N. S. C. PERKINS.
Bobbin-Winder.

No. 201,044. Patented March 5, 1878.

Fig. 1.

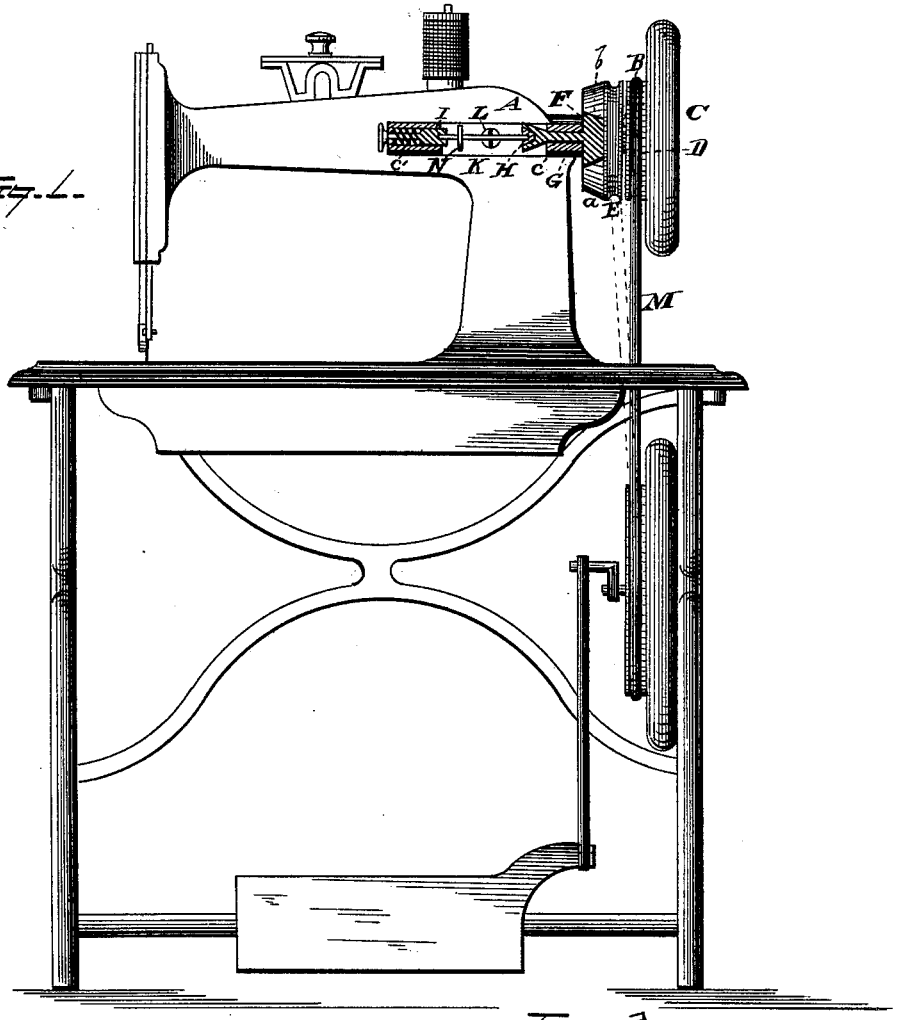
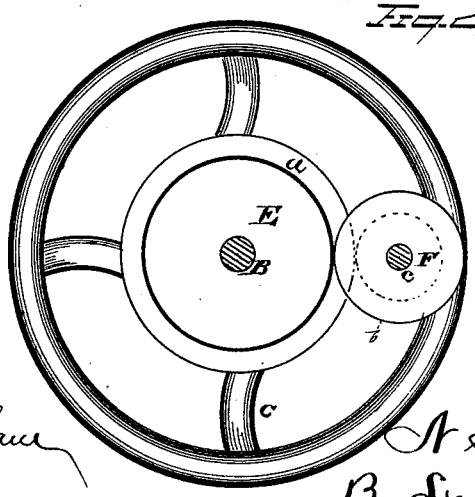


Fig. 2.



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NAHUM S. C. PERKINS, OF NORWALK, OHIO, ASSIGNOR TO DAUNTLESS MANUFACTURING COMPANY, OF SAME PLACE.

IMPROVEMENT IN BOBBIN-WINDERS.

Specification forming part of Letters Patent No. **201,044**, dated March 5, 1878; application filed January 12, 1878.

To all whom it may concern:

Be it known that I, NAHUM S. C. PERKINS, of Norwalk, in the county of Huron and State of Ohio, have invented certain new and useful Improvements in Bobbin-Winders for Sewing-Machines; and I do hereby declare the following to be a full, clear, and exact description of the invention, such as will enable others skilled in the art to which it pertains to make and use it, reference being had to the accompanying drawings, which form part of this specification.

