(No Model.)

L. T. WOOSTER.

WIRE BLOCK AND CARRIER.

No. 423,015. Patented Mar. 11, 1890

Fig. 1.

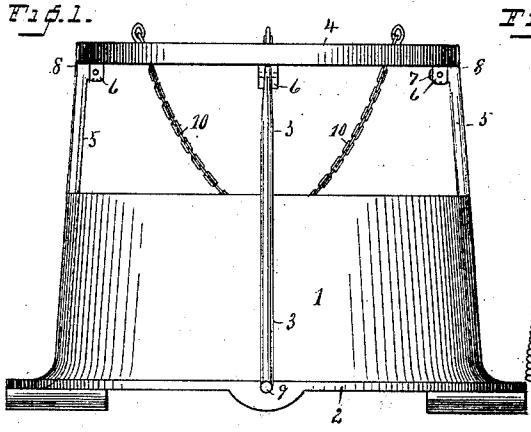


Fig. 2.

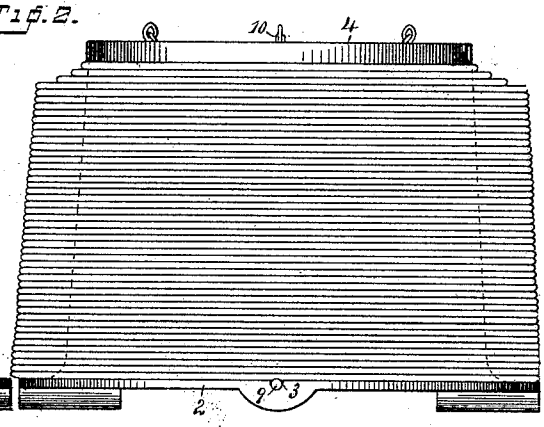


Fig. 3.

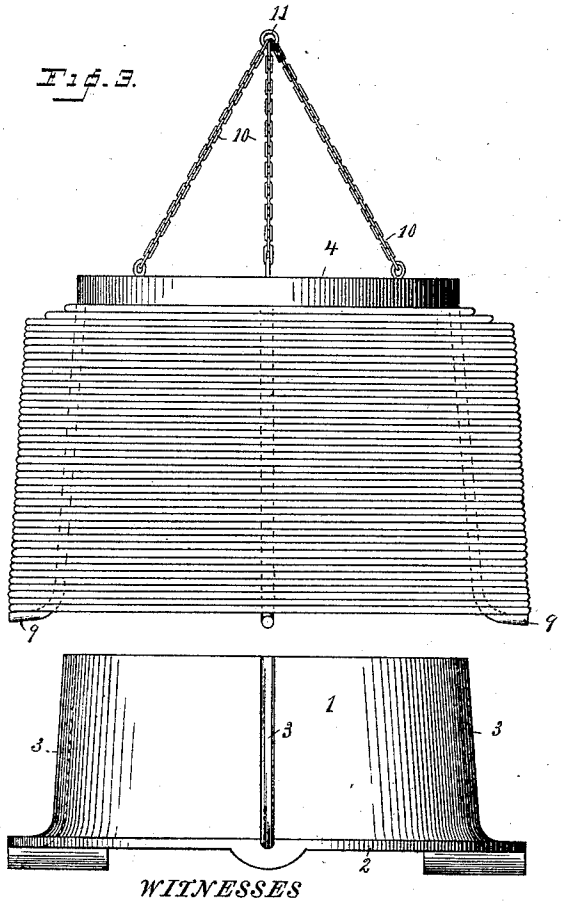
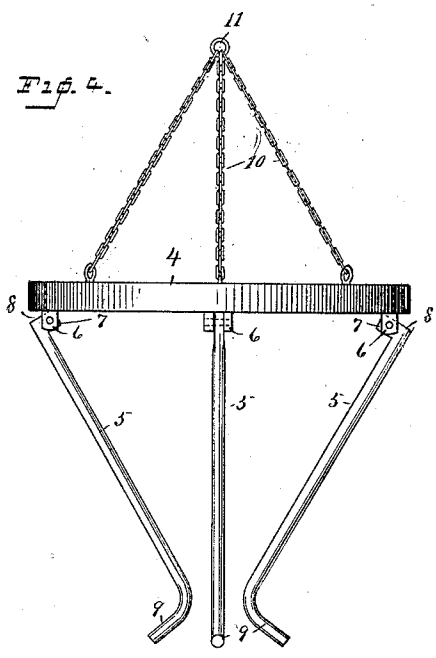


Fig. 4.



WITNESSES

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UNITED STATES PATENT OFFICE.

LETSOME T. WOOSTER, OF SEYMOUR, CONNECTICUT, ASSIGNOR TO THE SEYMOUR MANUFACTURING COMPANY, OF SAME PLACE.

WIRE BLOCK AND CARRIER.

SPECIFICATION forming part of Letters Patent No. 423,015, dated March 11, 1890.

Application filed September 13, 1889. Serial No. 323,858. (No model.)

To all whom it may concern:

Be it known that I, LETSOME T. WOOSTER, a citizen of the United States, residing at Seymour, in the county of New Haven and State of Connecticut, have invented certain new and useful Improvements in Wire Blocks and Carriers; and I do hereby declare the following to be a full, clear, and exact description of the invention, such as will enable others skilled in the art to which it appertains to make and use the same.

