

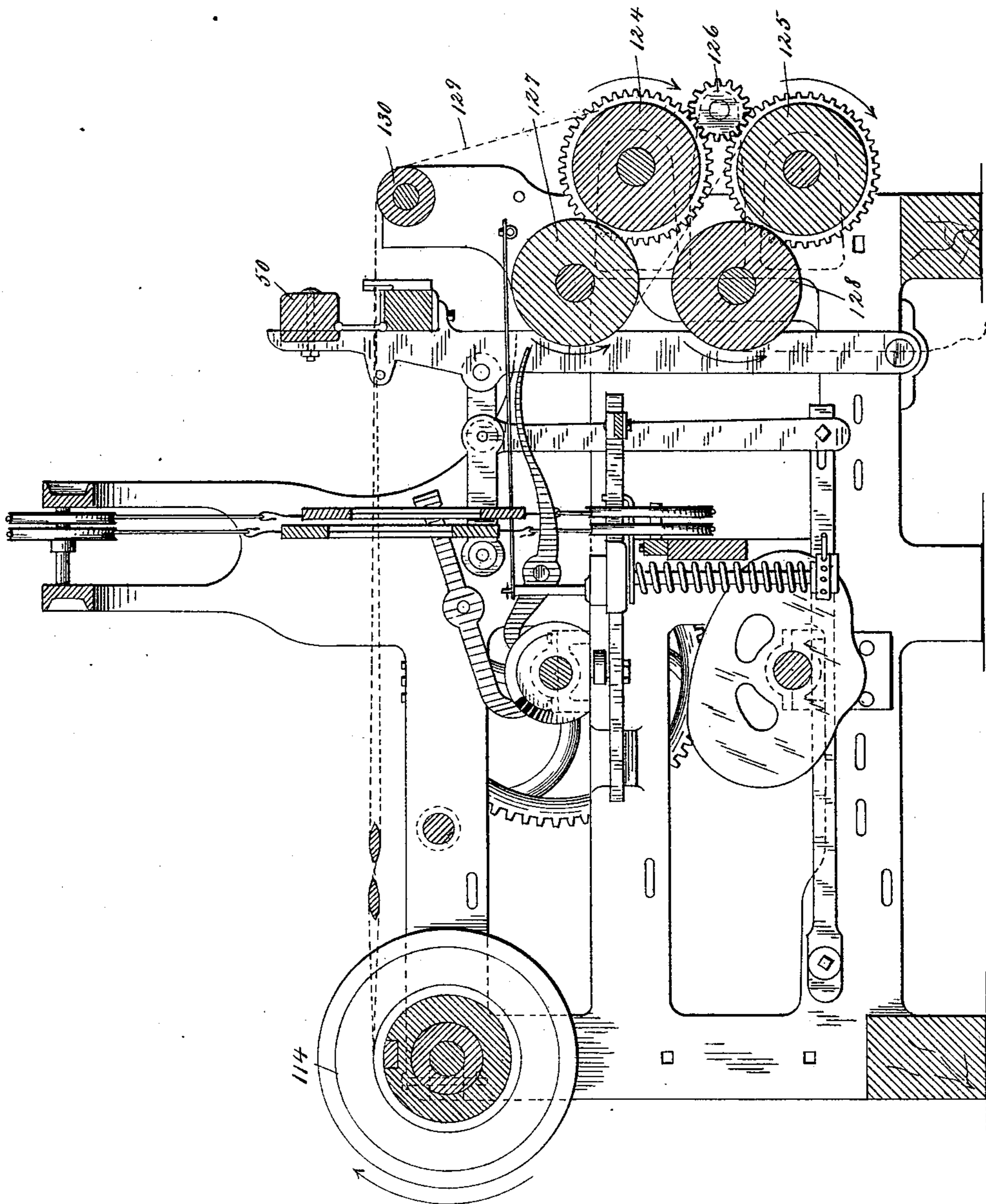
(No Model.)

S. T. & W. S. THOMAS.

METHOD OF FINISHING WOVEN WIRE FABRICS.

No. 386,761.

Patented July 24, 1888.



Witnesses:

E. D. Smith  
William Culver,

Inventors:

Samuel T. Thomas,  
Winfield S. Thomas,  
by Henry Culver  
Atty. Atty.

# UNITED STATES PATENT OFFICE.

SAMUEL T. THOMAS AND WINFIELD S. THOMAS, OF BOSTON, MASSACHUSETTS.

