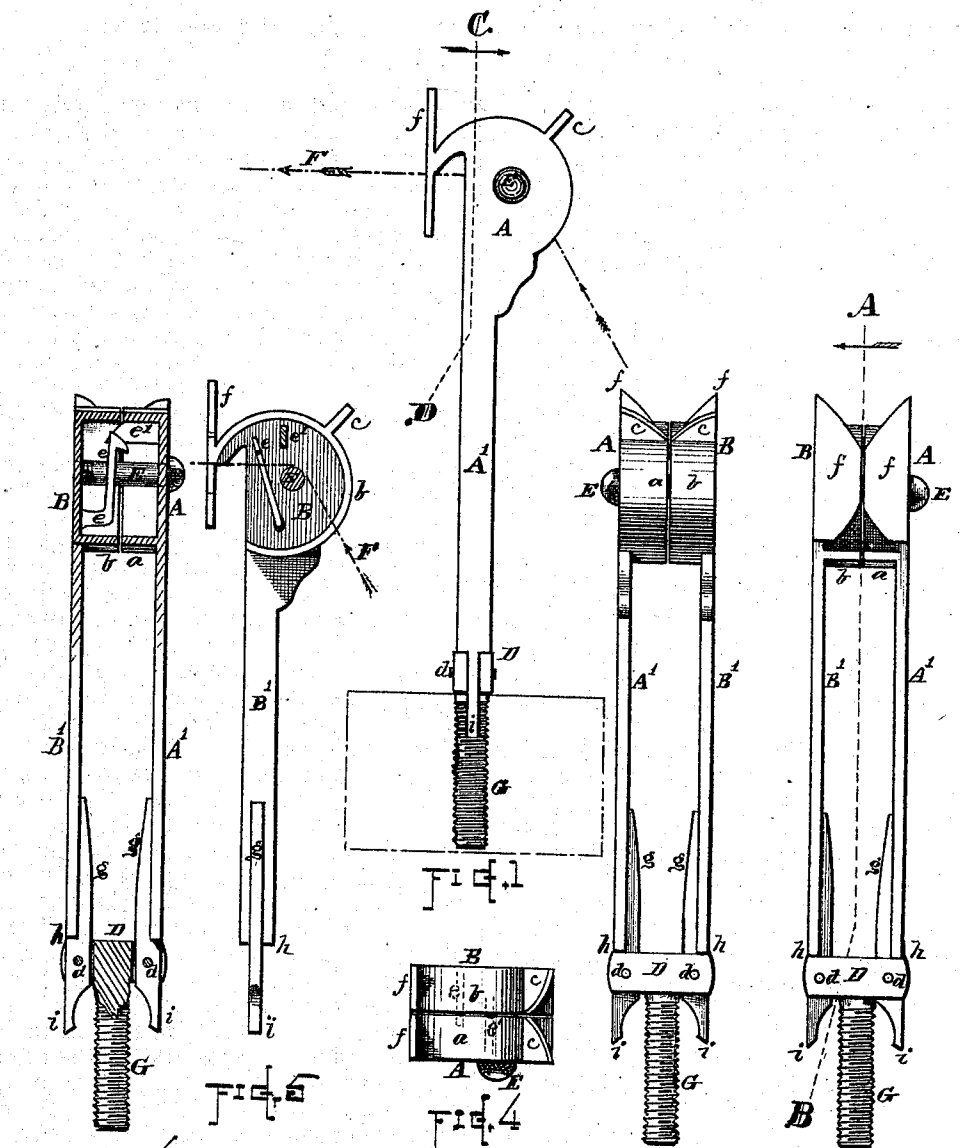
# P. LAFLIN.

## Guides for Spooling and Winding Machines.

No. 130,058. Patented July 30, 1872.



Witnesses

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A.M. PHOTO-LITHOGRAPHIC CO. N.Y. (OSBORNE'S PROCESS)

# UNITED STATES PATENT OFFICE.

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## IMPROVEMENT IN GUIDES FOR SPOOLING AND WINDING MACHINES.

Specification forming part of Letters Patent No. **130,058**, dated July 30, 1872.

*To all whom it may concern:*

Be it known that I, PERLEY LAFLIN, of Warren, in the county of Worcester and Commonwealth of Massachusetts, have invented certain new and useful Improvements in Guides for Spooling and Winding Machines; and I do hereby declare that the following is a full, clear, and exact description of the same, reference being had to the acompanying drawing, which forms a part of this specification, in which—

Figure 1 represents a side view of my safety and cleaning guide. Fig. 2 represents a front view. Fig. 3 represents a rear view. Fig. 4 represents a plan view. Fig. 5 represents a vertical section at line A B, Fig. 3; and Fig. 6 represents a vertical section at line C D, Fig. 1.

To enable others skilled in the art to which my invention belongs to make and use the same, I will proceed to describe it in detail.

This invention relates to certain improvements in devices for guiding yarn upon spooling and winding machines, as hereinafter fully described.

