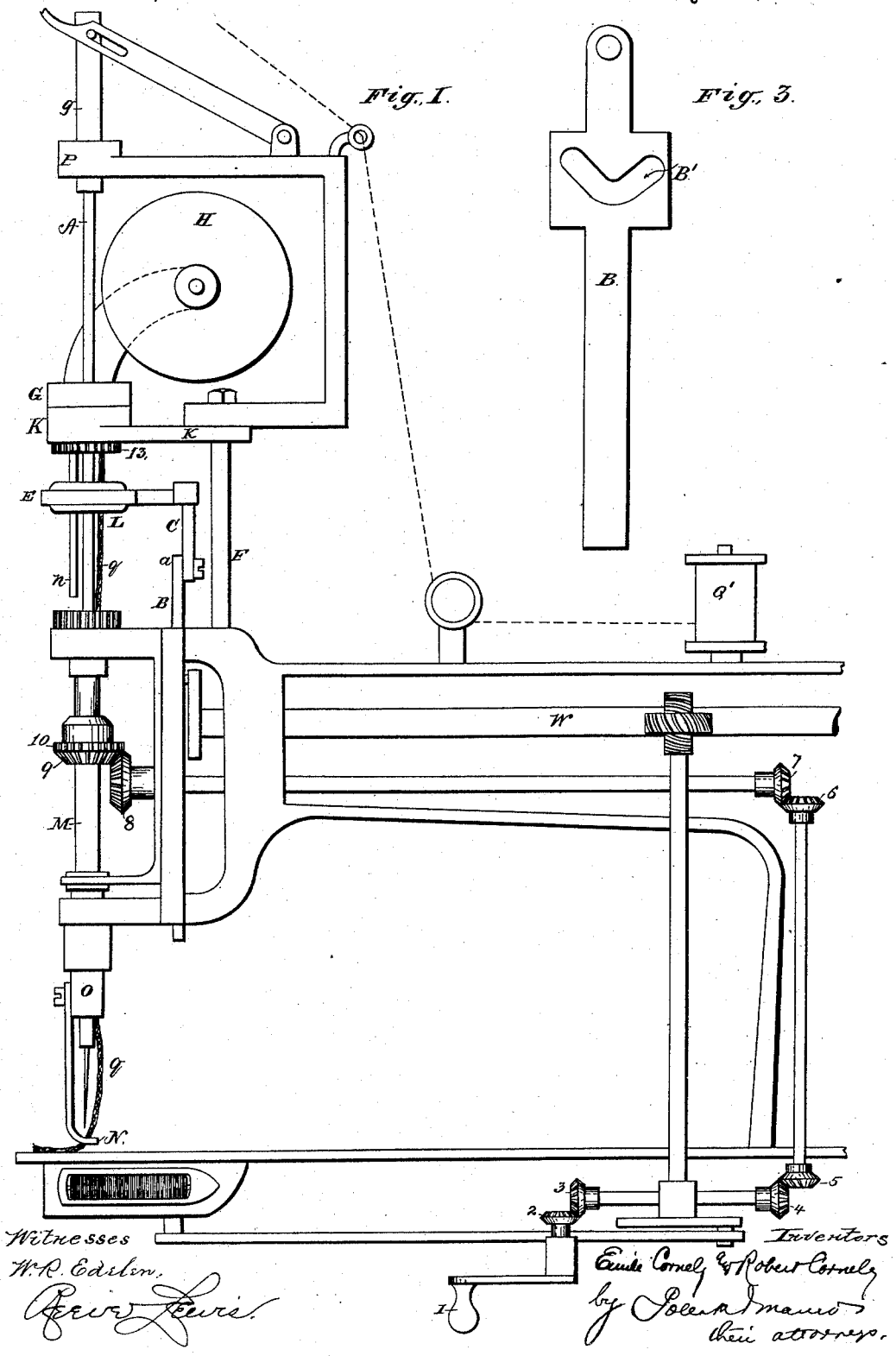
(No Model.) 3 Sheets—Sheet 1.

