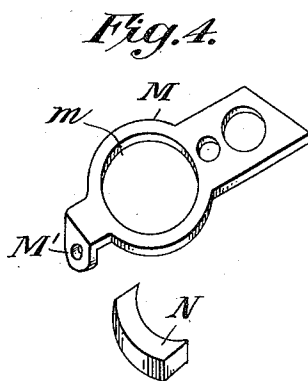
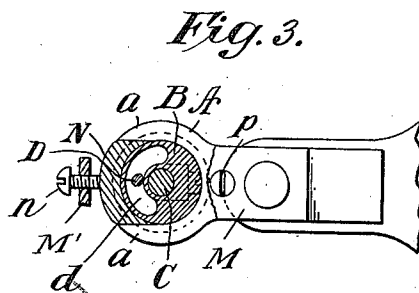
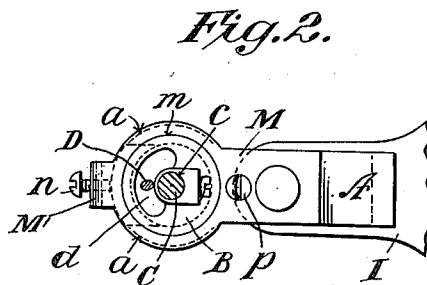
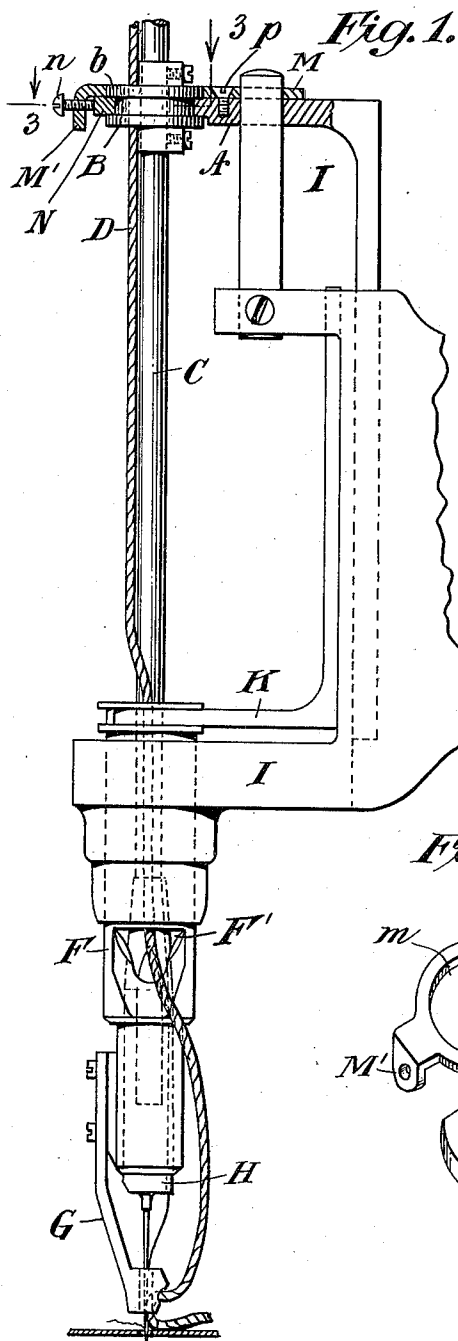


A. RUSSELL.
EMBROIDERING MACHINE.
APPLICATION FILED SEPT. 6, 1910.

1,004,912.

Patented Oct. 3, 1911.



Attest:
W. M. McGinnis
George C. Ford.

by

Inventor:
Albert Russell.
by *John F. Meyer,*
Atty.

UNITED STATES PATENT OFFICE.

ALBERT RUSSELL, OF NEW YORK, N. Y.

EMBROIDERING-MACHINE.

1,004,912.

Specification of Letters Patent.

Patented Oct. 3, 1911.

Application filed September 6, 1910. Serial No. 580,551.

