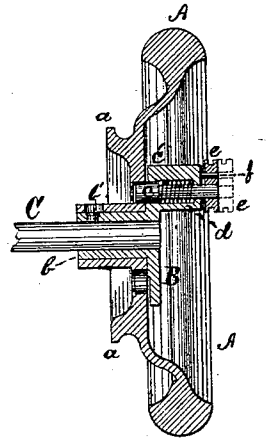
# W. L. FISH.

## Sewing-Machine.

No. 167,515. Patented Sept. 7, 1875.




Witnesses
W. VanDyne.
H. C. Sumbridge.

Inventor
Warren L. Fish.
By O. Drake. Atty.

# UNITED STATES PATENT OFFICE.

WARREN L. FISH, OF NEWARK, NEW JERSEY.

## IMPROVEMENT IN SEWING-MACHINES.

Specification forming part of Letters Patent No. **167,515**, dated September 7, 1875; application filed May 5, 1875.

*To all whom it may concern:*

Be it known that I, WARREN L. FISH, of Newark, in the county of Essex and State of New Jersey, have invented certain new and useful Improvements in Sewing-Machines; 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 pertains to make and use the same, reference being had to the accompanying drawings, and to the letters of reference marked thereon, which form a part of this specification, and in which the drawing represented is a longitudinal vertical section of my improvement.

The nature and object of this invention are to operate the bobbing-winding attachment while the mechanism of the sewing-machine proper is at rest, and vice versa, without having the fly-wheel or pulley revolve upon the shaft, (an objection which has never heretofore been overcome,) or necessitating any change in the construction of a sewing-machine requiring the removal of any of the parts thereof, and the substitution of new parts therefor, thus avoiding expense, and adapting it to be attached to any of the standard machines now in use, or being manufactured, without any alteration whatever, other than simply enlarging the holes through the centers of the fly-wheels already secured thereto, and attaching my improvements, which will be hereinafter more fully set forth and described.

My invention consists in the construction of a collar, B, provided with a sleeve, *b*, fitted and designed to be firmly and rigidly secured to the main shaft C, as shown in the drawing. Upon this sleeve (when the bobbin-winder is being operated) the fly-wheel A and pulley *a* (both of which constitute one solid casting) revolve, and the sewing-machine proper remains at rest; but when the sewing-machine is being operated the fly-wheel is rigidly and automatically coupled to the sleeve *b* by means of a locking device connected with the collar B, as shown in the drawing. Said locking device consists of a suitable coupling-pin, *c*, adjusted in a socket, *c'*, which engages with the fly-wheel A automatically, being actuated by means of a spring, *d*, coiled around said pin *c* in the socket *c'*, and which also serves to prevent the fly-wheel from becoming accidentally uncoupled. The pin *c* is provided with a suitable knob, *e*, by which to draw it back in uncoupling, in which position it is held and retained (until released) by means of a hub or post, *f*, against which said knob is made to rest by simply turning it partially around to avoid a perforation in said knob, in which said post fits when the fly-wheel and sleeve are coupled, substantially as shown in the drawing.

It will be observed that the sleeve *b* exactly corresponds in length with the hub of the fly-wheel and pulley, and is finished on the back, and even therewith, and adjusted and secured upon the shaft in the same exact location, so that the position of the fly-wheel and pulley with relation to the shaft and arm of the machine is identically and unchangeably the same as before my attachment was applied, nor is any alteration or change whatever required in the shaft. The collar B also serves to prevent the fly-wheel from running off, and affords a broad and reliable bearing against the face of said fly-wheel, thus securing a uniform and steady motion.

By means of these improvements I am enabled to operate both the mechanism of the sewing-machine proper and the bobbin-winder attachment, and each totally and perfectly independent of the other, and to apply it for such purposes to machines of different manufacturers with equal facility, and without any alteration or change in any part or parts of such machines, other than simply enlarging the hole through the centers of said fly-wheels so as to fit them to revolve upon the sleeve attached to the collar B, and drilling a small hole in the face of said fly-wheels for the reception of the coupling-pin *c*, all as above set forth, and shown in the drawing.

Having thus described my invention, what I claim as new, and desire to secure by Letters Patent, is—

In a sewing-machine, the combination, with

the main or driving shaft C, and fly-wheel A, having a fixed pulley, *a*, of the collar B, provided with the sleeve *b*, the coupling-pin *c*, having the knob *e*, and the hub or post *f*, the several parts being arranged and operating substantially as shown and described, and for the purpose set forth.

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

WARREN L. FISH.

Witnesses:

OLIVER DRAKE,

M. S. VAN KROWN.