My invention relates to an improvement in bobbin-winders for sewing-machines, the object of the same being to provide an attachment for sewing-machines for winding-bobbins that shall occupy little space, be simple and durable in construction, not necessitate the employment of additional belting, and arranged and adapted to be readily actuated by simply shifting the belt, which imparts motion to the driving-wheel of the sewing-machine, so that the thread can be wound without running the machine; and to that end my invention consists in the several details of construction and combination of parts, as will more fully appear from the following description and claim.

In the accompanying drawings, Figure 1 is a side elevation of a sewing-machine furnished with my improved bobbin-winder attachment; and Fig. 2 is an end view of the driving-wheel, showing the loose and bobbin pulleys.

A represents the arm of a sewing-machine, and B the driving-shaft, having a driving-wheel, C, rigidly secured thereto, all of said parts being of ordinary construction. On the driving-shaft B, between the grooved pulley D, attached to or formed as a part of the driving-wheel C and the arm A of the machine, is loosely mounted a grooved pulley, E. This latter pulley may be journaled directly on the driving-shaft, or it may be journaled on a hub projecting from the grooved pulley D, or upon a hub projecting from the arm of the sewing-machine. The outer surface of loose pulley E is provided with an inclined periphery, *a*, for a purpose hereinafter described.

F is a bobbin-winder pulley, the periphery *b* of which is of inclined form, to correspond with the inclined periphery *a* of the grooved pulley E. The shaft *c*, to which the winder-pulley F is secured, is supported in a bearing, G, said shaft extending through said bearing, and projecting therefrom, in order that it may have a longitudinal movement in said bearing. The end of the shaft *c*, opposite the winder-pulley, carries a cup-shaped receptacle, H, which receives one end of the bobbin, while the opposite end of the bobbin-shaft is placed in a depression formed in the end of a sliding shaft, I, which is pressed toward the bobbin by any suitable spring, *c'*.

K is a bar or bed-piece, serving to support the bearings for the bobbin-winder attachments, and the same is secured to the arm of the sewing-machine by screw L, or in any other suitable manner.

The operation of the device is as follows: When it is desired to wind the thread on a bobbin, the driving-belt M is shifted onto the grooved pulley E. A bobbin, N, is then placed in position, and the spring which serves to hold the bobbin in place also serves to force the inclined periphery of the winder-pulley in direct contact with the correspondingly-inclined periphery of the grooved pulley E, and hence, when the latter is revolved, it operates through frictional contact to revolve the winder-pulley and the bobbin. When the bobbin has been filled it is removed, and the belt shifted onto the driving-pulley of the machine.

It will be observed that the driving-shaft and all the several parts of the sewing-machine are not moved while the bobbin is being wound, and hence a great saving in wear to the machine is thus made by the simple transfer of the driving-belt from the driving to the loose pulley.

It is evident that many slight changes in construction and arrangement of parts might be resorted to, and secure the same result as is obtained by the improvement above described, without departing from the spirit of my invention—as, for instance, the grooved pulley E may be provided with a flat periphery, and the winder-pulley also be constructed with a flat periphery. In such case the winder-pulley would be mounted in a suitable bearing or frame, which may be oscillated, and thus

move the winding-pulley to or from the pulley E. Again, instead of constructing the grooved pulley E with an inclined or flat outer periphery, the inner surface of said flange may be formed in such manner, and the winder-pulley be arranged to be thrown in or out of contact with such surface.

I am aware that sewing-machines have been provided with bobbin-winders wherein the bobbin-winder pulley is adapted to be thrown in and out of engagement with the driving-pulley of the machine, and hence I make no claim to such construction, broadly considered.

I am also aware that sewing-machines have heretofore been provided with a loose pulley, located on the driving-shaft by the side of the driving-pulley of the machine, and the bobbin-winder attached to the table of the machine in such position that the driving-belt of the machine may be shifted from the driving-pulley to the loose pulley, and drive the grooved bobbin-winder pulley by being brought in direct contact therewith; and hence I make no claim to such a combination of parts.

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

The combination, with the driving-shaft of a sewing-machine having a grooved driving-pulley rigidly secured thereto, of a loosely-mounted grooved pulley placed by the side of the driving-pulley, and a bobbin-winder pulley adapted and arranged to have its periphery thrown either in or out of direct contact with said loosely-mounted grooved pulley, substantially as set forth.

In testimony that I claim the foregoing I have hereunto set my hand.

NAHUM SIMEON CARY PERKINS.

Witnesses:

HENRY A. SEYMOUR,

A. W. BRIGHT.