No. 817,770. PATENTED APR. 17, 1906

M. HELLICH.

DEVICE FOR APPLYING COPS TO LOOM SHUTTLE SPINDLES.

APPLICATION FILED DEC. 1, 1904.

2 SHEETS—SHEET 1.

Fig 1

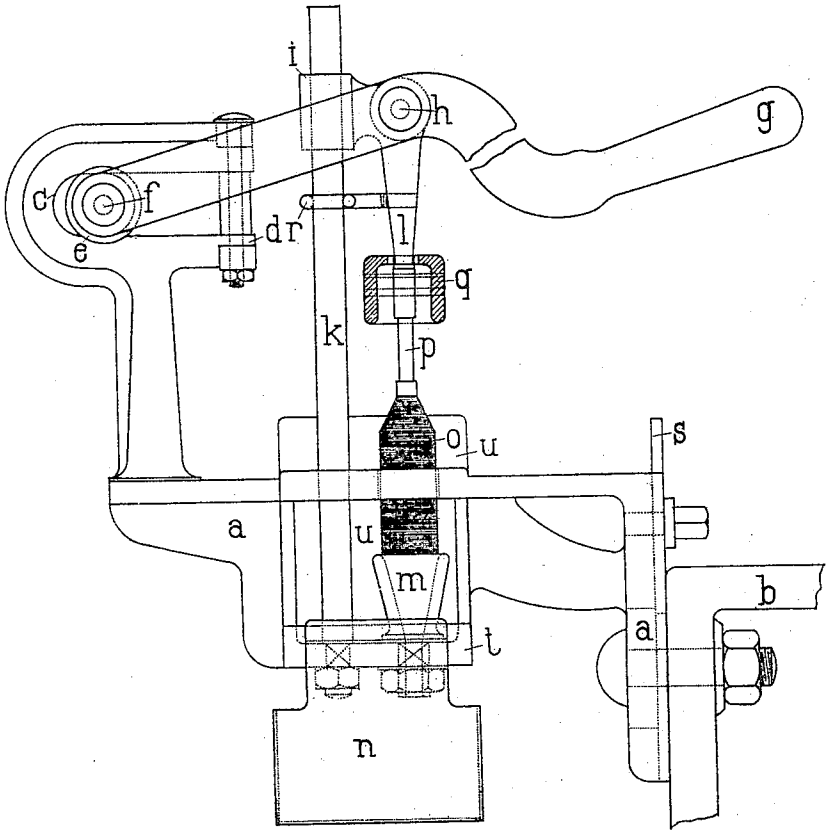
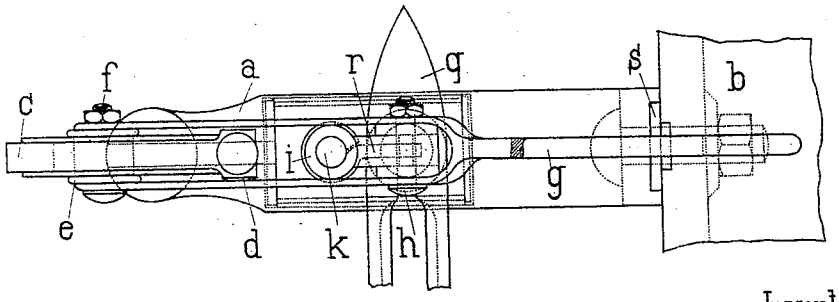


Fig 2



Witnesses

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Fig. 3

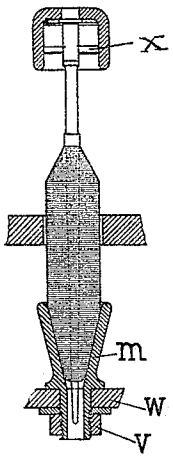


Fig. 5

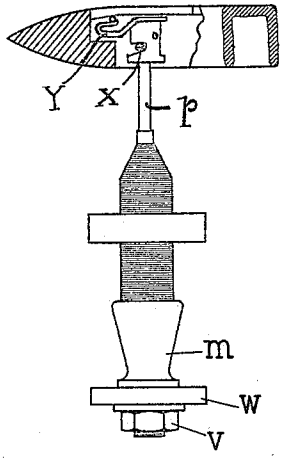
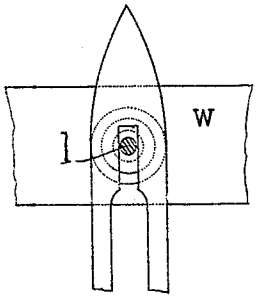


Fig. 4



Witnesses

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UNITED STATES PATENT OFFICE.

