

F. A. BARR.
SEWING-MACHINE CLUTCH.

No. 189,989.

Patented April 24, 1877.

Fig. 1.

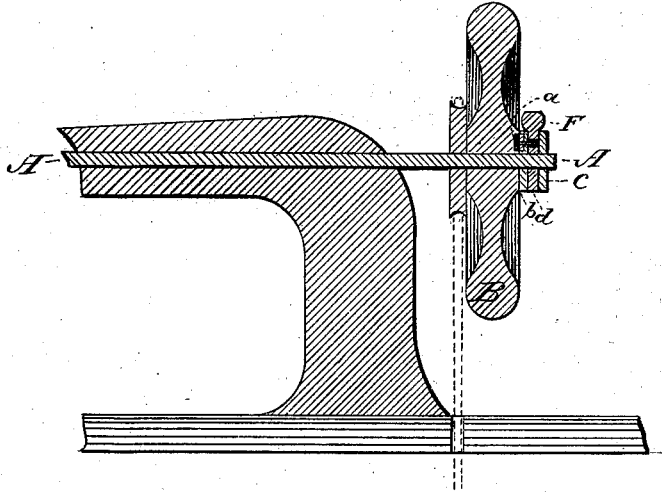


Fig. 2.

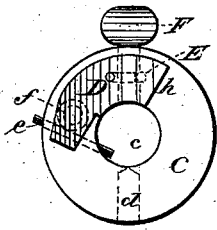


Fig. 3.

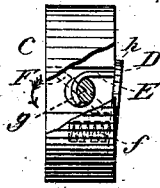


Fig. 4.

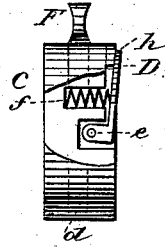
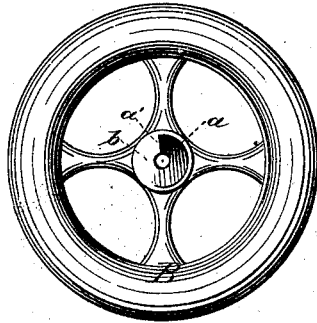


Fig. 5.



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FRANCIS A. BARR, OF HESTER, MISSOURI.

IMPROVEMENT IN SEWING-MACHINE CLUTCHES.

Specification forming part of Letters Patent No. 189,989, dated April 24, 1877; application filed March 3, 1877.

To all whom it may concern:

Be it known that I, FRANCIS A. BARR, of Hester, in the county of Marion and State of Missouri, have invented certain new and useful Improvements in Clutches; and I do hereby declare that the following is a full, clear, and exact description thereof, which will enable others skilled in the art to which it appertains to make and use the same, reference being had to the accompanying drawings, which form a part of this specification, and in which—

Figure 1 is a side elevation, partly in section, showing the application of my improvement. Fig. 2 is a front view of my improved clutch attachment. Fig. 3 is a top plan of the same, partly in section. Fig. 4 is a side elevation, part of the box having been removed to show the operating-spring; and Fig. 5 is a front elevation of the fly-wheel of a sewing-machine, showing the clutch affixed thereto that is preferably used in combination with my invention.

Similar letters of reference indicate corresponding parts in all the figures.

This invention consists in the construction and arrangement of a collar that may be affixed upon the driving-shaft of any sewing-machine, in such a manner that by simply turning a thumb-screw the sewing mechanism may be thrown into or out of operation at any time during the uninterrupted revolution of the fly-wheel; and its object is to produce a simple and efficient means for stopping the sewing mechanism during the operation of winding the bobbin, substantially as hereinafter more fully described.

In the drawing, A is the driving-shaft, and B the fly-wheel, of a sewing-machine. The latter is hung loosely upon the shaft, and has a clutch, *b*, rigidly affixed upon its hub, which engages with the collar or box C, that constitutes my invention. The clutch *b* is, however, not essential to the operation of my invention, as a beveled pin or catch projecting from the hub will answer the same purpose. Clutch *b*, when used, consists simply in a disk having a segmental sloping recess, *a*, on its face, as shown in Fig. 5, so as to pre-

sent an abrupt shoulder or offset, (denoted by *a'*), against which the cam of my improved device will operate.

The latter is represented in Figs. 2, 3, and 4, and consists of a cylindrical metallic box, C, having a central perforation, *c*, by which it is fitted upon the driving-shaft. *d* is a set-screw, passing through the box C, by means of which it may be firmly secured upon the shaft, so as to rotate with it. D is a steel cam or segment, hinged in box C at *e*, and forced outward from the box by a spring, *f*, arranged within the latter, as shown in Fig. 4. *E* is a bent wire catch or bail, affixed upon cam D, and projecting into the box, where it engages with a cam, *g*, which is operated by the thumb-screw F. By turning the thumb-screw in the direction of the arrow represented in Fig. 3, the cam D will be forced into its recess in box C, so that the latter will present a smooth face or surface; but if the thumb-screw is turned in the opposite direction, occupying the position indicated on the drawing, spring *f* will force the upper end of the hinged cam D outward, so that its end (denoted by *h*) will present a shoulder, that will engage with shoulder *a'* of the clutch *b*, (or with the pin or other prominence affixed upon the face of the fly-wheel hub,) so that the driving-shaft A, upon which the box or collar C is rigidly secured by means of its set-screw *d*, will be rotated.

From the foregoing, it will be seen that this is a simple and easily-operated device, by which the driving-shaft, and with it the entire sewing and feeding mechanism of a sewing-machine, may be thrown into or out of operation.

During the frequent operation of winding the bobbins it is desirable to stop the entire sewing mechanism, for the double reason of avoiding unnecessary wear of the operating parts, and reducing the force required to run the machine during this operation. All that is required to throw the sewing mechanism out of gear is simply to turn the thumb-screw F so that the cam D lies flush with the face of collar C; and when the bobbins have been wound, the thumb-screw is turned in

the opposite direction, when the entire sewing and feeding mechanism of the machine will immediately be in motion again.

Having thus described my invention, I claim and desire to secure by Letters Patent of the United States—

The clutch attachment for sewing-machines herein described, consisting of the collar or box C, set-screw *d*, segmental cam D, having bail or catch E, spring *f*, and thumb-screw F, having cam *g*, all constructed and

combined so as to operate in the manner and for the purpose substantially as herein set forth.

In testimony that I claim the foregoing as my own I have hereto affixed my signature in presence of two witnesses.

FRANCIS ANDERSON BARR.

Witnesses:

THAD. H. HATCHER,
M. D. THOMPSON.