

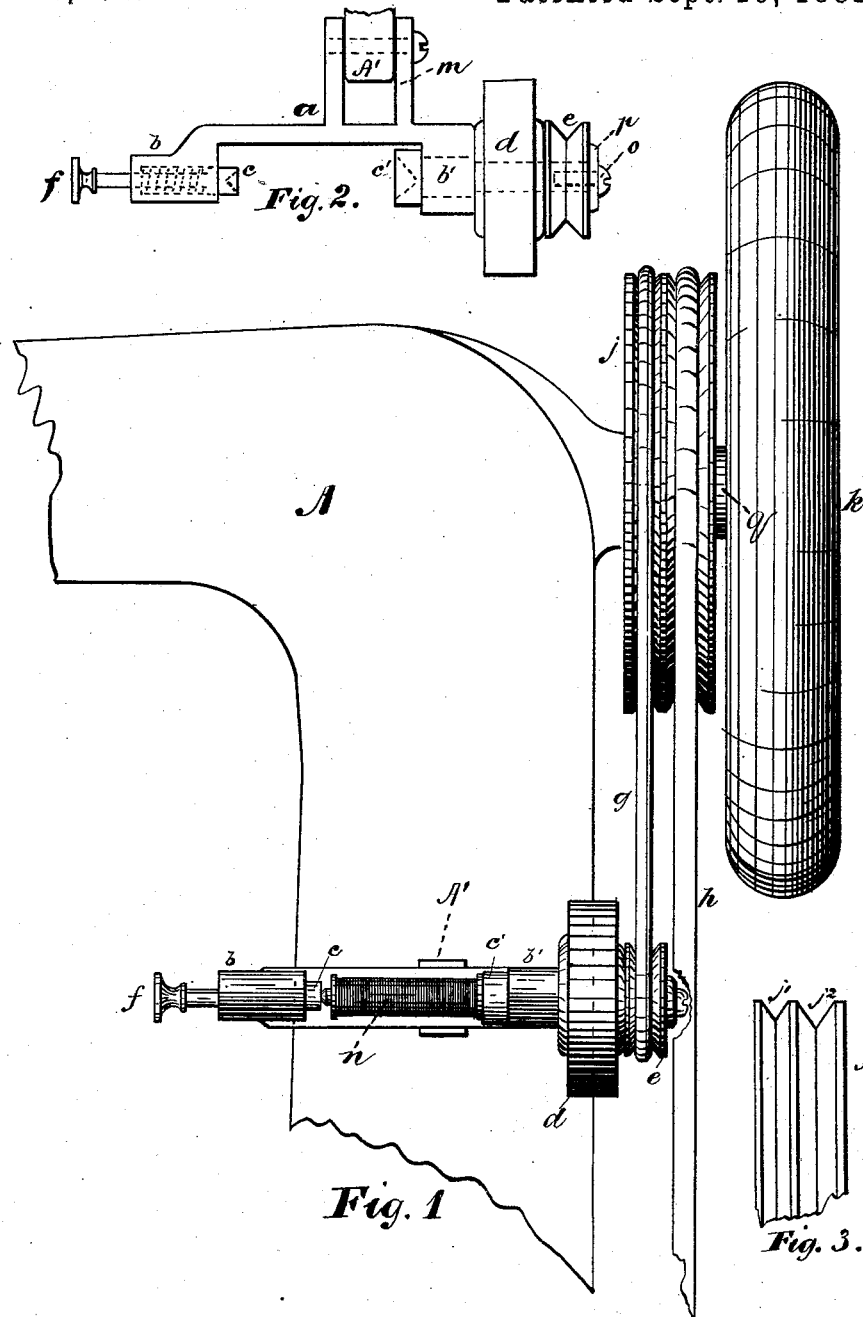
(No Model.)

J. CROSS & W. HARTY.

BOBBIN WINDER FOR SEWING MACHINES.

No. 264,442.

Patented Sept. 19, 1882.



Attest:

Charles H. Peck
Chas. T. Winters.

Inventors:

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by
O. Drake. Atty.

UNITED STATES PATENT OFFICE.

JOSEPH CROSS AND WILLIAM HARTY, OF NEWARK, NEW JERSEY.

BOBBIN-WINDER FOR SEWING-MACHINES.

SPECIFICATION forming part of Letters Patent No. 264,442, dated September 19, 1882.

Application filed April 7, 1882. (No model.)

