

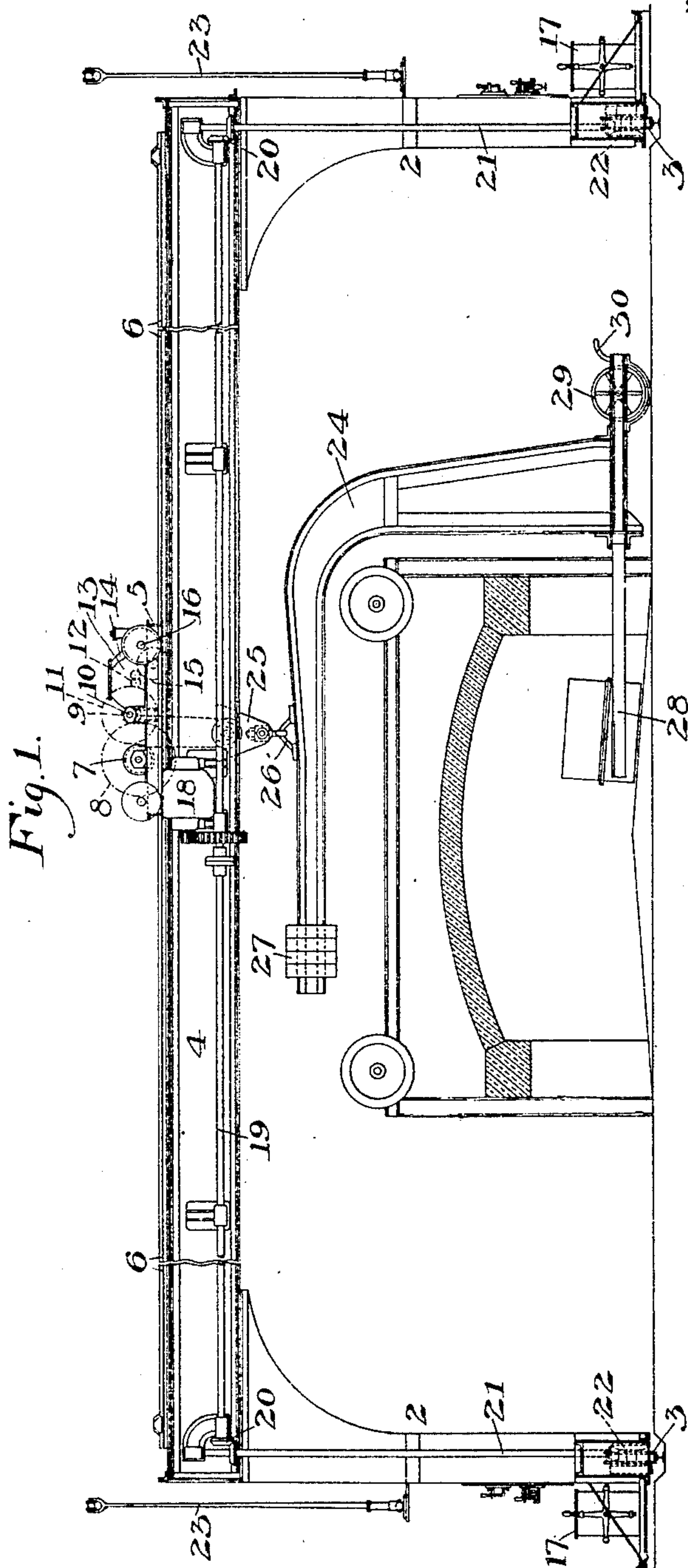
No. 862,370.

PATENTED AUG. 6, 1907.

H. AIKEN.  
GLASS POT HANDLING APPARATUS.

APPLICATION FILED NOV. 21, 1903.

