

No. 687,770.

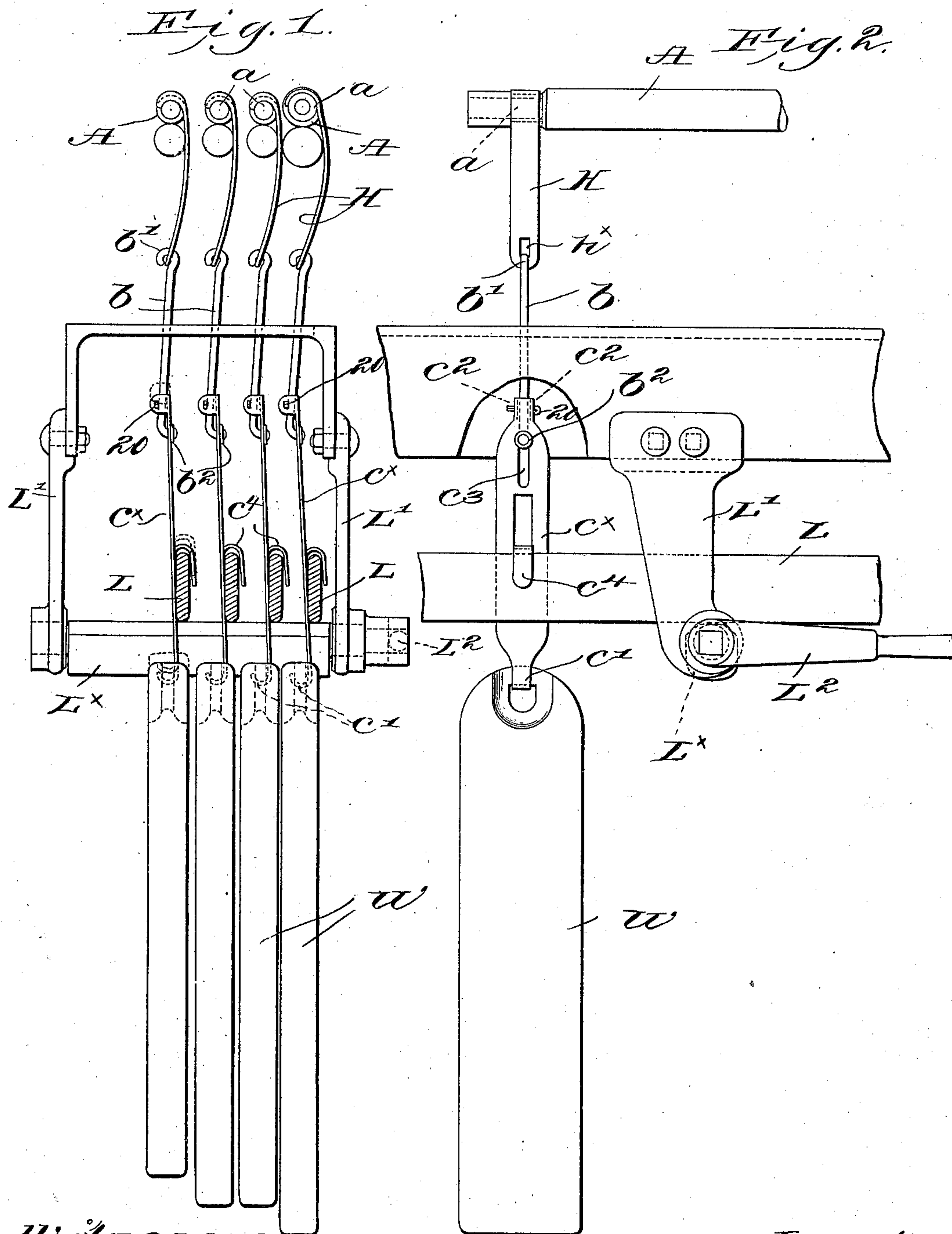
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WEIGHTING MECHANISM FOR DRAWING OR SPINNING FRAMES.

(Application filed Sept. 23, 1901.)

(No Model.)



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# UNITED STATES PATENT OFFICE.

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## WEIGHTING MECHANISM FOR DRAWING OR SPINNING FRAMES.

SPECIFICATION forming part of Letters Patent No. 687,770, dated December 3, 1901.

Application filed September 23, 1901. Serial No. 76,140. (No model.)

*To all whom it may concern:*

Be it known that I, CHARLES R. MCGOWAN, a citizen of the United States, and a resident of Taunton, county of Bristol, State of Massachusetts, have invented an Improvement in Weighting Mechanism for Drawing or Spinning Frames, of which the following description, in connection with the accompanying drawings, is a specification, like characters on the drawings representing like parts.

This invention relates to the mechanism for weighting the top drawing-rollers of drawing and spinning frames; and it has for its object the simplification and cheapening of such mechanism, with increased efficiency and convenience of operation.