To all whom it may concern:

Be it known that we, JOSEPH CROSS and WILLIAM HARTY, both residents of Newark, in the county of Essex and State of New Jersey, have invented certain new and useful Improvements in Sewing-Machines; and we 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 appertains to make and use the same, reference being had to the accompanying drawings, and to letters of reference marked thereon, which form a part of this specification.

The object of this invention is to provide more convenient and effective means for winding sewing-machine bobbins and sharpening needles. A further object is to furnish more positive and direct power to the device.

Heretofore devices in some respects similar to our improved attachment have been actuated by means of a pulley placed against the belt, (herein designated *h*), which connects the upper driving-shaft with the pulley beneath the sewing-machine table. By this arrangement a large amount of lost motion and power was occasioned, which our improved construction has saved.

The invention consists in the arrangements and combinations of parts hereinafter set forth, illustrated, and finally embodied in the claims.

Referring to the accompanying drawings, in which similar letters of reference indicate like parts in each of the several figures, Figure 1 is a front elevation of a portion of a sewing-machine embodying our improvements; Fig. 2, a detached plan view of the bobbin-winder and needle-sharpener; and Fig. 3 is a detail view of a portion of a double pulley, showing the peculiar shape of certain grooves in the periphery thereof.

In said drawings, A represents the usual hollow stand, having a projecting lug, A', which acts as a pivotal bearing for our improved attachment.

In Figs. 1 and 2 is shown a combined bobbin-winder and sharpening emery-wheel which we prefer to employ, in which figures *a* is a bed, having a fork, *m*, adapted to engage with the lug A', and hollow arms *b b'*, cast or otherwise formed thereon, which form bearings for spindles *c c'*, adapted to receive and hold the ends

of the bobbin *n* during the process of winding. Within the arm *b* we arrange a spiral spring, which bears against a shoulder on the spindle and against the interior wall of said arm, which spring has a normal tendency to hold said spindle against the ends of said bobbin, as will be readily understood. Through the arm *b'* the live-spindle *c'* passes, which spindle carries the sharpening-wheel *d* and driving-pulley *e*, which parts *d e* are held upon said spindle by the screw and washer *o p*. (Shown more clearly in Fig. 2.) The spindle and bobbin carried thereby are driven by means of a pulley, *j*, having two grooves in the periphery thereof, one of which grooves, *j²*, receives the belt *h* from the main driving-wheel beneath the machine-table, while the other groove, *j'*, carries the supplemental belt *g*, which transmits power to the pulley *e*. The peripheral grooves in the pulleys *e j*, we form V-shaped, as shown in Fig. 3, by which means greater power is transmitted, as the grooves thus formed have a greater frictional action upon the belt. The pulley *j* is arranged upon its bearings *q* so that it may be fast when it is desired to use the machine for sewing or be loose when necessary to operate the winding and sharpening mechanism.

By means of the device described the bobbin-winding device is operated by an especial belt, which transmits a greater amount of power thereto than when the pulley *e* is adjusted against the belt *h*, as heretofore.

Having thus described our invention, what we claim, and wish to secure by Letters Patent, is—

1. In a sewing-machine, the combination of the double-grooved pulley *j*, actuated by the main shaft *g*, the belt *g*, the bobbin-carrier provided with the pulley *e* and grinding-wheel *d*, the belt *h*, and means for operating the same, substantially as herein set forth and shown.

2. In a sewing-machine, the combination, with the stand A, having the projecting lug A' thereon, of the bed *a*, adjusted upon said lug, the arms *b b'*, forming bearings for the bobbin-spindles *c c'*, said bobbin-spindles, the sharpening-wheel *d*, the pulley *e*, and means for operating the same, all arranged and operating substantially as and for the purposes herein set forth and shown.

3. In a sewing-machine, the sharpening-wheel

d and bobbin-spindles, adjusted in suitable bearings, all arranged and combined with the stand-lug *Δ'*, substantially as herein set forth.

4. In combination with the stand *A*, having the lug *Δ'* thereon, the bed *a*, having arms *b b'*, the bobbin-spindles working in said arms, the pulley *e*, actuating said spindles, the supplemental belt, *g*, actuating said pulley and spindles, the double-grooved pulley *j*, and driving-belt *h*, all arranged and operating in combination substantially as set forth.

5. In combination in a sewing-machine, the

bed *a*, carrying the bobbin-spindles *cc'*, recessed to receive the bobbin *n*, sharpening-wheel *d*, and pulley *e*, arranged and operating substantially as set forth.

In testimony that we claim the foregoing we have hereunto set our hands this 15th day of February, 1882.

JOSEPH CROSS.

WILLIAM HARTY.

Witnesses:

OLIVER DRAKE,

CHARLES H. PELL.