In the drawing, the parts marked A and B represent the guiding-jaws, which are supported by upright arms A′ B′, the lower ends of which are pivoted in slots at the extremities of a short cross-bar, D, by the pivot-pins *d d*, as indicated. The jaws A B are provided with curved flanges *a b*, so that when the two are placed together in working position they form a cylindrical head or box, open at one side, as the flanges do not form a full circle, and having a space between the two parts of sufficient width to permit the free passage of the yarn through the guiding-jaws. The jaws A B are held to each other by a bar, E, which also serves as a yarn-support, its central portion being formed cylindrical and smooth, and a screw-thread cut upon one of its extremities, while the other is provided with a smooth hemispherical head. The bar or yarn support E passes through one of the jaws and screws into the other in the manner illustrated, and by turning it the distance or space between the jaws A B can be increased or diminished to adjust the guide to various-sized yarn. In the upper front part of the jaws A B are arranged upwardly-projecting plates *c c*, the inner edges of which incline down to the opening between the jaws, and to the rear side of the jaws A B are fixed plates *f f*, the inner edges of which are also inclined toward the opening, as fully shown in Fig. 3. These plates *c* and *f* facilitate the placing of the yarn between the guide-jaws, and cause it to be drawn into the jaws when the spooling or winding machine is started, even though the yarn is only thrown carelessly across the guide. The lower ends of the plates *f* are inclined inward, so that the yarn will not catch thereon when it has from any cause been pressed down below the ends of said plates. Within the cylindrical head formed by the jaws A B there are small lugs or catch-pieces *e e′*, one of which, *e*, is made in the form of a latch-hook and is secured to the jaw B, and the other, *e′*, is made in the form of an inclined lug and attached to the under side of the curved flange at the upper part of the jaw A. These catch-pieces *e e′* project past each other and prevent the yarn from being raised out from the jaws of the guide without breaking the yarn, so that the operator cannot raise the yarn from the guide, and thereby permit any accumulation of dirt and loose substance that may have been stripped from the yarn during its passage through the guide to pass the guide and wind onto the spool, as is the frequent practice with the ordinary guides in use. The yarn passes through the jaws of the guide, as indicated by the broken line F, Figs. 1 and 5. The lower ends of the uprights A′ B′, where they are pivoted to the cross-bar D, are made with inward flanges or ribs *g*, as shown, so that the parts will be stiff and light, and so that the shoulders *h* may rock upon and be supported by the cross-bar, thus relieving the pivot-pin from excessive wear. A screw-bolt, G, projects downward from the central part of the cross-bar D, which is screwed into the guide-bar of the machine, as indicated in Fig. 1, and thus supports the guide in proper position.

Among the advantages obtained by constructing the guides in the manner herein shown and described may be mentioned the following: It cleans the yarn in a very perfect manner by removing adhering particles of dirt, which are taken off from the yarn by the edges of the flanges *a b* and plates *f*. Those particles which pass the flanges *a b* are thrown

to the surface of the yarn by its being drawn over the supporting-bar E, and are then taken off by the edges of the plates *f*. My improved guide is much less liable than is the ordinary guide to become choked or clogged by the accumulation of lint and dirt in front of the jaws, as it is scraped off from the yarn by the flanges *a b* and plates *f*. This is owing to the fact that the jaws, being pivoted at *d d*, are in constant vibration by the jar of the machine, so that the lint and dirt are shaken off from the jaws. The form of the jaws is also such as to facilitate the release of the lint and dirt. Another important advantage is that the guide holds the thread or yarn so that the operatives cannot, as with the old guides, raise the yarn from the jaws when the latter become choked and permit the accumulation of lint or other imperfections to wind onto the spool with the yarn; but by raising the yarn it becomes broken, and the operative is then required to tie the ends, and as a matter of convenience, if for no other reason, they will at the same time remove the imperfect or clogged portion of the yarn. The spools are thus wound with cleaner and more perfect yarn, and all of the subsequent operations through which the yarn passes are thereby facilitated, while less imperfections are woven into the cloth. Again, by making the adjusting-screw or supporting-bar E with a round smooth head the operatives are prevented from opening the jaws or disarranging the adjustment thereof after they have been properly arranged by the foreman.

In lieu of making the catch-pieces *e e'* in the form herein shown, said catches may be made in the form of spring-hooks, so that they will yield to allow the yarn to pass them; or they may be made in the form of downward-curved hooks cast upon or otherwise attached to the flanges of the jaws; and, if desired, a single catch may be used similar to the lug *e'*, but with its end extended and curved downward sufficiently to insure its secure hold upon the thread. A rubber spring may be arranged upon the screw-bolt G between the lower ends *i i* of the uprights A' B' for pressing said ends outward, thereby causing the jaws A B to bear upon the yarn with a yielding pressure within the limit of their adjustment.

Having described my improved safety and cleaning guide for winding and spooling yarn, what I claim therein as new and of my invention, and desire to secure by Letters Patent, is—

1. A spooling-guide constructed substantially as described, whereby the thread or yarn will enter the guide freely, but cannot be withdrawn or lifted out of the guide without breaking the thread.

2. The combination, with the pivoted or vibratory jaws A B, of an adjusting and thread-supporting screw-bar, substantially as shown and set forth.

3. The combination, with the jaws A B, of a central thread-support and catch device, substantially as and for the purposes set forth.

4. The combination, with the upper part of the guide-jaws A B, of inwardly-inclined upward-projecting plates *c c f f*, substantially as and for the purposes set forth.

5. The combination, with the rear part of the guide-jaws A B, of the double-beveled plates *f f*, substantially as and for the purposes set forth.

6. The combination, in a guide for supporting and winding yarn, of the vibrating jaws A A' B B', provided with guiding and cleaning flanges *a b* and plates *c c f f* of the catch-pieces *e e'*, supporting and adjusting bar E, cross-bar D, pivots *d d*, and screw-bolt G, all constructed and combined for operation substantially as and for the purposes set forth.

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Witnesses:
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