

I. E. PALMER.
 THREAD GUIDE.
 APPLICATION FILED JUNE 23, 1909.

958,760.

Patented May 24, 1910.

Fig. 1.

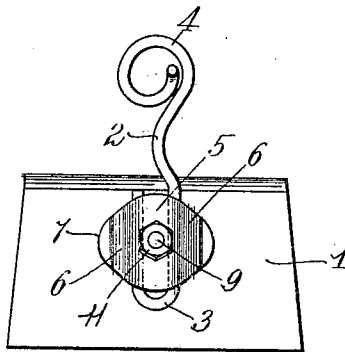


Fig. 2.

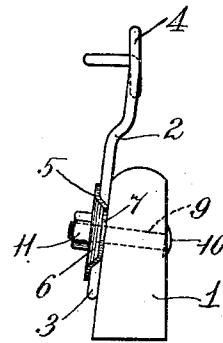
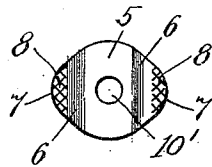


Fig. 3.



Witnesses.

Robert H. Kammeler.
 Horace A. Grossman

by

Inventor.
 Isaac E. Palmer.
 Emery and Booth.
 Attys

UNITED STATES PATENT OFFICE.

ISAAC E. PALMER, OF MIDDLETOWN, CONNECTICUT.

THREAD-GUIDE.

958,760.

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To all whom it may concern:

Be it known that I, ISAAC E. PALMER, a citizen of the United States, residing at Middletown, in the county of Middlesex and State of Connecticut, have invented an Improvement in Thread-Guides, of which the following description, in connection with the accompanying drawings, is a specification, like numerals on the drawings representing like parts.

This invention relates to thread guides for spinning or twisting machines and more particularly relates to means whereby the thread guide may be adjusted either laterally or longitudinally into exact alinement with the spindle to which the thread is directed.

In order that the principles of the invention may be readily understood, I have disclosed a single type or embodiment thereof in the accompanying drawings, wherein—

Figure 1 is an underneath plan view of a yarn or thread guide constructed in accordance with my invention; Fig. 2 is an edge view of the yarn or thread guide shown in Fig. 1; and Fig. 3 is a plan view of a form of bearing plate or washer that may be employed in the practice of my invention.

Referring more particularly to that specific embodiment of my invention herein selected for illustration, the finger board of a yarn spinning or twisting machine to which my invention is more particularly adapted is represented in Figs. 1 and 2 at 1, such finger board being preferably of wood and usually hinged to the frame of the spinning or twisting machine.

The thread guide to which my invention is applied is represented at 2 and is preferably of wire, although in certain embodiments of the invention it may be formed of cast metal or other suitable material. It is provided with a slotted shank 3 which, if the guide be formed of wire, is furnished by bending the wire upon itself in the manner indicated in the several views. The opposite end of the thread guide is formed as an eye 4 of any suitable character. It is important that the thread guide be readily adjustable both longitudinally and laterally, so that it may be brought into exact alinement with the spindle to which the thread or yarn is directed. For that purpose, I have as represented in the several figures, provided a bearing plate or washer 5, the opposite edges

whereof are bent or deflected as represented at 6—6 so as to embrace the slotted shank.

The bent or deflected edges 6 of the washer which embrace the slotted portion of the thread guide are themselves in this embodiment of the invention bent or deflected outwardly so as to lie upon the finger board to any desired extent. In Figs. 1 and 3, I have represented the washer 5 as bent at 6—6 to embrace the slotted portion of the guide 2, the deflected portions 6 being themselves bent outwardly as represented at 7—7 so as to lie flatwise against the finger board. The said portions 7—7 are provided with an interlocking formation such as represented at 8—8 in Fig. 3, but which may be of any suitable character. Such interlocking formation is preferably provided by slightly roughening the washer as indicated, so that upon tightening the securing means the roughened portions of the washer are forced into interlocking engagement with the surface of the finger board. It is apparent that the portions 7—7 of the washer provide an enlarged and effective bearing and binding surface. Any suitable means may be employed to secure the said bearing plate or washer in position. Herein for the purpose, in said Figs. 1 and 2, I have shown a single bolt 9, the head 10 whereof engages one face of the finger board, the said bolt penetrating a hole 10' in the bearing plate or washer and being threaded for the reception of a nut 11, by which the bearing plate or washer may be forced into interlocking engagement with the said finger board.

