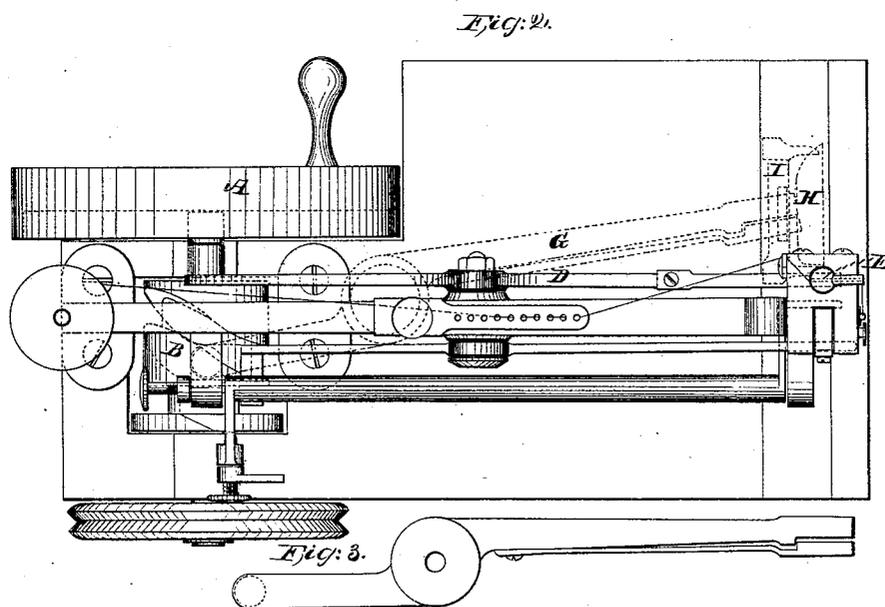
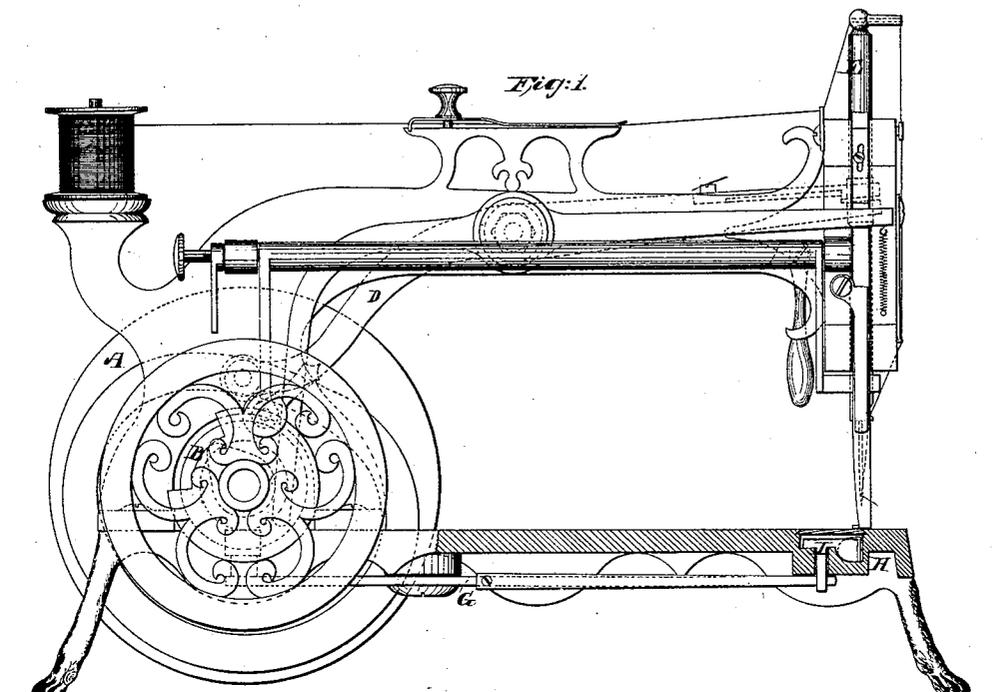


W. WINTER.  
Sewing Machine.

No. 88,936.