My invention has for its object to produce mechanism for use in handling lengths of wire—as, for example, in wire-drawing—which shall entirely dispense with the heavy manual labor of lifting the coils from the blocks or drums and shifting them from one block to another, thereby effecting a great saving in time and also reducing the number of operators required in handling the wire. It is of course well understood by those familiar with the art that ordinary wire-drawing is performed upon what is called a "drawing-bench." Bars of metal are first rolled into rods, which are coiled upon blocks or drums ready for drawing. The end of the rod is swaged sufficiently to permit its insertion into a die. A drawing-in device grasps the end of the rod and starts it through the die. The end of the rod that has passed through the die is then secured to a block, and rotation is imparted thereto, the entire rod being drawn through the die and coiled about the block. This operation is repeated, passing the wire from one block to another, drawing it through a finer die each time until the wire has been reduced to the desired size. The blocks in use are carried by suitable turn-tables, to which they are secured in any ordinary simple manner, it being understood, of course, that power is applied to the turn-table carrying the block on which the wire has been wound, and that the other turn-table is left free to turn as the wire is drawn from the block thereon. It will be obvious that it is desirable to produce the wire in as long lengths as possible and that the coils are necessarily very heavy, so that much time is lost and a number of operatives required in shifting them from block to block and from one drawing-bench to another in the operation of drawing or reducing wire.

In order to reduce the amount of manual labor required to the minimum, and thereby effecting an important saving of time and expense, I have devised the novel mechanism, of which the following description, in connection with the accompanying drawings, is a specification, numbers being used to denote the several parts.

Figure 1 is an elevation of the block and carrier as they stand upon a turn-table ready for use, the turn-table itself not being shown, as it forms no portion of my invention; Fig. 2, a similar elevation showing a coil of wire wound on the block; Fig. 3, an elevation showing the carrier with the wire upon it lifted from the block; and Fig. 4, an elevation of the carrier detached, showing the arms collapsed, as when the carrier is withdrawn from a coil of wire.

1 denotes the block, which is made much lower than ordinary blocks. This is in itself an advantage, as it reduces both the weight and the expense. The block is made to taper upward and inward slightly, as usual, and is provided with the usual flange 2 at the bottom. In the outer side of the block and extending outward to the end of the flange are a number of grooves 3, preferably equidistant. The exact number of grooves is of course unimportant. In practice I ordinarily use four.

The carrier consists of a ring 4, having hinged thereto a series of arms 5, corresponding in number with the grooves in the block. These arms are preferably hinged to the ring, substantially as shown in the drawings. Ears 6 are rigidly secured to or cast upon the inner side of the ring and extend below it. The arms are provided with inwardly-extending angle-lugs 7, which are pivoted between the ears. The upper ends of the arms constitute shoulders 8, which engage the under side of the ring when the arms are turned outward to the farthest extreme of their movement, forming stops for the arms, which prevent them from spreading out beyond their normal position under any circumstances whatever. The arms are so shaped as to just fit

closely in the grooves, the lower ends thereof being outwardly turned, as at 9, so as to just fit closely in the grooves in the flange, the position of the parts when ready for use being clearly shown in Fig. 1.

10 denotes chains connected to ring 4, the upper ends of which are connected to a ring 11, which is itself adapted for connection to the hook of an overhead crane or any suitable lifting device.

The operation is as follows: The carrier is placed upon the block, as in Fig. 1, and a coil of wire wound thereon. The carrier and the entire coil of wire are then lifted from the block in any suitable manner, carried to the place where the wire is to be used or where other operations are to be performed, and then dropped at any desired position or placed upon another block. The arms are so shaped and adjusted that when the carrier is lifted from the block they will not collapse, but will sustain the weight of the coil upon the outwardly-turned ends, and will retain it until the arms are pressed inward, as in Fig. 4, to disengage them from the coil.

Having thus described my invention, I claim—

1. The combination, with a block having grooves in its side, of a carrier consisting of a ring, and arms secured thereto and adapted to lie in the grooves of the block.

2. The combination, with a block having an outwardly-extending flange and continuous grooves in the side of the block and the flange, of a carrier consisting of a ring, arms secured thereto and upwardly turned at their lower ends, said arms being adapted to fit closely in the grooves in the block and its flange.

3. The combination, with a block having grooves in its outer side, of a carrier consisting of a ring, and folding arms hinged thereto and adapted to lie in the grooves of the block, said arms having shoulders which engage the ring to prevent them from expanding outward, but leaving them free to be moved inward when it is desired to remove the carrier from a coil of wire.

4. In a mechanism of the class described, a block tapering upward and inward, and having an outwardly-turned flange at its lower edge and a series of grooves in the side thereof, terminating at the outer edge of the flange.

5. In a device of the class described, a wire-carrier consisting of a ring, arms hinged thereto, said arms being outwardly curved at their lower ends, and provided at their upper ends with shoulders to prevent their outward movement, and chains connected to the ring, whereby the device can be lifted in any suitable manner.

In testimony whereof I affix my signature in presence of two witnesses.

LETSOME T. WOOSTER.

Witnesses:
EMMA M. WOOSTER,
CHARLES S. CANFIELD.