## METHOD OF FINISHING WOVEN-WIRE FABRICS.

SPECIFICATION forming part of Letters Patent No. 386,761, dated July 24, 1888.

Original application filed February 28, 1884, Serial No. 122,278. Divided and this application filed January 21, 1888. Serial No. 261,557. (No model.)

*To all whom it may concern:*

Be it known that we, SAMUEL T. THOMAS and WINFIELD S. THOMAS, citizens of the United States, residing at Boston, in the county of Suffolk and State of Massachusetts, have invented certain new and useful Improvements in the Method of Finishing Woven-Wire Fabrics, of which the following is a specification, reference being had therein to the accompanying drawing.

Our invention relates to a certain improved method of finishing woven-wire fabrics so as to render the surfaces thereof smooth and flat, said method consisting in straining or stretching such fabrics by pressing them between two pairs of rollers, the second pair of which rotates faster than the first pair.

In practicing our invention we prefer to finish the woven-wire fabrics in the manner above stated before they finally leave the looms on which they are woven by pressing the fabrics between the take-up roll and another roll which is adjacent thereto, and then pressing the same between a second pair of rolls, the surfaces of which rotate faster than the surfaces of the take-up roll and the said roll adjacent thereto.

The accompanying drawing is a longitudinal sectional elevation of a loom fitted for the practice of our invention; but as the said loom, which is more particularly adapted for weaving wire fabrics, is fully shown and described in our application, Serial No. 122,278, filed February 28, 1884, of which this application is a division, it need not be herein described, excepting so far as is necessary for the proper understanding of the present invention. The said loom is provided at its front with a take-up roll, 124, and with a second roll, 125, which is also, in a certain sense, a take-up roll. These rolls 124 and 125 have hard surfaces, and are provided with gears, which are connected by an intermediate gear or pinion, 126, the gear on the roll 125 having a lesser number of teeth (two less in the present instance) than the gear on the roll 124, and as these two rolls are both of the same diameter it is obvious that the surface of the roll 125 will rotate or move faster than the surface of the roll 124. These rolls 124 and 125 may be positively rotated by any

suitable mechanism, preferably by such as is fully shown and described in our application hereinbefore referred to; and adjacent to these rolls are two hard-surfaced pressing-rolls, 127 and 128, which rotate by frictional contact with the positively-driven rolls or with the fabrics passing between them and the said positively-driven rolls. The woven-wire fabric 129, after passing the lay 50, runs over a guide-roll, 130, thence around the take-up roll 124, and between the latter and its adjacent roll 127, passing from the latter roll around the roll 125, and between said roll and the pressing-roll 128, and around the last-named roll to the place of delivery, as indicated in the drawing. As the surfaces of the second pair of rolls 125 and 128 travel slightly faster than the surfaces of the first pair of rolls 124 and 127, a considerable strain or tension is given the fabric, and this, in conjunction with the pressure which the fabric receives in passing between the hard meeting faces of the rolls, produces a finishing effect upon the fabric analogous to calendering, whereby the surfaces of the wire goods are leveled under a uniform tension and pressure and the appearance and finish of the same greatly improved.

Although we prefer to finish woven-wire fabrics according to our above-described method before they finally leave the looms on which they are woven, we do not wish to be understood as confining ourselves to this method of practicing our invention, as woven-wire fabrics may be finished according to our improved method after they leave the looms and on machines having two pairs of straining and pressing rolls—such as are herein shown and described—rotating at different speeds.

We claim—

1. The method herein described of straining or stretching woven-wire fabrics and of leveling and finishing their surfaces, said method consisting in pressing the said fabrics between two pairs of hard-surfaced rolls, the second pair of which rotates faster than the first pair, substantially as set forth.

2. The method herein described of straining or stretching woven-wire fabrics and of leveling and finishing their surfaces before they

finally leave the looms, said method consisting  
in pressing the said fabrics between the take-  
up roll and another roll, both of which have  
hard surfaces, and then pressing the same be-  
5 tween a second pair of hard-surfaced rolls, the  
surfaces of which move faster than the sur-  
face of the take-up roll, substantially as set  
forth.

In testimony whereof we affix our signatures  
in presence of two witnesses.

SAMUEL T. THOMAS.  
WINFIELD S. THOMAS.

Witnesses:

RALPH W. E. HOPPER,  
EBEN HUTCHINSON.