J. NAMECHE.

MACHINERY FOR ENGAGING AND CARRYING LOADS.

APPLICATION FILED MAR. 20, 1911.

1,021,469. Patented Mar. 26, 1912.

2 SHEETS—SHEET 1.

FIG. 1.

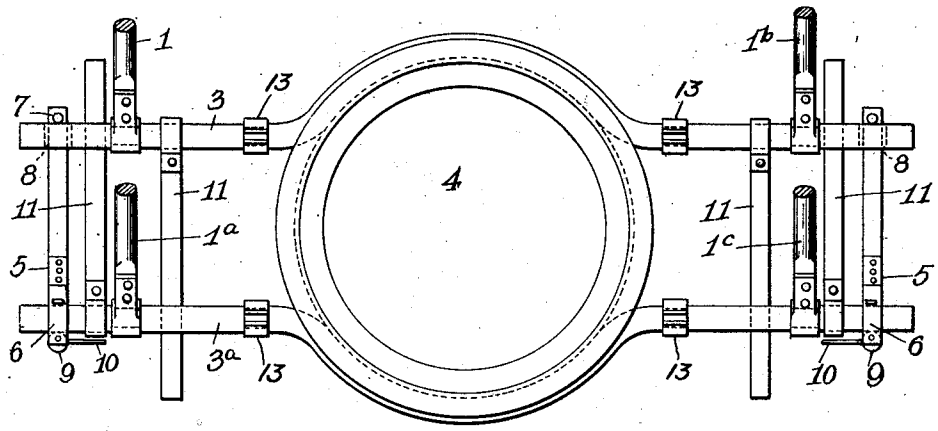
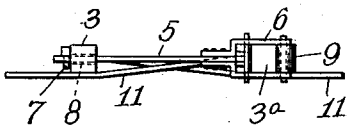


FIG. 2.



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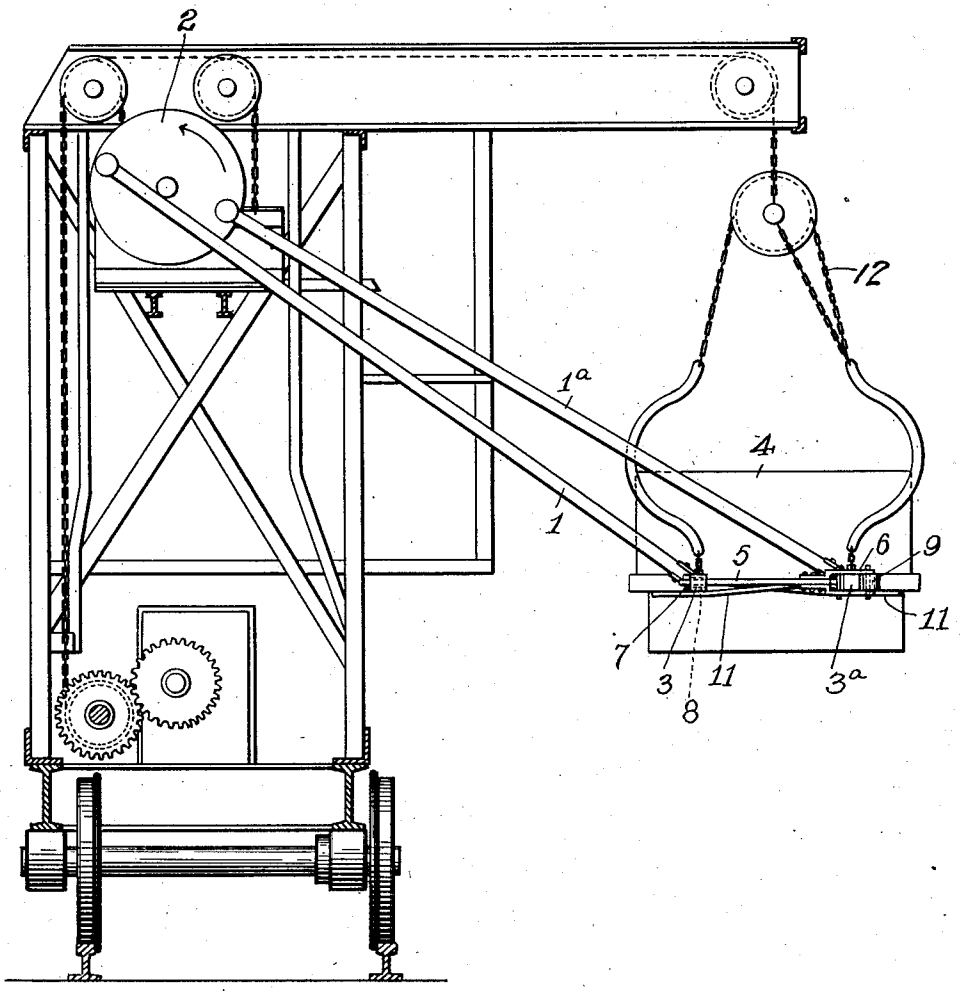
2 SHEETS—SHEET 2.

FIG. 3.



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JOSEPH NAMECHE, OF TARENTUM, PENNSYLVANIA, ASSIGNOR TO PITTSBURGH PLATE GLASS COMPANY, OF PITTSBURGH, PENNSYLVANIA, A CORPORATION OF PENNSYLVANIA.

MACHINERY FOR ENGAGING AND CARRYING LOADS.

1,021,469. Specification of Letters Patent. Patented Mar. 26, 1912.

Application filed March 20, 1911. Serial No. 615,550.

