No. 878,002. PATENTED FEB. 4, 1908.

C. H. IMBODEN & J. J. LAWLOR.

LADLE CARRIER.

APPLICATION FILED JAN. 29, 1906.

2 SHEETS—SHEET 1.

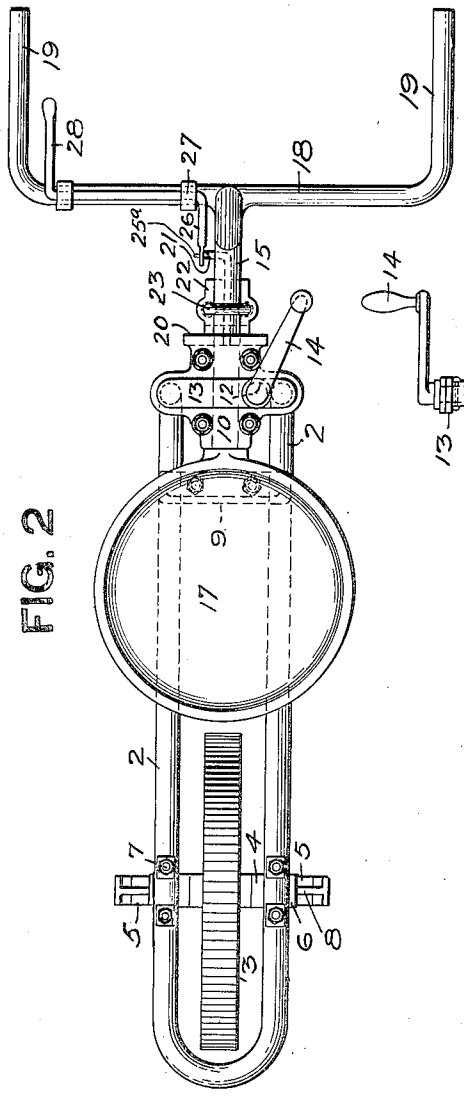


FIG. 2

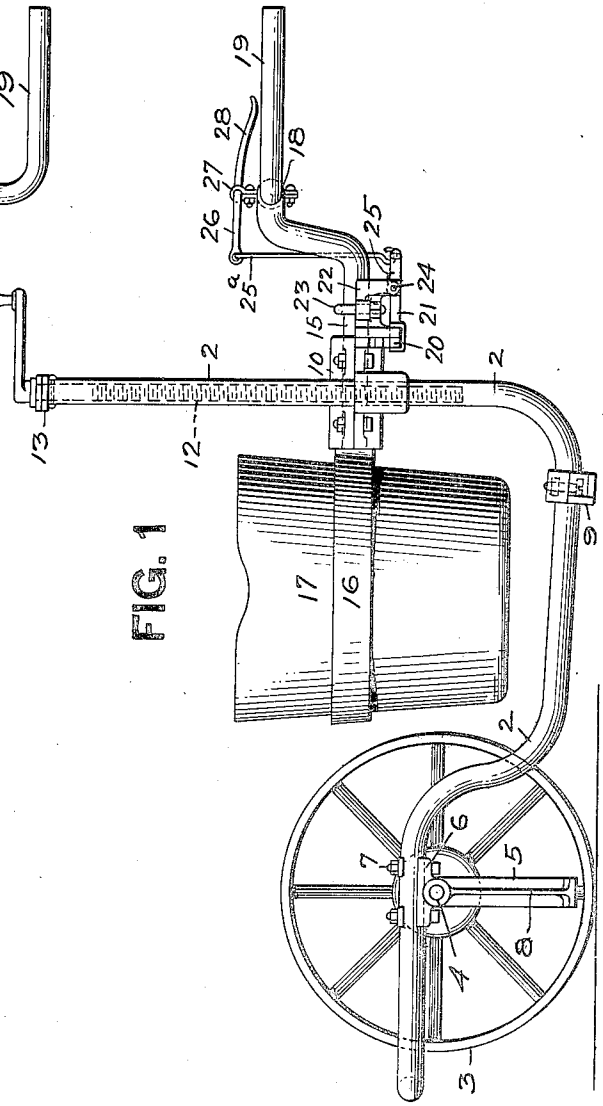


FIG. 1

WITNESSES.

