblers of different size is regulated by an adjustable slide 3.

Located in front of the furnace 1 is a bed-frame 4 for supporting the working parts of my machine. Four vertical threaded rods 5 are mounted in apertures 4<sup>a</sup> in the corners of the frame 4 and support an inclined table 6, having side bars 7, having recesses 7<sup>a</sup>, within which the upper ends of the rods 5 loosely fit. Sheaves 8, having threaded hubs 8<sup>a</sup>, are mounted on the threaded rods 5 and are operated in unison by means of a belt or sprocket-chain 9 to adjust the height of the table 6.

The table 6 is inclined toward the furnace 1 and supports the mechanism for handling the tumblers and comprising a carrier-belt 11 and means for driving it. The carrier-belt 11 consists of two parallel belts or chains 12, connected by flights 13. The chains 12 pass over sheaves 14, keyed on shafts 15, journaled in brackets 16. The brackets 16 are adjustably mounted in parallel inclined guides secured to cross-pieces attached to the ends of the table 6. Rods 17 connect these brackets 16 in pairs and enable them to be moved in unison to adapt the machine for different sizes of tumblers. A bar 18 is rigidly attached to the outer ends of the rod 17. A pair of guide-rods 19 are seated in the table 6 and pass through apertures in the bar 18. The outer ends of the rods 19 are threaded, and sheaves 21, having threaded hubs 22, are mounted thereon and are confined in boxes 23, secured to the bar 18. A belt 24 passes over the sheaves 21. By this arrangement the position of the brackets 16 in the guides can be regulated by turning the sheaves in unison by means of the belt 24.

I will now return to the conveyer and describe the means for handling the tumblers.



Each of the flights 13 comprises a disk 13<sup>a</sup>, having arms 13<sup>b</sup>. The disk 13<sup>a</sup> is apertured at 25 to accommodate a spindle 26, which carries a holder 27, comprising a circular block 5 28, provided with curved fingers 29, arranged to grip and hold a tumbler 30. The spindle 26 carries a pinion 31, which is arranged to mesh with a rack-bar 32<sup>a</sup>, attached to one of two parallel guides 32, secured to guides 33, 10 slidingly mounted in grooves 34 in the table 6. The upper ends of the guides 33 are connected by straps 34' to the bar 18 and can therefore be moved in unison with the brackets 16 to adjust the machine by means of the sheaves 15 21. In practice one of these shafts 15 is driven by some source of power. An attendant stands at one end of the machine and as the belt passes him places an unfinished tumbler in each of the holders 27. The holders 20 resting on the inclined table will give the tumbler the proper angle to bring the rim just opposite the slit 2 in position to receive the force of the blast. When the tumbler comes opposite the slit 2, the rack 32<sup>a</sup> will 25 engage the pinion 31 and rotate the tumbler, thereby bringing every part of the rim within the blast. After the tumbler has been treated it is replaced in the holder by another. In case it is found that the tumblers are melted 30 too much the conveyer is adjusted to remove them farther from the furnace.

I do not wish to be limited as to details of construction, as these may be modified in many particulars without departing from the 35 spirit of my invention.

Having thus described my invention, what I claim as new, and wish to secure by Letters Patent, is—

1. In a tumbler-finishing machine, the combination with an inclined table, means for adjusting the height of said table, a carrier-belt bearing tumbler-holders, and means for driving said carrier-belt, substantially as described. 40

2. In a machine for finishing tumblers, the combination, of two pairs of slidingly-mounted brackets, the members of each pair being connected to move in unison, shafts journaled in said brackets, guides bearing a rack-bar and mounted to be moved transversely, a carrier-belt mounted on said sheaves and bearing 50 rotatable holders constructed to be actuated by said rack-bar, and means for moving said brackets and said guides in unison to adjust the machine for different sizes of tumblers, 55 substantially as described.

3. In a tumbler-finisher, the combination with a table, of transversely-adjustable brackets mounted on said table, shafts journaled in said brackets and bearing pulleys, and a 60 conveyer bearing tumbler-holders mounted on said pulleys, substantially as described.

In testimony whereof I have hereunto set my hand in presence of two subscribing witnesses.

JOHN C. TRIANCE.

Witnesses:

H. SIEDER,

C. W. SCHROPP.