Dec. 8, 1925. 1,565,065

J. B. DOERR

WIRE STRETCHER

Filed Sept. 1, 1925

Fig. 1.

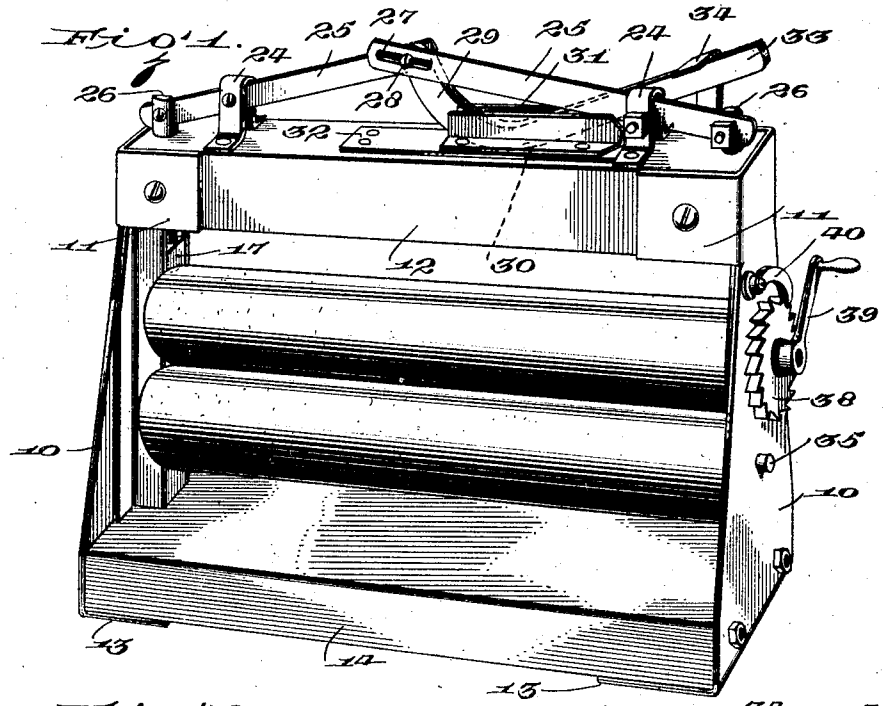
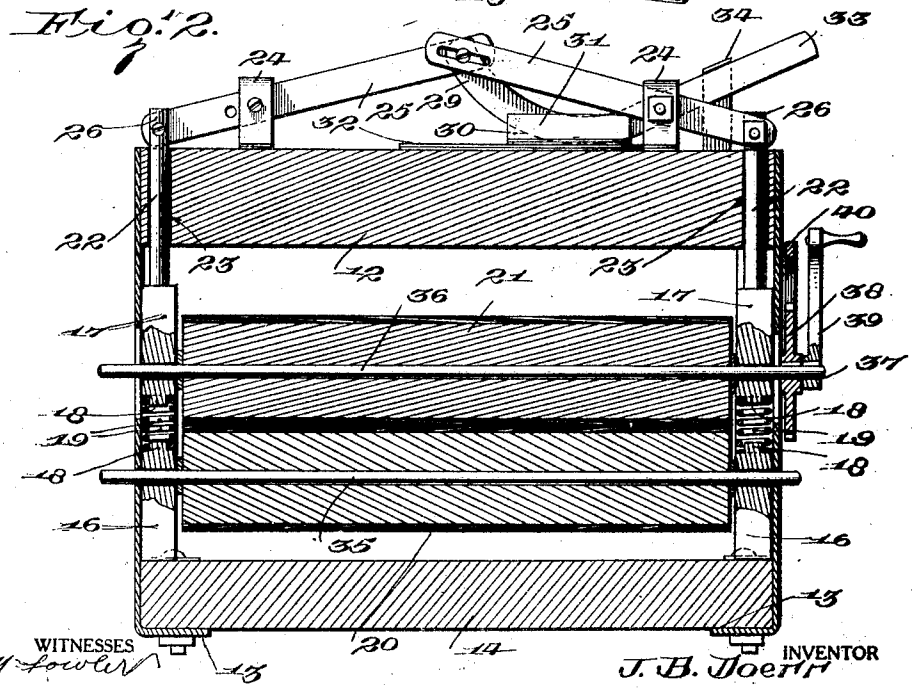


Fig. 2.



WITNESSES

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Patented Dec. 8, 1925. 1,565,065

UNITED STATES PATENT OFFICE.

JOHN BERNARD DOERR, OF ORLANDO, FLORIDA.

WIRE STRETCHER.

Application filed September 1, 1925. Serial No. 53,941.

To all whom it may concern:

Be it known that I, JOHN BERNARD DOERR, a citizen of the United States, and a resident of Orlando, in the county of Orange and State of Florida, have invented certain new and useful Improvements in Wire Stretchers, of which the following is a specification.

This invention relates to wire stretching machines and has for its object the provision of a device for pulling wire screening taut when applying the wire to such frames as are used for windows and doors.

A further object of the invention is the provision of a device for stretching wire screening when being applied to frames and in which a pair of rollers are employed, one being adjustable relative to the other and mounted for positive rotation, said rollers being adapted to be locked against movement when the wire has been stretched to a predetermined degree.