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2 SHEETS—SHEET 2.

FIG. 3

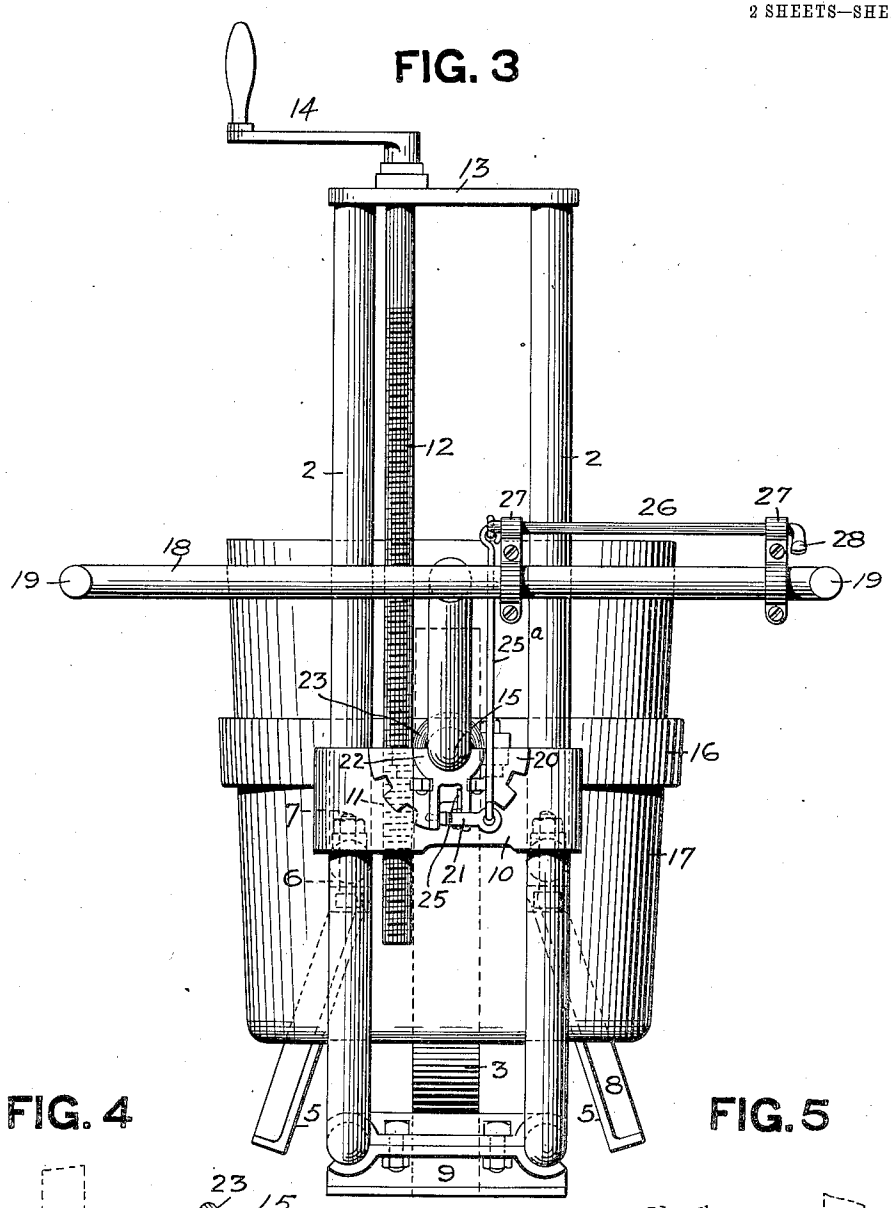


FIG. 4

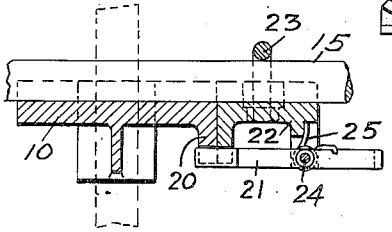
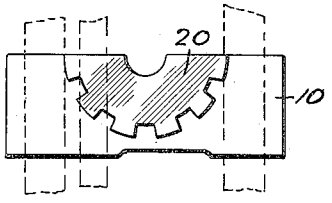


FIG. 5



WITNESSES.