E. & R. CORNELY.

SEWING MACHINE.

No. 522,828. Patented July 10, 1894.



Witnesses
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by Poole & Mauro
their attorneys.

(No Model.) 3 Sheets—Sheet 2.

E. & R. CORNELY.

SEWING MACHINE.

No. 522,828. Patented July 10, 1894.

Fig. 2.

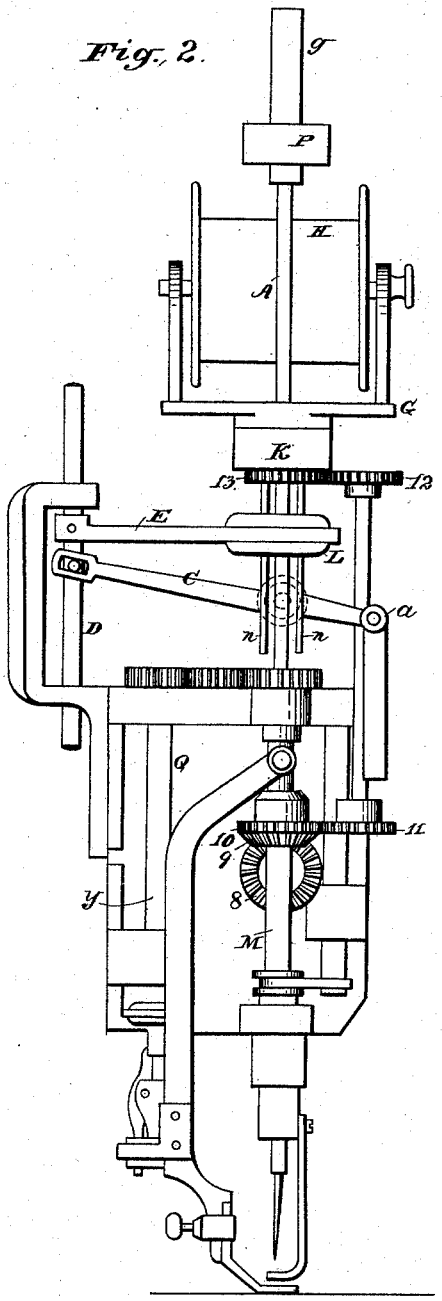
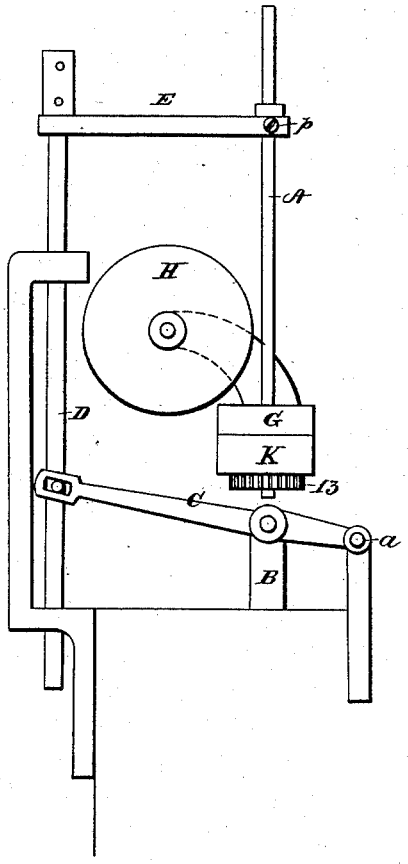


Fig. 4.



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their attorneys

(No Model.) 3 Sheets—Sheet 3.

E. & R. CORNELY.

SEWING MACHINE.

No. 522,828. Patented July 10, 1894.

Fig. 5.