It is important that the thread or yarn guide be readily adjustable longitudinally as well as laterally. In order that it may readily be adjusted longitudinally, the slotted portion of the guide is not only desirably of greater longitudinal extent than the bearing-plate of washer 5, but the said slotted shank is preferably flat, so that it may readily be slid or moved to and fro longitudinally between the said washer and finger board. Moreover the face of the bearing plate or washer that engages the guide is of such character as to permit the free and ready longitudinal movement of the guide relative to the washer upon loosening the nut 11. In other words, the washer 5 is in this embodiment of the invention not provided with means whereby it is itself attached to or interlocked with the guide. Moreover the in-

terlocking formations upon the washer are preferably of a very considerable degree of fineness so that in penetrating the surface of the finger board the said interlocking formations do not make such large depressions therein as will prevent very slight changes in the lateral position of the washer when it is desired laterally to adjust the thread guide. It will be understood that it is highly desirable to adjust the thread guide laterally as well as longitudinally to a very exact degree so that means should be provided which will not interfere with variations in lateral adjustment. If the interlocking portions of the washer are relatively large or coarse, the resulting depressions in the thread board would be such as to materially interfere with or prevent fine or accurate lateral adjustments of the thread guide. Thus it will be apparent that the thread guide may be very readily adjusted in either direction longitudinally by slightly loosening the bolt 9 and without removing the washer from the guide, and that the guide and washer may be adjusted laterally in either direction with any desired degree of fineness. It is apparent that the interlocking formations upon the edges of the bent plate or washer 5 may be of any suitable character.

From the foregoing description it is apparent that the guide is held fixedly and securely in position because of the interlocking formation upon the washer and that the guide may readily be adjusted longitudinally or laterally to any desired degree. Moreover the construction is exceedingly simple and may readily be applied to thread guides or finger boards now in use.

Having thus described one illustrative embodiment of my invention, I desire it to be understood that although specific terms are employed, they are used in a generic and descriptive sense and not for purposes of limitation, the scope of the invention being set forth in the following claims.

Claims.

1. The combination with a finger board of a yarn or thread spinning or twisting machine of a yarn or thread guide having

an eye at one end and an opposite, elongated, slotted shank, a bearing plate or washer adapted to rest on and having bent lateral edge portions to embrace the said slotted shank, thereby permitting longitudinal adjustment in either direction of the guide relative to said plate or washer, the finger board contacting parts of the said lateral edge portions being outwardly bent or deflected to provide lateral faces to contact flatwise with the surface of the finger board, said faces being provided with interlocking formations to penetrate the surface of the finger board, and securing means between said lateral faces of the bearing plate or washer for forcing the latter toward the finger board, thereby interlocking it therewith but permitting the lateral swinging adjustment of the guide upon loosening said securing means.

2. The combination with a finger board of a yarn or thread spinning or twisting machine of a yarn or thread guide formed of wire having its shank turned back along itself to form an elongated loop and having its opposite end bent to form an eye, a bearing plate or washer adapted to rest on and having bent lateral edge portions to embrace the said elongated looped portion, the finger board contacting parts of the said lateral edge portions of the plate or washer being outwardly bent or deflected to provide lateral faces to contact flatwise with the surface of the finger board, said faces being provided with interlocking formations to penetrate the surface of the finger board, and securing means passing through the said bearing plate or washer between the lateral faces thereof and engaging the finger board, thereby interlocking it therewith but permitting the lateral swinging adjustment of the guide upon loosening said securing means.

In testimony whereof, I have signed my name to this specification, in the presence of two subscribing witnesses.

ISAAC E. PALMER.

Witnesses:

FRED. E. FOWLER,
REUBEN M. BURR.