To all whom it may concern:

Be it known that I, JOSEPH NAMECHE, residing at Tarentum, in the county of Allegheny and State of Pennsylvania, a citizen of the United States, have invented or discovered certain new and useful Improvements in Machinery for Engaging and Carrying Loads, of which improvement the following is a specification.

My invention relates to cranes, derricks, or machines of any description wherein loads are operatively engaged by clamps or tongs, the members of which are of irregular shape and are not rigidly supported.

The object of my invention is to provide means to maintain such clamps or tongs in a load engaging position at all times.

A further object of my invention is to provide efficient and easily operated locking mechanism for such clamps.

While my invention is applicable to cranes designed for various uses, I choose to describe it as applied to a teeming-crane, used, in the manufacture of plate glass, to carry the molten glass from a furnace to a casting table.

In the accompanying drawings, which form part of the specification, and in which I illustrate my invention in its application to a pair of pot-tongs used on such a teeming-crane, Figure 1 is a plan view of a pair of pot-tongs, holding a pot in engagement, and embodying my invention; Fig. 2 is an end view of the pot-tongs; and Fig. 3 is an elevation of a teeming-crane wherein my improved pot-tongs find particular application.

In the figures like numerals are used to designate like parts.

In the teeming-crane shown in Fig. 3, a pair of pitmen 1 and 1^a are pivotally connected at one end to a rotatable member 2 and, at the other end, pivotally connected to a pair of pot-tongs 3, 3^a, which hold in their engagement a pot 4. In this arrangement it is desirable to have the rotatable member 2 secured to a shaft, carrying a second and like rotatable member, provided similarly with pitmen 1^b and 1^c, (see Fig. 1) which are also connected to the pot-tongs 3, 3^a. This duplication of parts is partly shown in Fig. 1, but the illustration of the connection of the pitmen 1^b and 1^c to the rotatable member does not appear in the drawings, the construction being obvious. The tongs 3, 3^a are suitably suspended by flexible chains or cables 12, which are secured to the tongs by the sleeves 13; and the tongs are curved or otherwise irregularly shaped to conform to the shape of the pot. In the operation of such a teeming-crane, pots may be engaged by the tongs transferred from one place to another, the contents teemed therefrom and the pot again released. When the teeming machine is in the position shown in Fig. 3, that is, when in pot-engaging position, the contents of the pot may be teemed therefrom by rotating the rotatable member 2 in the direction indicated by the arrow placed on it, and the pot may be released by a rotation of the said rotatable member 2 in the opposite direction, provided the members of the tongs are not united and free to move away from each other.

It will be readily understood that, when the tongs 3, 3^a do not have a pot in their engagement, the outwardly curved portion of each member will (unless provision to prevent be made) depart from its normally horizontal position to such a position as will render impossible the operation of engaging a pot without a manipulation of the said members; and it is toward the elimination of this undesirable feature that part of my invention is directed. In order to maintain the members of the tongs constantly in a pot engaging position I preferably provide each member with one or two fingers 11, which are preferably made of a steel bar and are each rigidly secured to one of the said members. Each finger is bent downward sufficiently to pass below the member of the tongs to which it is not rigidly secured and is of sufficient length to extend beyond that member. The operation of such fingers to maintain the tongs in pot engaging position will be readily understood by reference to Fig. 3, wherein a finger 11 is shown extending below the member 3 of the tongs 3, 3^a and secured to the member 3^a the outwardly curved portion of which last named member is kept from dropping by the engagement of the said finger 11 with the under surface of the member 3. Such a disposition of fingers also aids materially in causing the tongs to act as a unit when the pot is being teemed.

The second feature of my invention is directed toward a locking means for the tongs.

Each locking member preferably consists of a tongue 5, connected at one end, as by a stirrup 6, to one member 3^a of the pot-tongs, and at the other end, suitably provided with a hole, adapted to receive a cotter-pin or bolt 7, after the tongs have been brought to closed position, in which position the tongue 5 extends through the slot 8 of the member 3 of the tongs. To accomplish the tightening of the clamps around an engaged pot, I preferably provide the stirrup 6 with a cam 9, having a handle 10 secured thereto, the arrangement being such that a turning of the handle will be effective to diminish the distance between the pin 7 and the face of the cam 9, adjacent thereto, and thereby bring the members of the pot-tongs closer together in their engagement of the pot.

I claim herein as my invention:

1. The combination with a pair of loosely suspended tongs of irregular shape, of a finger rigidly secured to one member of the tongs and extending adjacent to and in contact with the other member of the tongs, substantially as described.

2. In a pair of pot-tongs or like structures, the combination of a pair of rods arranged adjacent to one another and in a generally parallel position, one of said rods being supported by loosely turning joints and being of irregular shape, and a finger rigidly secured to said irregularly-shaped rod and extending to and in contact with the other of the said pair of rods, substantially as described.

3. A pair of pot-tongs or like structures, consisting of rods arranged adjacent to one another in a generally parallel position, each rod suspended at its opposite ends by freely turning joints, said rods offset outwardly intermediate their supported ends and each provided with a finger rigidly secured thereto and extending beneath and engaging the opposite rod, substantially as described.

4. The combination with a pair of swivel-supported irregularly-shaped coöperating pot-clamping jaws, of a finger rigidly secured to one of said jaws and extending to and in contact with the companion jaw, and means for drawing the said jaws into clamping engagement with a pot, substantially as described.

In testimony whereof I have hereunto set my hand.

JOSEPH NAMECHE.

Witnesses:
G. G. TRILL,
PAUL N. CRITCHLOW.