No. 826,875. PATENTED JULY 24, 1906.

I. E. PALMER.

THREAD GUIDE.

APPLICATION FILED APR. 16, 1906.

Fig. 1.

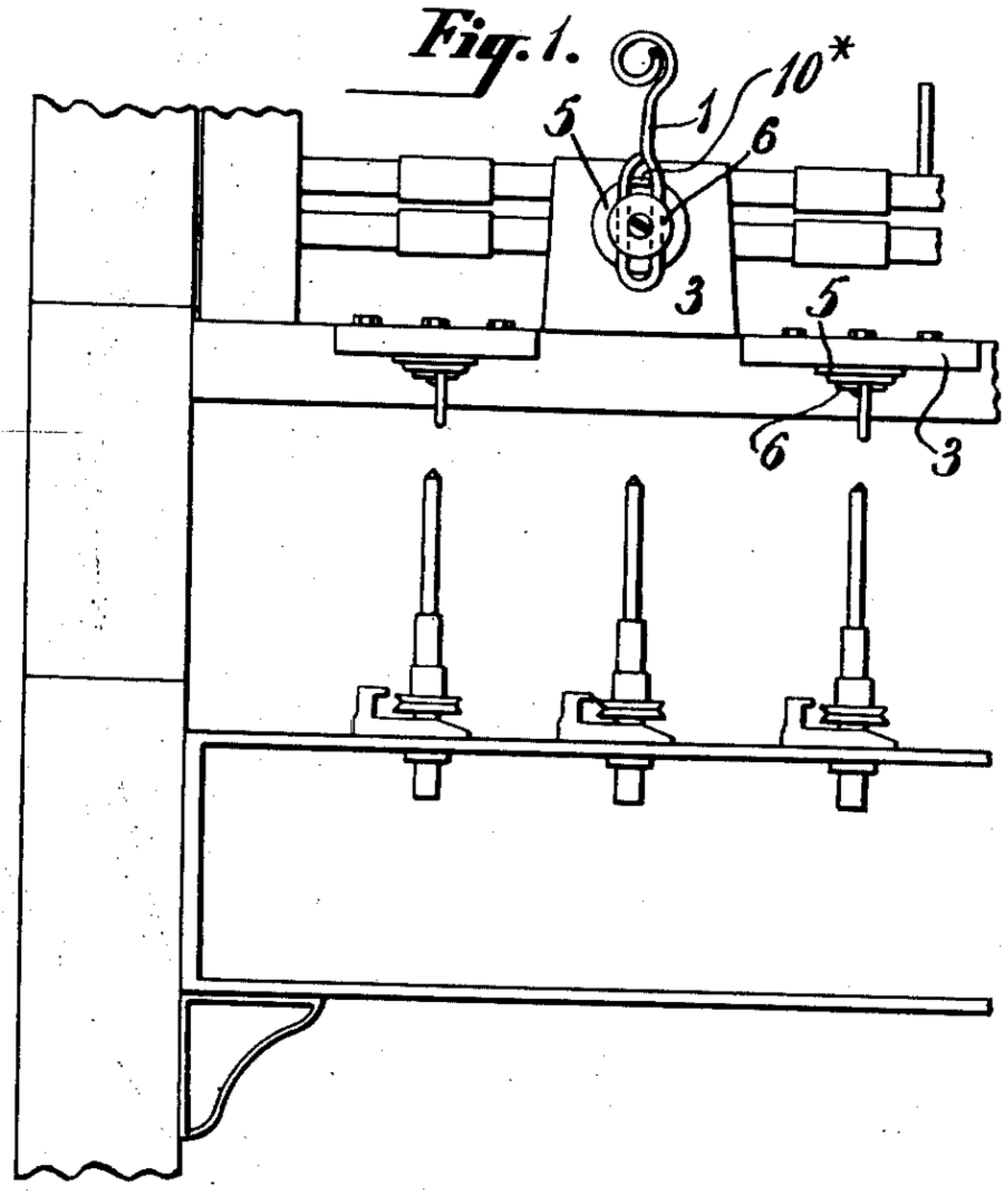


Fig. 6.

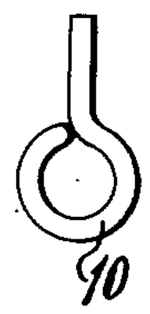


Fig. 7.

Fig. 2.