2 SHEETS—SHEET 1.



WITNESSES

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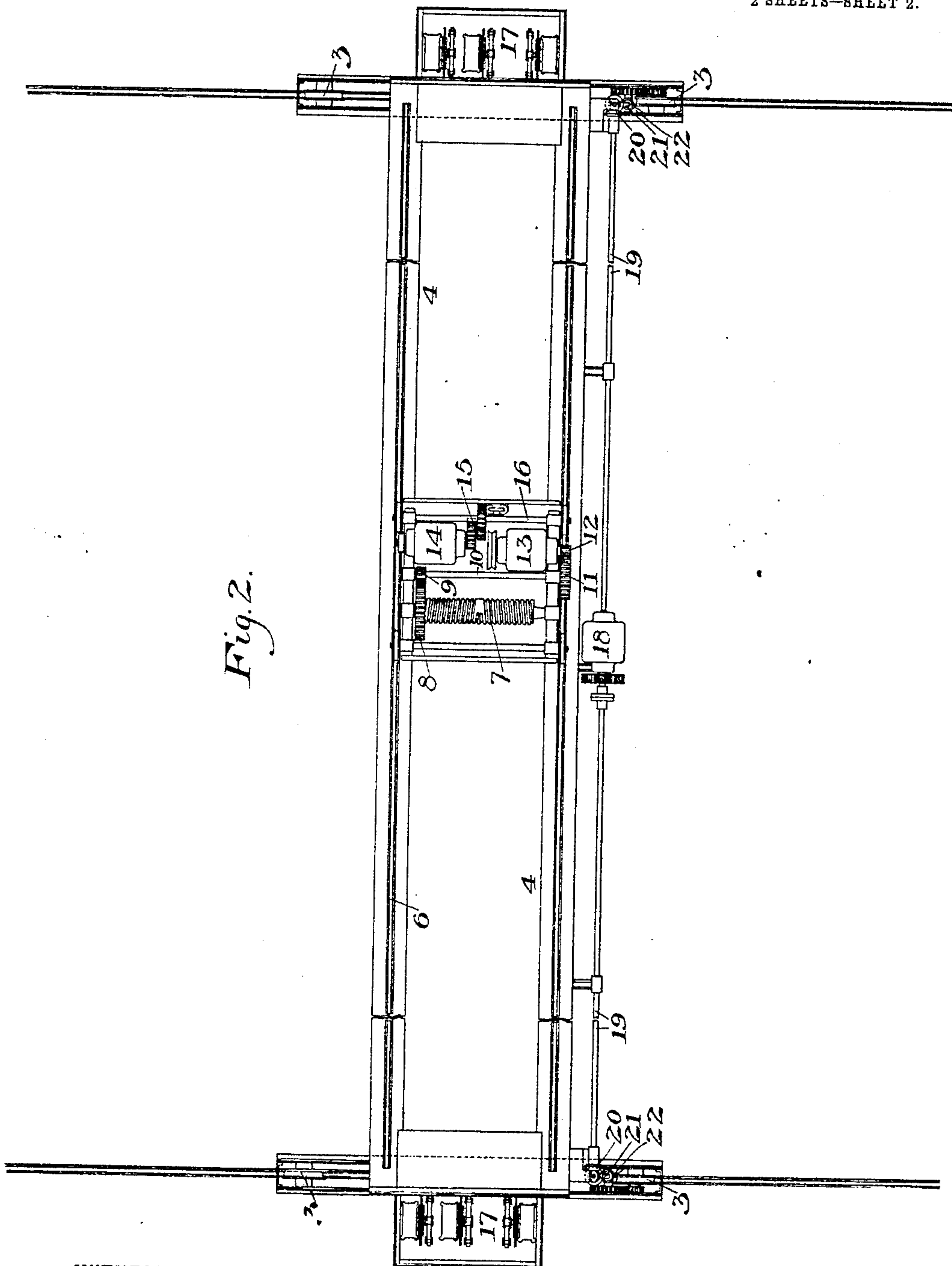
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## GLASS POT HANDLING APPARATUS.

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2 SHEETS—SHEET 2.



*Fig. 2.*

**WITNESSES**

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# UNITED STATES PATENT OFFICE.

HENRY AIKEN, OF PITTSBURG, PENNSYLVANIA.

## GLASS-POT-HANDLING APPARATUS.

No. 862,370.

Specification of Letters Patent.

Patented Aug. 6, 1907.

Application filed November 21, 1903. Serial No. 182,091.

*To all whom it may concern:*

Be it known that I, HENRY AIKEN, of Pittsburg, Allegheny county, Pennsylvania, have invented a new and useful Glass-Pot-Handling Apparatus, of which the following is a full, clear, and exact description, reference being had to the accompanying drawings, forming part of this specification, in which—

Figure 1 is a sectional side elevation showing my improved apparatus in connection with a glass pot furnace and Fig. 2 is a top plan view of the same partly broken away.

My invention relates to the handling of glass pots used in melting glass.