This invention will be best understood from a consideration of the following detailed description, in view of the accompanying drawings forming a part of the specification; nevertheless it is to be understood that the invention is not confined to the disclosure, being susceptible of such changes and modifications which shall define no material departure from the salient features of the invention as expressed in the appended claims.

In the drawings:

Figure 1 is a view in perspective of a wire screen stretching device.

Figure 2 is a vertical longitudinal sectional view of the device shown in Figure 1.

Referring more particularly to the drawings, a frame is provided in which 10 designates a pair of standards made of metal and a pair of inturned ears 11 to receive the ends of a head block 12. These ends are secured to the ears in any approved manner as by screws or bolts. Each of the lower ends of the standards are provided with inturned flanges 13 which are secured to the under face at the ends of a base 14.

Angle iron guides 15 are secured to the base 14 and are spaced from the standards to receive alined pairs of bearing blocks 16 and 17. The adjacent ends of the blocks are provided with lugs 18 to receive the opposite ends of springs 19 which tend to maintain the block separated and also a pair of rollers 20 and 21. Rigid with the upper end of each bearing block 17 is an operating rod 22 which is inserted through a passage 23 in the ends of the head block and terminates at a point above the block. The passages are of slightly larger diameter than the rods to permit of a slight play of said rods laterally therein.

A pair of inverted U-shaped brackets 24 are secured to the upper face of the head block and in which are pivoted levers 25. The outer ends of the levers are pivotally connected to the projecting ends 26 of the rods 22. The inner ends of the levers 25 have elongated slots 27 which receive a pin 28 carried by the inner end of an operating lever 29. This lever has a curved portion 30 located in a guide 31 and normally resting on a base 32 of the guide which acts as a fulcrum for the actuation of the lever 29 when the outer free end 33 is depressed. The free end 33 of said lever is adapted to be held in depressed position by a catch 34 secured to the head block 12.

Roller 20 is carried by a shaft 35 having its ends journaled in the bearing blocks 16 while roller 21 is rigid with a shaft 36 having its ends journaled in the bearing blocks 17. On a projecting end 37 of shaft 36 is keyed a ratchet wheel 38 and a crank 39 is made rigid with said shaft for rotating said shaft.

A pawl 40 is pivoted on a standard 10 adjacent the ratchet wheel 38 and engages said wheel to lock the shaft 36 and roller 21 against rotation when the wire screen has been sufficiently stretched. The rollers are covered with any suitable material to provide sufficient friction to insure stretching of the wire.

The operation of my device is as follows:

The lever 29 is released from the catch 34 and the free end raised whereby the lever 25 will be rocked so that the outer ends of levers 25 will be elevated and raise rods 22 when roller 21 will be displaced relatively to roller 20 by the springs 19 elevating bearing blocks 17. The rollers are now sufficiently separated to insert the wire screen. After the insertion of the screen, lever 29 is returned to normal operative position and the free end 33 inserted beneath the catch 34. The crank 39 is then revolved until the screen is sufficiently taut. The pawl 40 will maintain the rollers against reverse rotation and lessening of the tautness of the wire screen.

One end of the wire screen is nailed to an

end of the frame and the end of the frame is blocked against movement on a work bench. After the wire has been stretched said wire is nailed to the end of the frame adjacent the stretching device.

What I claim is:

1. A wire screen stretching device comprising a frame, a roller mounted for rotation in the frame, a second roller mounted for rotation in the frame, movable bearings for the second roller, means for positively rotating the second roller, and means for adjusting the bearings for moving the second roller towards or away from the first roller, said adjusting means consisting of rods connected to the bearings, pivotally mounted levers, a lever being connected to an end of a rod, and means oscillating the levers whereby the rods are oscillated.

2. A wire screen stretching device comprising a frame, a roller mounted for rotation in the frame, a second roller mounted for rotation in the frame, movable bearings for the second roller, means for positively rotating the second roller, and means for adjusting the bearings for moving the second roller towards or away from the first roller, said adjusting means consisting of rods connected to the bearings, pivotally mounted levers, a lever being connected to an end of a rod, the other ends of the levers being provided with elongated slots, a pin inserted through the slots, and an actuating lever pivoted on the pin and having a fulcrum on the frame.

3. A wire screen stretching device comprising a frame, a roller mounted for rotation in the frame, a second roller mounted for rotation in the frame, movable bearings for the second roller, means for positively rotating the second roller, and means for adjusting the bearings for moving the second roller towards or away from the first roller, said adjusting means consisting of rods connected to the bearings, pivotally mounted levers, a lever being connected to an end of a rod, the other ends of the levers being provided with elongated slots, a pin inserted through the slots, an actuating lever pivoted on the pin and having a bent portion, a guide on the frame to receive the bent portion and cooperating with the bent portion to provide a fulcrum for the actuating lever.

4. A wire screen stretching device comprising a frame, a roller mounted for rotation in the frame, a second roller mounted for rotation in the frame, movable bearings for the second roller, means for positively rotating the second roller, and means for adjusting the bearings for moving the second roller towards or away from the first roller, said adjusting means consisting of rods connected to the bearings, pivotally mounted levers, a lever being connected to an end of a rod, the other ends of the levers being provided with elongated slots, a pin inserted through the slots, an actuating lever pivoted on the pin and having a fulcrum on the frame, and a catch on the frame adapted to engage the free end of the actuating lever and retain the lever in position when maintaining the rollers in operative position.

JOHN BERNARD DOERR.