To all whom it may concern:

Be it known that I, ALBERT RUSSELL, a citizen of the United States, residing in Manhattan borough of the city of New York, in the county and State of New York, have invented a new and useful Improvement in Embroidering-Machines, of which the following is a specification.

My improvement is specially applicable to the type of machine covered by Letters Patent of the United States, Number 826,764, and is designed to control the vibration of the needle so as to insure certainty and precision in its work.

In existing machines, the needle is carried on the lower end of a needle bar whose upper end is inclosed within a collar provided with a grooved outer surface into which is fitted the forked extension of a carrying frame, which gets its reciprocal motion through the working of a cam connected with the machine frame. The needle-bar is held into position by the collar the upper end of which is fitted into an opening in a collar plate which is fastened onto the upper surface of the carrying frame extension. The needle bar is revolved by gearing connected with the machine frame, in order to keep the eye of the needle in position to present the loop of the thread properly to the shuttle; and the friction of the collar against its embracing plate and forked prongs results in the wearing of the bearing surfaces so that the bar vibrates laterally in its reciprocal motion, and the looseness of this upper end is reflected at the needle end of the bar and causes the needle frequently to miss the braid and strike against the needle plate and break, thus entailing inferior work and expense of repairing.

My improvement is in the collar and collar plate and consists in an extension of the plate over in front of the collar, and an adjusting block fitted to the face of the collar and within the forked extension of the frame. This block by the bearing of a screw set into the collar plate extension is adjusted to check the vibration of the needle bar by taking up the looseness resulting from the wearing of the bearing surfaces of the collar.

My invention is illustrated in the accompanying drawing in the several figures of which like letters indicate like parts.

Figure 1 is a side elevation, partly in section, showing the needle bar and its collar embraced within the extension of the carrying frame; and shows my improved collar plate and adjusting block and screw, and shows the needle in contact with braid being stitched. Fig. 2 is a top view of the collar plate showing the needle bar and collar within its opening. Fig. 3 is a section view indicated on the lines 3—3 in Fig. 1. Fig. 4 is a perspective view of my improved collar plate with its extension and adjusting block and screw and the collar opening.

A, is the extension of the carrying frame, I, terminating in the prongs, *a, a*, embracing the grooved collar, B.

C, is the needle bar to which the collar, B, is secured by screw; *m*, is the opening in the collar plate within which the collar is inclosed; and *c*, is the opening in the collar inclosing the needle bar; *d*, is the opening in the collar through which the braid, D, passes down to the stitching point.

M, is my improved collar plate, fastened to the frame by the screw, *p*; and terminating in the extension M', provided with the screw, *n*, which serves to press the adjusting block, N, against the collar to check the looseness and vibration resulting from the wearing of the collar and its embracing plate and prongs.

I claim:

1. In an embroidering machine the combination of a needle bar reciprocating frame, having a forked projection, a needle bar, a collar secured to said needle bar and embraced by said forked projection, a collar plate having an extension mounted on the forked projection and surrounding said collar, a wear compensating block fitted to said collar and located in said forked projection and means carried by said extension for adjusting said block.

2. In an embroidering machine, having the needle bar, C, and the collar, B, secured thereto; and the needle bar reciprocating frame, I, provided with the forked extension, A, terminating in the prongs, *a, a*, which embrace the collar, B; the wear compensating block, N, fitted against the collar, B, between the ends of the fork prongs, *a, a*; and the collar plate M, mounted on the forked extension, A, and embracing the collar, B, and provided with the extension, M', and adjusting screw, *n*, and adapted, by the

operation of said adjusting screw against
the wear compensating block, N, to take up
looseness and vibration resulting from the
wearing away of the bearing surfaces of
5 the collar, B; all combined substantially as
and for the purpose set forth.

Signed at New York city in the county of

New York and State of New York this 31st
day of August, A. D. 1910.

ALBERT RUSSELL.

Witnesses:

DUNCAN CAMPBELL,
C. D. WEAVER.

Copies of this patent may be obtained for five cents each, by addressing the "Commissioner of Patents,
Washington, D. C."