In the making of rolled glass plates or sheets, the pots containing the batch are placed in a furnace chamber, the chamber sealed up and the heat then applied to melt the batch. The furnace chamber is then opened and the pots removed and poured upon the table or other plate-rolling apparatus.

My invention is designed to provide a simple and efficient crane system for handling the pots, which may also be used for carrying the batches to the pots and for general use in the furnace room.

In the drawings I show an over-head crane having side columns 2 mounted on wheels 3 and supporting the top transverse crane bridge 4. The wheeled trolley 5 moves upon rails 6, 6 on the crane and carries a winding drum 7 having a gear wheel 8 intermeshing with a pinion 9 on a countershaft 10 carrying at its other end a gear wheel 11 intermeshing with a pinion 12 on the shaft of an electric motor 13. The trolley is moved along its track by a motor 14 mounted upon it and having slow motion gear 15 leading to the shaft 16 carrying a pair of the supporting wheels. Both of the motors 13 and 14 are provided with magnetic brakes of the ordinary type, and the circuits for these motors are provided with suitable controllers on both of the side supports 2, as indicated at 17.

The crane is moved along its track by means of an electric motor 18 having slow motion gearing connection to a shaft 19 connected by bevel gearing 20 with vertical shafts 21 on the side crane supports. The shafts 21 connect at their lower ends by bevel gearing 22 with one of the shafts for the supporting wheels. The wiring for the motor 18 also extends to suitable rheostats at both sides of the members 2. I show the crane as provided with two trolley poles 23 of ordinary form and bearing trolley wheels running upon overhead conductors.

To manipulate the pots I suspend from the hoisting drum of the trolley a U-shaped charger 24. The trolley rope or chain carries a head 25 provided with a swivel-hook engaging a yoke or eye 26 on the upper leg of the charger. This charger is preferably framed up from structural material and provided with adjustable weights 27 on its upper leg, the yoke 26 being vertically over the lower forked lifter on the lower leg 28 of the

U-shaped frame. This lower member 28 is preferably extended rearwardly and carries a wheel 29 and a manipulating handle 30.

In using the apparatus the U-shaped charger is picked up by the head carried on the trolley and the overhead crane is moved along to the desired furnace. The pot is then engaged by the fork at the front end of the lower leg 28 and the operator lifts the pot by bearing down upon the handle. The trolley is then moved along the bridge of the crane to carry the pot into the furnace and the operator then lowers the pot and the trolley is moved to draw the charger backwardly. The pots may be drawn out from the furnaces in the same manner, and may be moved along the line of furnaces and deposited at any desired point.

When the batch is being distributed the charger may be dropped at any convenient point and the overhead crane used in the ordinary manner for carrying the materials to the pots and furnaces. It will be noted that the U-shaped charger can be swung around so as to work on either side of the furnace or line of furnaces; and that it may be manipulated by the operator standing at either side of the furnace, through the double sets of rheostats.

Many variations may be made in the form and arrangement of the crane, the detachable charger and the connections without departing from my invention.

I claim:

1. A glass pot furnace having charging openings on both sides, and an overhead crane extending above the furnace and to both sides thereof, and having a single rotatable charging device arranged to handle the pots on both sides of the furnace; substantially as described.
2. A glass pot furnace having charging openings on both sides, and an overhead crane extending above the furnace and to both sides thereof, and having a single detachable rotatable charging device arranged to handle the pots on both sides of the furnace; substantially as described.
3. A glass pot furnace having charging openings on opposite sides thereof, an overhead crane having a bridge extending transversely over the furnace to each side thereof and provided with a trolley movable to opposite sides of the furnace, and a U-shaped charging bar suspended from the trolley and arranged to operate from either side of the furnace; substantially as described.
4. A glass pot furnace, an electric gauntree crane arranged to straddle the furnace, a U-shaped charging machine carried on the bridge of the crane, and electric controllers mounted on both sides the crane and arranged to actuate the charger; substantially as described.
5. A glass pot furnace, an electric gauntree crane having supporting columns on both sides of the furnace, a trolley on the crane bridge having a winding drum, a U-shaped charger rotatably carried by the hoisting drum, electric motors on the trolley and controllers on both of the crane columns arranged to actuate the U-shaped charger; substantially as described.

In testimony whereof, I have hereunto set my hand.

HENRY AIKEN.

Witnesses:

H. M. CORWIN,  
JOHN MILLER.