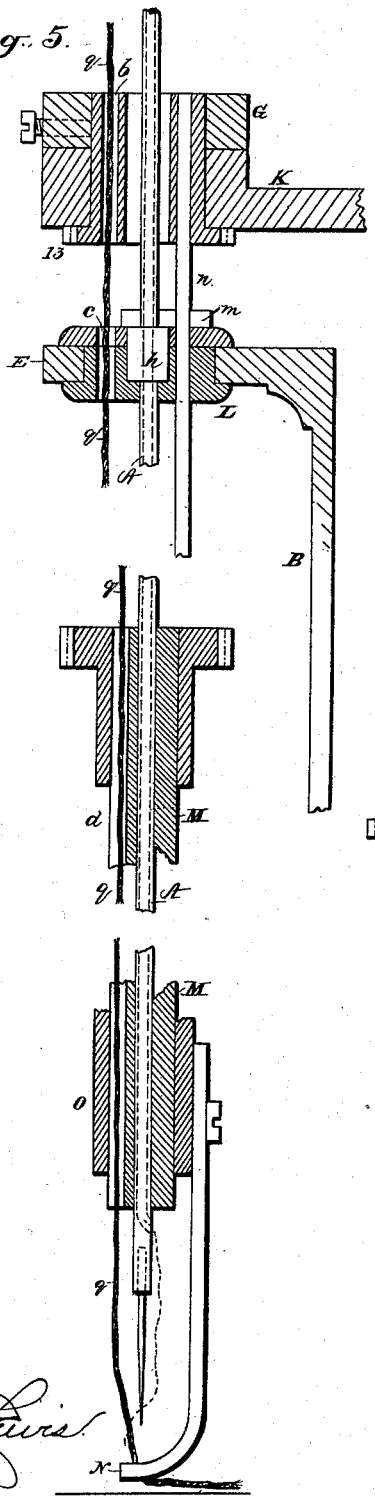


Fig. 6.

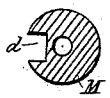


Fig. 7.

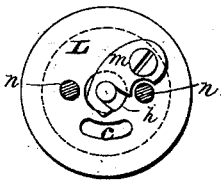
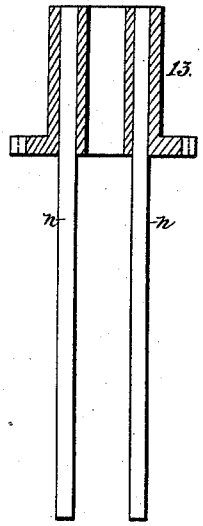


Fig. 8.



Witnesses.
W. R. Edelen.
Peter Lewis.

Inventors.
Emile Cornely & Robert Cornely
by Edelen & Lewis
their attorneys.

UNITED STATES PATENT OFFICE.

EMILE CORNELY AND ROBERT CORNELY, OF PARIS, FRANCE.

SEWING-MACHINE.

SPECIFICATION forming part of Letters Patent No. 522,828, dated July 10, 1894.

Application filed January 10, 1894. Serial No. 496,417. (No model.)

To all whom it may concern:

Be it known that we, EMILE CORNELY and ROBERT CORNELY, residents of Paris, France, have invented a new and useful Improvement in Sewing-Machines, which is fully set forth in the following specification.

The present invention has for its object the construction of a braiding machine in which the seam is produced by the usual elements of a shuttle sewing machine and which is provided with a universal feed, with a braiding spool, with suitable passages for the braid and with a braiding guide, which can be turned together with the universal feed of the machine by means of the crank handle, while the needle bar and the shuttle do not participate in said movement but remain relatively stationary as in the ordinary shuttle sewing machine.

In the accompanying drawings which form part of this specification, Figure 1 represents an elevation and Fig. 2 a front view of the machine. Fig. 3 is an elevation of the slide for driving the needle-bar. Fig. 4 is a front elevation of the head of the machine, showing a modified form of the connections for driving the needle-bar. Fig. 5 is a vertical section on the axis of the needle-bar. Fig. 6 is a cross-section on the hollow tube M. Fig. 7 is a detail in plan of the nut L, and Fig. 8 is a detail in sectional elevation.

