(No Model.)

R. FARIES.

TWISTER HEAD FOR MACHINES FOR FORMING INTERLOCKING EYES.

No. 333,121. Patented Dec. 29, 1885.

Fig. 1.

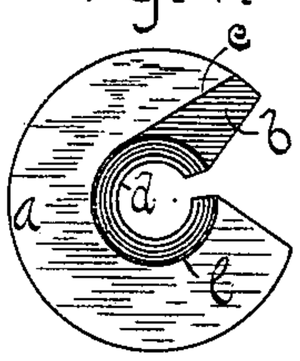


Fig. 2.

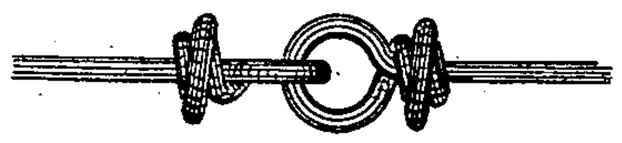


Fig. 3.

Fig. 4.

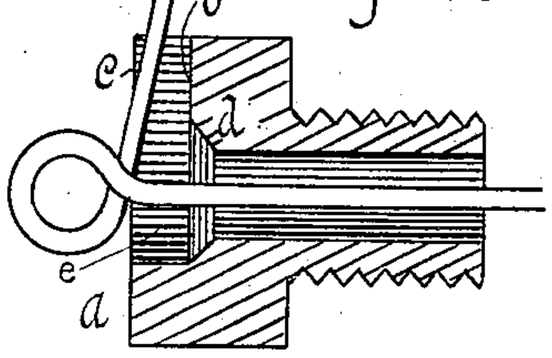
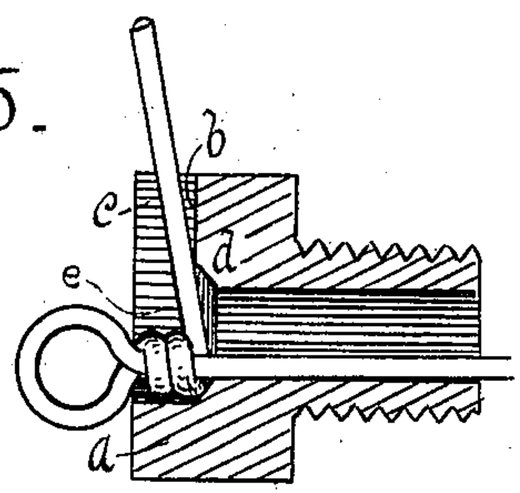


Fig. 5.



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ROBERT FARIES, OF DECATUR, ILLINOIS.

TWISTER-HEAD FOR MACHINES FOR FORMING INTERLOCKING EYES.

SPECIFICATION forming part of Letters Patent No. 333,121, dated December 29, 1885.

Application filed November 10, 1885. Serial No. 182,397. (No model.)

To all whom it may concern:

Be it known that I, ROBERT FARIES, of the city of Decatur, county of Macon, and State of Illinois, have invented certain new and useful Improvements in Twister-Heads for Machines for Forming Interlocking Eyes, of which the following is a specification.

The object of my invention is to produce a twister-head that will effect a double coil in the terminations of the wire.

To secure the above-mentioned result, I provide a machine similar in general construction to that described in Patent No. 321,013, granted to me June 13, 1885, with a head having a recess approximately equal to five times the diameter of the wire to be twisted, a twisting-shoulder to carry the end of the wire, an obstructive surface to reverse the direction of the coil, and suitable means for preventing a longitudinal retrograde motion therein during the formation of the coil.

In the drawings accompanying and forming a part of this specification, Figure 1 is an end view of my improved twister-head. Fig. 2 is a representation of the interlocking eye formed therewith. Fig. 3 is a longitudinal diametrical section of the twister-head in position in its shaft. Fig. 4 is a diametrical section of the twister-head, showing the position of the wire with relation thereto at the commencement of the formation of the inner coil, and Fig. 5 is a sectional view of the head, showing the position of the wire just previous to the commencement of the outside coil.

a is the twister-head. *b* is a surface therein approximately parallel to the end thereof. *c* is a shoulder opposed to the direction of motion in the operating-head. *d* is a beveled surface in forming recess *e*. *e* (see Fig. 1) is a recess in the end of the twister-head approximately equal to five times the diameter of the wire. *f*, Fig. 3, is the shaft to which the twister-head is secured. *g* is a slot in shaft *f*, that receives friction-spring *h*. *k* is a tubular shaft in which shaft *f* operates. *i* is a drive-pulley for shaft *k*. *l* is a set-screw that is used to rigidly connect shafts *f* and *k*.

With the exception of head *a* and set-screw *l*, the device shown in Fig. 3 corresponds in construction and operation with similar mechanism in my previously-described patent, and by loosening the set-screw, so as to permit the shaft *g* to slide longitudinally in shaft *k*, an ordinary single coil may be produced.

In operation the wire, formed as shown in Fig. 4, is placed in the twister-head, as indicated, the eye is held from rotation, and the free end of the wire is coiled around the body thereof by shoulder *c* until the obstructive surface *b* is reached, when the inclination of the wire is changed and a reverse outer coil is formed on the inner coil, as shown in Fig. 2.

The operation of obstructive surface *b* is negative, and the power that forces the wire against the same with sufficient force to cause the reverse coil is furnished by the screw-like pressure of the inner coil.

It will be readily seen that in order to make the obstructive surface effective the head must be longitudinally rigid, and that in order to cause the end of the wire to coil closely the recess *e* must, as heretofore stated, approximate a diameter equal to five times the diameter of the wire.

As shown in Fig. 3, the set-screw *l* prevents longitudinal retrograde motion in shaft *f*, and so makes the obstructive surface effective; but when it is desired to produce a machine on which the double coil only can be made the said shaft may be formed rigid with drive-pulley *i*.

The bevel *d* is of utility in forming the reverse coil, inasmuch as the free end of the wire may be carried to its reverse position with greater accuracy and uniformity by its use.

The head may be made in adjustable sections in order to compensate for wear, and it may also be mounted and operated in any suitable manner without affecting the principle of my invention.

The form of the obstructive surface *b* is immaterial; but its position must be such as to turn the wire back at the proper time to effect the double coil.

I claim as new and desire to secure by Letters Patent—

1. The twister-head herein set forth, having recess *e* of the comparative size specified, drive-shoulder *c*, obstructive surface *b*, and

suitable means of preventing longitudinal retrograde motion in the head, for the purpose specified.

2. The twister-head herein set forth, having recess *e* of the comparative size specified, drive-shoulder *c*, obstructive surface *b*, bevel *d*, and suitable means of preventing longitudinal retrograde motion in the head, for the purpose specified.

In testimony whereof I sign my name in the presence of two subscribing witnesses.

ROBT. FARIES.

Attest:
C. C. CLARK,
J. N. BILLS.