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UNITED STATES PATENT OFFICE.

CLARENCE H. IMBODEN AND JOHN J. LAWLOR, OF GREENSBURG, PENNSYLVANIA.

LADLE-CARRIER.

No. 878,002. Specification of Letters Patent. Patented Feb. 4, 1908.

Application filed January 29, 1906. Serial No. 298,571.

To all whom it may concern:

Be it known that we, CLARENCE H. IMBODEN and JOHN J. LAWLOR, residents of Greensburg, in the county of Westmoreland and State of Pennsylvania, have invented a new and useful Improvement in Ladle-Carriers; and we do hereby declare the following to be a full, clear, and exact description thereof.

Our invention relates to a ladle-barrow for carrying and pouring molten metal.

In iron, brass and steel foundries it has been the usual custom to melt the metal in a cupola or furnace and distribute it to the molds in ladles carried by a crane or trolley where large ladles are employed, or a ladle holding several hundred pounds of metal is carried by two men who pour the metal into the molds.

The object of our invention is to provide a ladle barrow which is light and durable in construction by means of which one man can get his supply of metal from the cupola and by wheeling the barrow to the molds can pour the molds without assistance, thereby not only being able to handle a greater amount of metal, but gaining the advantage of a hotter, cleaner and better mixed metal, while at the same time a saving in labor results.

To these ends our invention comprises the novel features hereinafter set forth and claimed.

To enable others skilled in the art to make and use our invention we will describe the same with reference to the accompanying drawing in which

Figure 1 is a side elevation of our improved ladle barrow; Fig. 2 is a plan view thereof; Fig. 3 is a rear elevation; Fig. 4 is an enlarged detail view of the latch mechanism; and Fig. 5 is a detail view of the bearing block and toothed segment.

Like numerals indicate like parts in each of the figures of the drawing.

In the drawing the numeral 2 designates a suitable frame made of wrought iron pipe bent in the manner indicated and preferably formed in one continuous piece. The front end of the frame is supported by the wheel 3 which has its axle journaled in bearings 4 in the legs 5. These legs 5 are inclined outwardly and at their upper ends are provided with the semi-circular lugs 6 which are secured to the frame 2 by means of the bolts 7. The legs 5 are formed with the ribs 8 which act to strengthen the same and give rigidity to the construction.

The frame is provided with the foot 9 which rests normally on the floor when the barrow is at rest.

Engaging the vertical portion of the frame 2 is the bearing block 10 freely movable up and down thereon. This bearing 10 has a threaded opening 11 with which the screw bar 12 engages, said screw bar at its upper end being supported in the bearing 13. Screw bar 12 is provided at its upper end with the handle 14 for turning the same. By turning the screw bar 12 it is apparent that the bearing 10 may be raised and lowered on the frame.

The bearing 10 forms a support for the trunnion 15 which carries at its outer end the ring 16 adapted to support the ladle 17. The trunnion 15 has the handle bar 18 connected therewith with the handles 19 by means of which the barrow is lifted and guided from one place to another.

The bearing 10 is further provided with the toothed quadrant 20 with which a latch 21 on the trunnion 15 is adapted to engage. This latch 21 is carried by the bracket 22 which is secured by means of the U-bolt 23 to the trunnion 15. The latch 21 is pivoted at 24 to the bracket 22 and a spring 25 normally holds the latch in engagement with the toothed quadrant 20. Connected to the outer end of the latch 21 is the rod 25^a, said rod being connected at its upper end to the lever 26 which is journaled in bearings 27 on the handle bar 18. This lever 26 is provided with the handle 28 adjacent to one of the handles 19 of the handle bar so that the operator is able to operate the lever 25 with the same hand which grasps the handles 19 adjacent thereto.