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DEVICE FOR APPLYING COPS TO LOOM-SHUTTLE SPINDLES.

No. 817,770. Specification of Letters Patent. Patented April 17, 1906.

Application filed December 1, 1904. Serial No. 235,015.

To all whom it may concern:

Be it known that I, MATHIS HELLICH, a subject of the German Emperor, residing at Guensbach, Alsace, Germany, have invented certain new and useful Improvements in Devices for Applying Cops to Loom-Shuttle Spindles, of which the following is a specification.

The present invention has reference to devices for applying cops to loom-shuttle spindles.

By means of this new device the thread-coils are pressed close together and the nose of the spindle is freed, thus obviating the initial unwinding of this spindle end and reducing thereby the weft waste to almost nothing. The cop, furthermore, if wet is compressed or condensed. The weft thereby is evenly saturated with the fatty liquid, and an evenly-wetted-through woof is obtained.

A further advantage of my improvement consists in doing away with the necessity of placing the cop on the spindle by hand, which always more or less tires the operator.

In order to make the invention more readily understood, I have illustrated it on the accompanying sheets of drawings, in which—

Figure 1 represents a side view of my device, partly in section. Fig. 2 is a plan view. Fig. 3 represents a section through the shuttle, the drip-cup, and adjacent parts and a side elevation of the cop with spindle. Fig. 4 is a detail plan view; and Fig. 5, a side elevation of Fig. 3, partly in section.

To the loom-frame *b* is secured in suitable manner the bracket *a*, carrying a bearing *c d*, in which slides the roller *e*, to which is fulcrumed at *f* the forked hand-lever *g*. To the latter is pivotally secured at *h* the pin *l* and also the guide-sleeve *i*, which latter and a ring *r* surround and slide on the rod *k*, rigidly secured to the bracket *a*. A cup *m*, having a perforated bottom, is rigidly secured to the plate *w*, underlying the bracket *a*, by means of a nut *v*, while the trough or drip-pan *n* is detachably secured to ribs *t* on the bracket *a*. An adjustable stop-ledge *s* limits the downstroke of the lever *g*.

As shown in Fig. 5, the spindle *p* is removably and pivotally journaled on the pin *x*, extending transversely through the shuttle-recess, a spring *y* serving to retain the spindle in the respective position. For the purpose of introducing the spindle *p* into a cop the former is swung out rectangularly to the shuttle, as shown in Fig. 5, and is partly introduced into the cop. The lower end of the cop is then placed into the cup *m* and the hand-lever *g* moved downwardly, swinging about its receding pivot *f*. The pin *l* descends parallel to the rod *k* and enters the longitudinal slot provided in the shuttle-wall, bears upon the spring *y*, and presses the shuttle, with the spindle, downward, forcing the spindle still farther into the cop and jamming the lower end of the cop in turn into the cup *m* until the stop-ledge *s* arrests further down motion. In case the cop is wet the humidity will be evenly pressed through it and finally run off into the cup *m* and through the perforated bottom of the latter into the drip-pan *n*. A plate *u* prevents the liquid from squirting about. The lever *g* can obviously be operated by foot or other power. Upon the cop having been treated in this manner the lever *g* is raised again and the shuttle removed. The spindle, with the cop, is then laid over into the shuttle and the latter placed in the shuttle-race in well-known manner.

What I claim is—

1. A device for placing cops on the spindle secured to the shuttle, comprising in combination, a bracket, a roller slide-bearing, a lever operating in said bearing, a pin pivotally secured to said lever, means for insuring vertical down motion of said pin, a shuttle, a spindle pivotally secured thereto, a conical cup with perforated bottom to receive the lower end of the cop, a detachable drip-pan, means to prevent the liquid from squirting about, and adjustable means to limit the operation of said lever, substantially as and for the purpose set forth.

2. A device of the type set forth, comprising a frame, a cup thereon, a splash-fender in proximity to the cup, a drip-pan, and means for expressing moisture from a cop held in said cup.

3. A device of the type set forth, compris-

ing a frame, having a perforated portion, a cop-receiving cup in proximity to said portion, a drip-pan suspended from said portion, a splash-fender connected with said portion, and means for forcing a shuttle-spindle through a cop while the latter is held in said cup.

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

MATHIS HELLICH.

Witnesses:
JULIEN GUNTZ,
JOSEPH ROHMER.