The hollow needle bar A is set in motion by means of a slide B having a heart shaped cam B′ represented in Fig. 3 and which is similar to that employed on the Singer sewing machines. The heart slide B operates the bar A either directly as represented in Fig. 5 or by the intermediate action of a lever C which is driven by said heart slide as represented in Figs. 1, 2, and 4 where the heart slide B operates lever C which turns on its fulcrum *a* and which drives the vertical slide-bar D and the horizontal arm E. In Fig. 5 the needle bar A and the central tubes of the machine are represented in sections of full size.

On the head of the machine is secured a column F, Fig. 1, which supports the bracket K, upon which is mounted the oscillatory spool holder G of the braiding spool H. The latter can be turned by the crank handle I of the machine by means of pinions 2, 3, 4, 5, 6, 7, 8, 9, 10, 11, 12 and 13. Pinion 13 turns with the bracket K and to its hub the holder G is secured. The braid *q* passes down from spool H through the passage *b* in pinion 13, (Fig. 5) thence through a similar passage *c* (Figs. 5 and 7) in the nut L, which is actuated either directly by the heart slide B as represented in Fig. 5 or by the intermediate lever C as represented in Figs. 1, 2 and 4. The braid *q* thence passes through a groove *d* in the central tube M (Figs. 5 and 6) in which the needle bar A plays and is thence guided into the braiding guide N which is secured to the tube O and which can also be turned by the crank handle by means of the pinion 9 which is secured to the tube M.

The needle bar A is provided at its upper end with a square or flat part *g* (Figs. 1 and 2) which plays in the frame P and which prevents the bar from turning. It is also provided with a small cylindrical boss *h* which enters nut L (Fig. 5) and is held therein by means of the latch *m* (Figs. 5 and 7) so that the needle bar is reciprocated vertically by the motion of the heart slide B without participating in the axial motion of nut L. The nut L in its up and downward motion plays on two rods *n* which are secured to pinion 13 (Figs. 5 and 8) so that the nut L can be turned during its up and downward motion by said pinion from the crank handle of the machine. In Fig. 4 the needle bar A is secured directly to the transverse arm E of the bar D by means of screw *p* and in this case the nut L can be entirely dispensed with.

The universal feed-bar *y* in this machine is not secured to the central tube but is placed upon a secondary shaft Q as represented at Fig. 2.

The object of the intermediate lever C is to permit the application of the present invention to such existing machines as have not sufficient space to admit the long stroke of the heart slide which is required on shuttle machines, and such length of stroke is therefore obtained by the action of lever C on the bar D and on the horizontal arm E.

The shuttle of the machine is driven by the well known mechanism represented in Fig. 1 and which requires no description.

The thread from the spool Q′ (Fig. 1) is passed through the tension and thread guides of ordinary construction down through the hollow needle bar A and is then threaded into the needle. By the construction and arrangement of parts shown and described the slide for driving the needle-bar is actuated directly from the main shaft W, instead of from a supplementary shaft, as in machines devised for doing similar work.

We do not claim the combination with the elements of a shuttle machine of a universal feeding mechanism, as such combination has been extensively used for many years in machines for sewing elastics to shoes and gaiters.

What we claim is—

1. In a braiding machine having universal feed-mechanism and stitch forming mechanism, the combination with the needle-bar, the actuating slide therefor, the nut L connected and turning with the universal feed mechanism and also connected and reciprocating with said slide, and means connecting the needle-bar to said nut, so that the former reciprocates with the latter without participating in its axial movement, substantially as described.

2. The combination with the stitch forming mechanism and the universal feed mechanism, of the braid-holder connected with a pinion of the universal feed-mechanism so as to follow the motions of the operating handle thereof, a nut provided with a braid-passage and also connected with the operating handle of the feed-mechanism so that it moves with the braid-holder, means for reciprocating said nut, and a needle bar connected with and reciprocated by said nut, substantially as described.

In testimony whereof we have signed this specification in the presence of two subscribing witnesses.

EMILE CORNELY.
ROBERT CORNELY.

Witnesses:
CLYDE SHROPSHIRE,
D. T. S. FULLER.