When our improved ladle barrow is in use, having filled the ladle from the cupola or furnace the operator grasps the handles 19 and lifts the barrow so as to raise the foot 9 from the floor when by pushing in the ordinary manner the wheel 3 revolves and the ladle is moved to the point where the pouring is to be done. On arriving at the mold to be poured the operator then turns the handles 19 the one up and the other down so that the metal flows from the pouring spout of the ladle, the whole barrow frame and the other parts of the same turning on the pivot of the side of the wheel 3 until the barrow has been tilted enough for the lower end of the leg 5 on that

side to rest upon the floor, when the leg 5 will support the weight of the load and the wheel 3 will be lifted clear of the floor. By supporting the barrow on the leg in pouring in this way the slipping or skidding of the wheel 3 when the mold is being poured is prevented. In another manner of operating our improved ladle the operator allows the foot 9 to rest upon the floor and by pressing with his thumb on the handle 28 of the lever 25 he releases the latch 21 from the toothed quadrant 20 of the bearing 10 whereupon by use of the handles 19 he can turn the trunnion 15 until the ladle has been turned to the proper angle, whereupon by releasing his thumb from the handle 28 the latch 21 reenters the toothed quadrant 20 at a different point and the ladle is then held in that position, when by turning the barrow the metal is poured into the mold. Or, if the operator does not wish to turn the whole frame the tilting may be done entirely by revolving the trunnion after the latch has been thrown from the quadrant.

If it is found at any time that the ladle 17 is not adjusted at the proper height convenient for the pouring, the operator by turning the handle 14 at the upper end of the screw bar 12 is able to adjust the ladle at any convenient height.

By the above construction we obtain a very light, simple and durable form of ladle barrow which has many points of advantage over the use of traveling cranes and other such devices, in that the operators can work entirely independently of each other and each operator has a ladle under his control which he can direct to any part of the foundry without interfering with the operations of any of the other molders.

What we claim is:

1. In a ladle barrow, the combination of a pair of legs, a wheel journaled directly on said legs, a frame having a front horizontal portion secured to the upper ends of said legs, an intermediate depressed portion and a rear vertical portion, and a ladle carrier secured to the vertical portion and provided with rearwardly projecting handles.

2. In a ladle barrow, the combination of a pair of legs, a wheel journaled directly on said legs, a frame having a front horizontal portion secured to the upper ends of said legs, an intermediate depressed portion, and a rear vertical portion, a foot secured to the depressed portion of the frame, and a ladle carrier secured to the vertical portion of the frame and provided with a forwardly projecting ladle carrying ring and with rearwardly projecting handles.

3. In a ladle barrow, the combination of a frame having a front horizontal portion, an intermediate depressed portion and a rear vertical portion, a wheel mounted on the front end of the frame, a bearing block mounted on the vertical rear portion of the frame, means for raising and lowering said bearing block, and a ladle carrier mounted in said bearing block and provided with a forwardly projecting ladle carrying ring and rearwardly projecting handles.

4. In a ladle barrow, the combination of a frame having a front horizontal portion, an intermediate depressed portion and a rear vertical portion, a wheel mounted on the forward end of the frame, a bearing block mounted in the rear vertical portion of the frame, a screw arranged to elevate and lower said bearing block, a shaft rotatably mounted in said bearing block and provided with a forwardly projecting ladle carrying portion and rearwardly projecting handles, and means for locking said shaft against rotation.

In testimony whereof we the said CLARENCE H. IMBODEN and JOHN J. LAWLOR have hereunto set our hands.

CLARENCE H. IMBODEN.
JOHN J. LAWLOR.

Witnesses:
THOS. K. HANCUFF,
J. F. BEATTY.