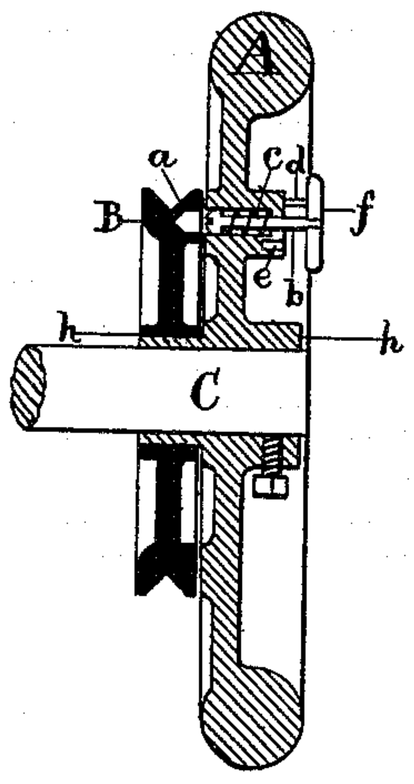
W. L. FISH.

Clutch for Fly-Wheels of Sewing-Machines.

No. 214,246. Patented April 15, 1879.



Attest:

Oliver Drake

P. J. Sinclee

Inventor.

Warren L. Fish

UNITED STATES PATENT OFFICE.

WARREN L. FISH, OF NEWARK, NEW JERSEY.

IMPROVEMENT IN CLUTCHES FOR FLY-WHEELS OF SEWING-MACHINES.

Specification forming part of Letters Patent No. **214,246**, dated April 15, 1879; application filed March 5, 1878.

To all whom it may concern:

Be it known that I, WARREN L. FISH, of the city of Newark, in the county of Essex and State of New Jersey, have invented certain new and useful Improvements in Clutches for the Fly-Wheels of Sewing-Machines; and I do hereby declare that the following is a full, clear, and exact description of the invention, which will enable others skilled in the art to which it appertains to make and use the same, reference being had to the accompanying drawing, and to letters of reference marked thereon, which form a part of this specification.

The nature and object of this invention are to operate the bobbin-winding attachment while the mechanism of the sewing-machine proper is at rest, and vice versa, without necessitating any expensive change in the construction of a sewing-machine, such as the removal of some of the material parts thereof, and the substitution of new parts therefor. Another important advantage secured in this device is in its adaptation to most of the standard machines now in use or being manufactured with which bobbin-winders are used, without increasing cost of manufacture.

The accompanying drawing illustrates the nature and character of the invention, and represents a sectional view of my improved fly-wheel and pulley, together with the driving-shaft and a suitable locking device for coupling the wheel and pulley together when the machine is to be operated, and uncoupling them when the bobbin-winder only is to be operated, thereby relieving the bobbin-winding appliances of the weight and momentum of the fly-wheel, the fly-wheel being rigidly secured to the main or driving shaft C, as usual.

The invention consists in the combination, with a sewing-machine, of a fly-wheel, A, secured to the shaft, a loose pulley, B, carried by the shaft, but turning independently of the wheel A, and a locking device, described hereinafter, whereby the fly-wheel and pulley may be coupled.

In carrying out my invention, the loose pulley B, it will be observed, is adjusted and revolves upon the hub *h* of the fly-wheel A, to which it is secured, when it is desired to operate the sewing-machine, by means of a suitable locking device, consisting, in this instance, of an adjustable pin, *b*, which passes through a portion of the fly-wheel and enters the face of the pulley, as shown, or vice versa. A short supplementary pin, *d*, attached to the head *f* of pin *b*, and resting against the face of the fly-wheel, serves to retain said pin *b*, and prevent its contact with the pulley when the latter is uncoupled from the fly-wheel, and a coiled spring, *c*, serves to force said pin *d* again in contact with the pulley, when desired, by turning the head *f* so that the short pin *d* enters a hole, *e*, all as shown and indicated in the drawing.

It may be observed, however, that the loose pulley can be adjusted and revolve directly upon the shaft, if desired, though I do not think it preferable, and a simple screw, key, clamp, or any other appropriate means may be employed as a locking device without departing from the principle embodied in my invention; which having been thus described,

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

1. The combination, with a sewing-machine, of the fly-wheel A, secured to the shaft, the loose pulley carried by the shaft, but turning independently of the wheel A, and a locking device whereby the pulley and wheel may be locked together or disconnected, as set forth.

2. The combination, with the fly-wheel A, secured to the shaft C of a sewing-machine, of the loose pulley B and spring-pin having a head, *f*, and pin *d*, adapted to an opening, *e*, as and for the purpose set forth.

3. The combination of the driving-shaft, a loose driving-pulley having one or more recesses around and near its periphery, a balance-wheel firmly secured to the driving-shaft and having a slot, and a spring locking-pin arranged in the balance-wheel and having a lateral stud, substantially as and for the purpose set forth.

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

WARREN L. FISH.

Witnesses:

OLIVER DRAKE,

P. J. INSLEE.