Patented April 13, 1869.



Witnesses:  
Mebaker  
Coo Smith

Inventor:  
William Winter



WILLIAM WINTER, OF LEEDS, ENGLAND.

Letters Patent No. 88,936, dated April 13, 1869.

IMPROVEMENT IN SEWING-MACHINES.

The Schedule referred to in these Letters Patent and making part of the same.

To all whom it may concern :

Be it known that I, WILLIAM WINTER, of Leeds, in the county of York, and Kingdom of England, have invented new and useful "Improvements in Sewing-Machines;" and I do hereby declare that the following is a full and exact description thereof, reference being had to the accompanying drawings, and to the letters of reference marked thereon; that is to say—

The improvements consist in the construction, application, and use of self-compensating-levers, or levers which compensate for the wear of the joints, or connecting parts.

Heretofore, in the working of these machines, by the constant reciprocation of the needle-bars and shuttle-drivers, the joints wear away quickly, requiring frequent repairs.

Now, to remedy this evil, I form the lever-arm, which connects therewith in two parts, or in two prongs, the one having a tendency to spring off from the other.

These parts, or prongs, are (when the said levers are applied) pressed together, and inserted into a slot-hole, formed in the needle-bar, and same with respect to the shuttle-driver, so that, as the holes or the levers wear, the expansive tendency of these levers will always compensate therefor, and thus, not only avoid frequent repairs, but prevent the clacking sound produced by the worn or loose-fitting joints, and will also give elasticity in the action, or working of those parts of sewing-machines, and thereby diminish the liability to break off the thread.

In order that this invention may be clearly understood, I herein give reference to an accompanying sheet of drawings of a sewing-machine constructed in accordance therewith.

Description of the Drawings.

Figure 1 is a side elevation, partly in section, and Figure 2 is a plan of the same.

The general arrangement and action of this machine are similar to others in ordinary use, which, being well known, it is not deemed necessary to refer to all the parts thereof.

The particular parts of the machine, wherein are shown my improvements, are as follows:

The ordinary plate-cam A, and the boss-cam B, both fixed upon the same shaft, may be either cast together, or attached, one to the other, or may be formed separate, but fixed on the same shaft, as shown more clearly at fig. 2 of these drawings.

The former, placed or arranged so as to actuate the lever D, which is hinged to the arm of the machine in the usual manner, and by which reciprocatory-motion is given to the needle-carrier E.

The latter actuates the lever G, hinged under the bed, by the action of which the shuttle H is actuated or driven.

This lever acts directly on the shuttle-carrier, or propeller I, by passing through a slot-hole formed therein, thus requiring no joints, cotters, or pins in connecting the parts together, whereby sewing-machines are very much simplified in construction, and rendered more efficient and durable, beside the original costs thereof being greatly diminished.

Figure 3 is a plan of the compensating-lever, constructed according to the second part of the said invention.

This lever is made in two parts, and attached together, (or may be in one part,) with a slit, and of spring-temper, or having a tendency to remain in an expanded state, yet capable of the ends being pressed together when inserted into the slot-hole of the needle-bar, or the shuttle-driver, so that, as the holes or the levers wear, this expansive tendency of the lever will compensate for such wear.

I claim the combination of the needle-working arm D, needle-bar E, shuttle-lever G, and shuttle-carrier I, operating together, and when the said needle-arm D and shuttle-lever G are constructed so as to connect, respectively, with the needle-bar and shuttle-carrier by a divided end, such division being made so as to form a spring upon the end of the respective levers, substantially in the manner and for the purpose herein set forth.

WM. WINTER.

Witnesses:

CLARK SMITH,  
United States Consul, Leeds.

WM. TASKER,  
Patent Agent, Halifax and Bradford.