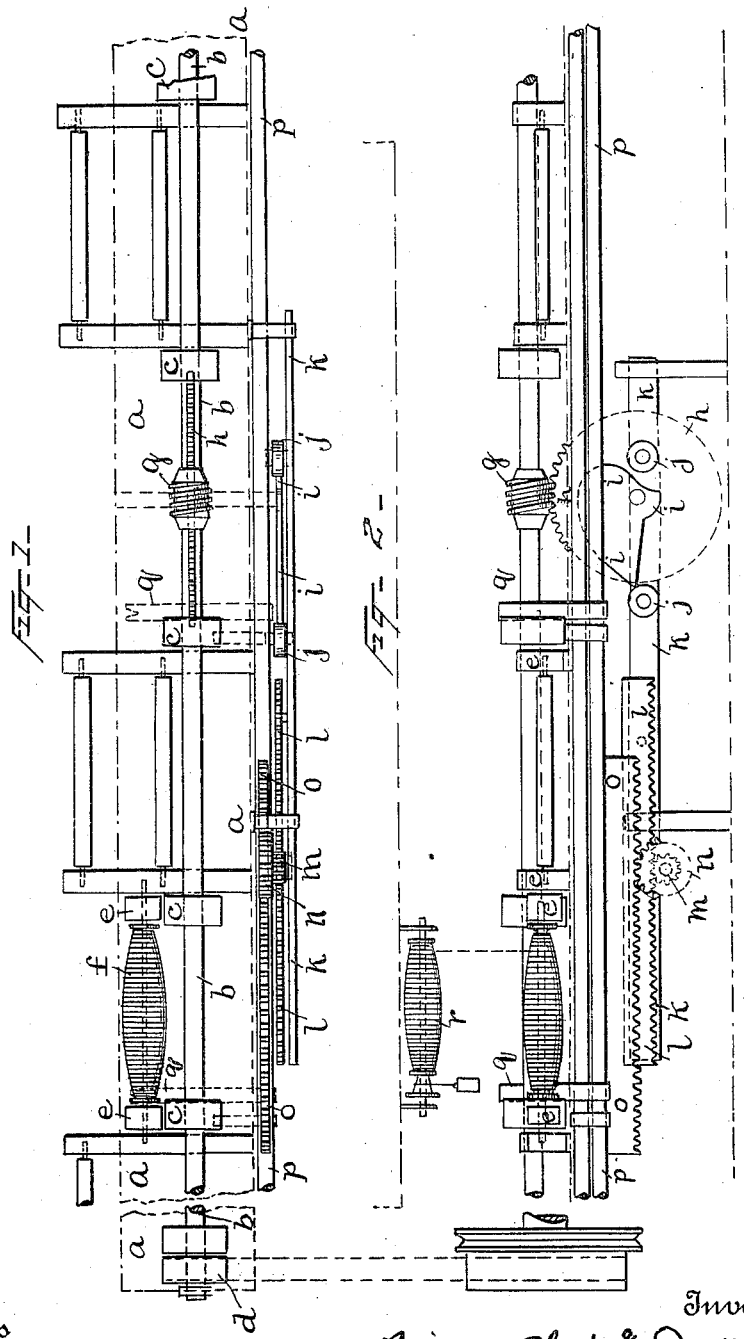
No. 676,875. Patented June 25, 1901.

N. & J. CHAIZE.

COP WINDING MECHANISM FOR RIBBON LOOMS.

(Application filed Dec. 1, 1900.)

(No Model.)



Witnesses
Louis A. Clark
M. H. Hatkins

Inventors
Nicaas Chaize & Jacques Chaize
By Geo. H. Whittemore
Attorney

UNITED STATES PATENT OFFICE.

NICOLAS CHAIZE AND JACQUES CHAIZE, OF ST. ETIENNE, FRANCE.

COP-WINDING MECHANISM FOR RIBBON-LOOMS.

SPECIFICATION forming part of Letters Patent No. 676,875, dated June 25, 1901.

Application filed December 1, 1900. Serial No. 38,349. (No model.)

To all whom it may concern:

Be it known that we, NICOLAS CHAIZE and JACQUES CHAIZE, citizens of the Republic of France, residing at St. Etienne, in the department of the Loire, Republic of France, have invented certain new and useful Improvements in Cop-Winding Mechanism for Ribbon-Looms; and we do 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, reference being had to the accompanying drawings, and to the letters of reference marked thereon, which form a part of this specification.

This invention relates to thread-winding mechanism and especially to a device for that purpose which can be attached to the ribbon-loom shown in our application, filed December 1, 1900, Serial No. 38,348.

Between each band of ribbon there exist in such a loom blank spaces toward and upon the breast-beam, which are utilized as follows:

Figure 1 is a front elevation of the cop-winding mechanism upon the breast-beam, the latter being shown by dotted lines. Fig. 2 is a plan of the same.

Upon the vertical face of a suitable support, such as the breast-beam *a*, is arranged a small driving-shaft *b*, furnished with india-rubber rollers *c*, preferably located between each band of ribbon when the device is applied to our ribbon-loom. This shaft *b* receives its movement where the loom is a power-loom through a pulley *d* at the outer end of the shaft, operated by a band from a pulley on the main motion-shaft of the loom, or the shaft *b* may be turned by hand or treadle in a hand-loom. Spindles furnished with small rollers *e* receive the cops *f* and are adapted to drop into slots in the posts *s* of the ribbon guide-rollers. They turn by frictional contact produced by gravity of the rollers *e* upon the india-rubber rollers *c* of the driving-shaft *b*. The shaft *b* also carries a small worm-screw *g*, which gears into a worm-wheel *h*, upon the axle of which is a cam *i*. This cam revolves between two rollers *j j*, fixed on a sliding bar *k*, carrying a rack *l*. The rack *l* drives a pinion *m*, keyed to an axis, which carries also for increase of speed of movement a larger cog-wheel *n*, gearing into another rack *o*, fixed to the sliding bars *p*, which carry a thread-guide *q*, by which the thread or yarn from a bobbin *r* is guided from end to end of the cop *f* as it is wound upon the latter to insure a uniform distribution of the thread or yarn upon it.

Having now described this invention, what we desire to claim and secure by Letters Patent is—

The combination with a suitable beam, of a shaft carried on the vertical face thereof, guide-roller posts, cops adapted to lie between each set of guide-roller posts and to be rotated from the shaft, a worm on said shaft, a worm-wheel and cam engaging with said worm, a sliding rack operated by said cam, a multiplying pinion and wheel, a second rack and sliding supports operated by said multiplying-gear, and a thread-guide reciprocated by said second rack and support over the face of said cops, to evenly lay the thread from supply-bobbins onto said cops, substantially as described.

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

NICOLAS CHAIZE.
JACQUES CHAIZE.

Witnesses:
JACQUES DEYSIN,
HASTINGS BURROUGHS.