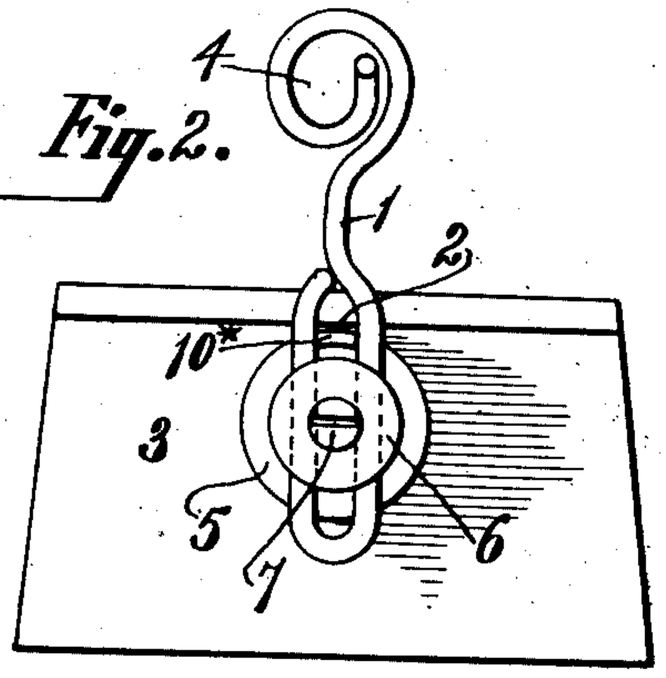


Fig. 3.

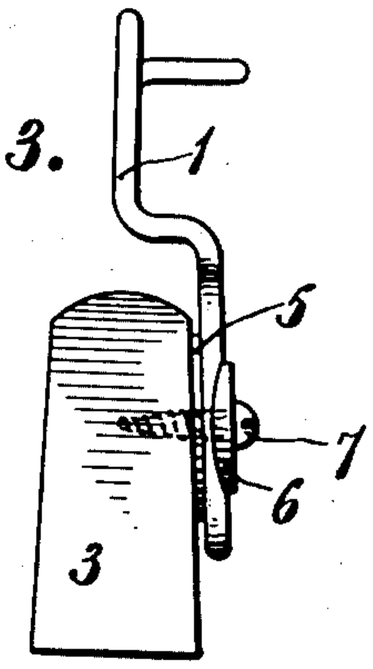


Fig. 4.

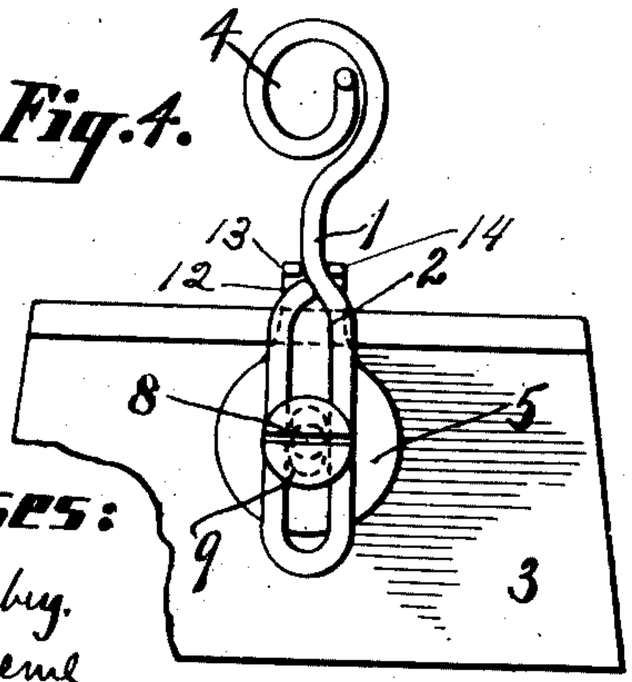
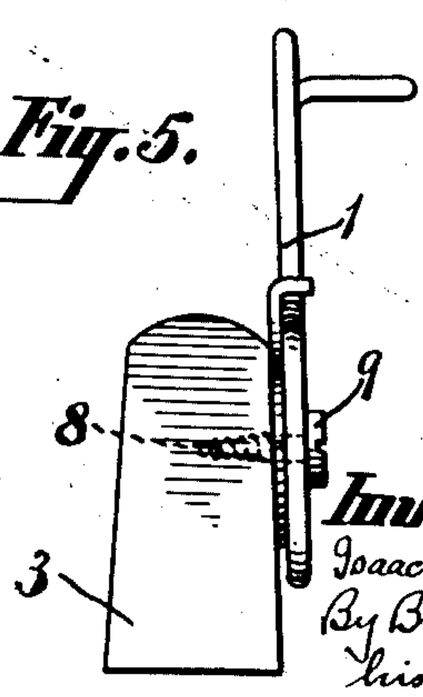


Fig. 5.



Witnesses:

F. G. Wachenhuy.

Henry Thieme

Inventor:

Isaac E. Palmer

By Brown Brownell

his Attorneys

UNITED STATES PATENT OFFICE.

ISAAC E. PALMER, OF MIDDLETOWN, CONNECTICUT.

THREAD-GUIDE.

No. 826,875. Specification of Letters Patent. Patented July 24, 1906.

Application filed April 16, 1906. Serial No. 311,877.

To all whom it may concer n:

Be it known that I, ISAAC E. PALMER, a citizen of the United States, and a resident of Middletown, in the county of Middlesex and State of Connecticut, have invented new and useful Improvements in Thread-Guides, of which the following is a specification.