My invention applies more particularly to drawing or spinning frames wherein the top drawing-rollers are covered with leather or similar material of such character that it is necessary to relieve the rollers of weight when the frame is not in operation.

In relieving the weight it is undesirable to disconnect the weight-hooks, and the latter should not be permitted to turn in either direction, nor should they be so constructed as to permit the possibility of a change in length, as would be the case if screws and nuts are employed in their construction.

The various novel features of my invention will be hereinafter described, and particularly pointed out in the following claims.

Figure 1 is a transverse section of a portion of a drawing or spinning frame with one embodiment of my invention applied thereto, and Fig. 2 is a front elevation of a portion of the apparatus illustrated in Fig. 1.

The journals  $a$  of the top drawing-rollers A have suspended therefrom the hooks H, which are shown as thin flat plates, the lower end of each having a hole  $h^x$  therein, Fig. 2, to be engaged by the upper end of a link  $b$ , forming one member of the weight connection. The links are made conveniently as stout rods of an elongated S shape, the upper end of each being bent over, as at  $b'$ , to hook into the hole  $h^x$  of the roller-hook H, and the lower oppositely-bent end has a laterally-enlarged head  $b^2$ .

I have shown the weight-carrier which constitutes the other member of the connection as an elongated plate  $c^x$ , which is reduced in width at its ends to form at the lower end an upturned hook  $c'$ , on which the weight W is hung, and at the upper end two parallel ears  $c^2$  are extended substantially at right angles to the plate. A longitudinal slot  $c^3$  is made in each weight-carrier at its upper end, and, as herein shown, a portion of the plate  $c^x$  below the slot is cut out and bent over to form a downturned bent finger  $c^4$ , the several fingers extending over the tops of the usual lifter-bars L, as clearly shown in Fig. 1.

The lifter-bars L are supported on transverse eccentric shafts  $L^x$ , pivotally mounted in depending brackets  $L'$  on the main frame-work, and when the frame is in operation the eccentric shafts are turned to lower the lifter-bars, so that the weights W act through the intervening connections and the roller-hooks H on the drawing-rollers. By a suitable handle  $L^2$  the shafts  $L^x$  can be turned to elevate the bars, so that their upper edges engage the bent fingers  $c^4$  and raise the weight-carriers  $c^x$ , so that the rollers are relieved of the pressure. The hooked end  $b'$  of each link is passed through the slot  $c^3$  of its weight-carrier and the link is then drawn through until its head  $b^2$  bears against the face of the weight-carrier, when the link is upturned between the ears  $c^2$ . A cotter-pin 20 is then passed through the ears outside the link, so that the latter cannot be accidentally disconnected from its weight-carrier  $c^x$ , while permitting a relative sliding movement of said members when the weight-carriers are raised by the elevation of the lifter-bars L. I have thus provided a two-part connection between the weight and the corresponding roller-hook, so constructed and arranged that when the member  $c^x$  is lifted to relieve the roller from the weight the other member  $b$  of said connection remains in normal condition, and it is prevented from turning or twisting by the ears  $c^2$  and the bent lower end of said member  $b$ , passing through the slot  $c^3$ .

The construction is very simple, efficient,



and exceedingly cheap to manufacture, and the connection can be conveniently applied or removed when necessary.

In Fig. 1 I have shown by dotted lines the elevated position of the member  $c^x$  of the extreme left-hand connection, the member  $b$  remaining in normal position.

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

1. In a drawing or spinning frame, top drawing-rollers and their cooperating hooks suspended therefrom, lifter-bars, roller-weights, and a two-part connection between each roller-hook and its weight, said connection comprising a weight-carrier connected with the weight and longitudinally slotted at its upper end, an elongated, substantially S-shaped member having a head at its lower end and passed through the slot of the weight-carrier, and means to retain said members together while permitting relative longitudinal movement, the weight-carrier having a bent, downturned finger to engage the lifter-bar, and the S-shaped member being connected at its upper end to the roller-hook.

2. In a drawing or spinning frame, top drawing-rollers and their cooperating hooks suspended therefrom, lifter-bars, roller-weights, and a two-part connection between each roller-

hook and its weight, said connection comprising a flat plate having a weight-hook at its lower end, two parallel ears and a longitudinal slot at its upper end, and a downturned finger, and an elongated, substantially S-shaped member having a head at its lower end, said member being passed through the slot and upturned between the ears and connected at its upper end with the roller-hook, the downturned finger on each plate overhanging the lifter-bar, to be raised thereby when the lifter-bars are elevated.

3. A weight-suspending connection for drawing or spinning frames, consisting of a plate having a hook at its lower end, parallel ears and a longitudinal slot at its upper end, and a downturned finger between its ends, combined with an elongated, substantially S-shaped rod having an enlarged head at its lower end, said rod being passed through the slot and upturned between the ears of the plate, and a retaining-pin passed through the ears to prevent separation of the rod and plate.

In testimony whereof I have signed my name to this specification in the presence of two subscribing witnesses.

CHARLES R. MCGOWAN.

Witnesses:

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