My invention relates to thread-guides, and more particularly to thread-guides adapted to be used on spinning or twisting machines where it is desirable that the eye of the guide shall be adjusted accurately over the top of the spindle. To adjust these eyes with great accuracy, it is important that they be capable of adjustment both longitudinally and in a swinging direction—viz., having a universal adjustment in a horizontal plane or plane transverse to the axis of the spindle.

In the accompanying drawings, Figure 1 represents a portion of a spinning-machine, showing two of the thread-guides in their horizontal position as in use and one of them turned up into a vertical position for purposes of adjustment or renewal or for gaining access to the spindle, as the case may be. Fig. 2 is an enlarged bottom plan view of the thread-guide, showing its attachment to the finger-board. Fig. 3 is an edge view of the same. Fig. 4 is a bottom plan of a thread-guide, showing a modified form of attachment to the finger-board. Fig. 5 is an edge view of the same, and Figs. 6 and 7 represent modified forms of thread-guide shank.

The thread-guide, Figs. 1 to 5, inclusive, is shown as consisting of a piece of wire having its shank 1 turned back along itself to form an elongated open loop 2 for the reception of the fastening means for securing it to the finger-board 3, the opposite end of the said wire being bent to form the eye 4 of the guide, as usual. The part of the shank which forms the loop 2 rests on a flat washer 5, applied to the under side of the finger-board 3, and is held in the desired adjustment both longitudinally and in a swinging direction either by means of a clamping-plate 6, which is forced down against the loop portion of the shank by means of a screw 7, which passes through the clamping-plate 6 and through the loop 2 and washer 5 into the finger-board 3, or by the head of the screw itself, as shown in Fig. 4.

The face of the washer or bearing-plate 5 is provided with a lug or teat 10*, located either in advance of the holding-screw or behind it. This teat may conveniently be struck up from the body of the plate and by extending between the sides of the loop forms a bearing to hold the loop in position, while the plate or washer 5 will be held securely in place by the frictional contact between it and the board, or the bearing-plate or washer may be provided with a neck 12, with a pair of lugs 13 14 at its end to embrace the shank in proximity to the doubled portion, and the screw-hole in the washer may be elongated, as shown in dotted lines, Fig. 4.

When the clamping-plate 6 is omitted, the head of the screw 7 may be enlarged, forming, in effect, a clamp-screw 8, as shown in Figs. 4 and 5, where the head 9 of the screw is made sufficiently large to overlap the opposite parts of the loop portion of the guide, so that the simple screwing of the screws 8 into the finger-board 3 will serve to clamp the guide in such adjustment as may be desired both in a longitudinal and swinging direction. In fact, in ordinary use this simple screw with its enlarged head, the washer or bearing-plate, and the thread-guide formed of a single piece of wire so disposed as to furnish an elongated loop in its shank are all that is required to produce an efficient and readily-adjustable thread-guide.

Not only does the turning of the end of the shank to form the elongated loop serve to provide for the ready and universal adjustment of the guide in a horizontal plane, but it also spreads the shank laterally to such an extent that the guide is very easily held against any possible rolling or displacement when in use. The shank of the thread-guide may be offset, as shown in Fig. 3, to bring the eye into the central plane of the finger-board, or it may be left straight, as shown in Fig. 5. Instead of making the loop in the shank elongated it may take a circular form, as shown in Figs. 6 and 7, where the loop portion of the shank is denoted by 10 and 11, respectively. In this form the loop is made enough larger than the shank of the screw to admit of the necessary adjustment of the guide longitudinally as well as in a swinging direction. The loop may be a closed one, as shown in Fig. 6, or an open one, as shown in Fig. 7. In the latter case the guide may be removed and placed in position without removing the screw from the finger-board.

The structure is a very simple and inexpensive one and capable of quite general application.

What I claim is—

1. A thread-guide having an opening in its

shank, a bearing-plate or washer provided with a projection on its face extending into the opening in the shank, and means for securing the guide in position in the desired longitudinal and swinging adjustment.

2. A thread-guide support, a thread-guide having its shank turned back along itself to form a loop, a fastening device passing through the loop and leaving the guide free to be adjusted bodily thereon in a longitudinal and swinging direction, and a bearing-plate or washer interposed between the thread-guide and its support and provided with a projection extending between the sides of the loop.

3. A thread-guide comprising a wire having a return-bend in its shank, a washer forming a bearing for the shank and provided with a lug struck up from its face in position to engage the said return-bend, a clamping-plate and a screw for forcing the clamping-plate toward the washer to lock the guide in position.

In testimony that I claim the foregoing as my invention I have signed my name, in presence of two witnesses, this 14th day of April, A. D. 1906.

ISAAC E. PALMER.

Witnesses:
FRANK P. HAYDEN,
ALFRED J. BAIER.