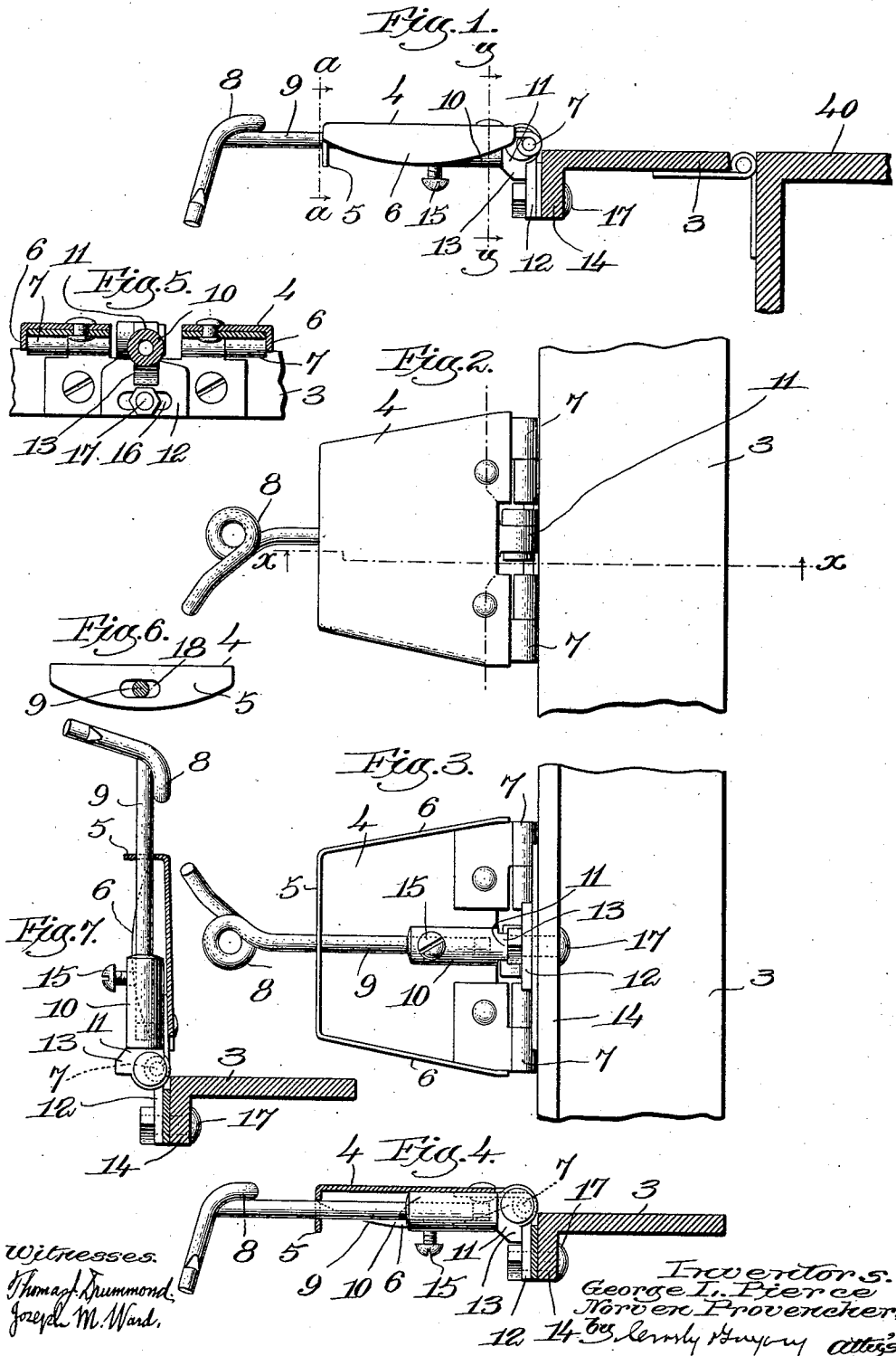


G. L. PIERCE & N. PROVENCHER.
 THREAD GUIDE FOR SPINNING MACHINES.
 APPLICATION FILED OCT. 10, 1910.

1,061,007.

Patented May 6, 1913.



UNITED STATES PATENT OFFICE.

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THREAD-GUIDE FOR SPINNING-MACHINES.

1,061,007.

Specification of Letters Patent.

Patented May 6, 1913.

Application filed October 10, 1910. Serial No. 586,143.

To all whom it may concern:

Be it known that we, GEORGE L. PIERCE and NORVEN PROVENCHER, citizens of the United States, and residents of Manchester, county of Hillsboro, and State of New Hampshire, have invented an Improvement in Thread-Guides for Spinning-Machines, of which the following description, in connection with the accompanying drawing, is a specification, like characters on the drawing representing like parts.

The thread guide construction for spinning machines now commonly used is one in which the thread guide is sustained by a finger head or finger board, as it is termed, which in turn is pivotally connected to the doffing rail.

This invention relates to apparatus of this general character and has for its object to provide a novel thread guide construction in which the thread guide is pivoted directly to the doffing rail instead of being sustained by a finger head, as is frequently done.

The invention also has for its object to provide a novel cover or shield which is associated with the thread guide and which protects the spindle from lint.

The drawings show a selected embodiment of the invention which is sufficient to illustrate the principle thereof, but no attempt has been made to depict the various constructions in which the invention might be embodied.

Figure 1 is a side view of a thread guide and finger head embodying the invention; Fig. 2 is a top plan view; Fig. 3 is an under side view; Fig. 4 is a section on the line $x-x$, Fig. 2; Fig. 5 is a section on the line $y-y$, Fig. 1; Fig. 6 is a section on the line $a-a$, Fig. 1. Fig. 7 is a section similar to that shown in Fig. 4, showing the finger head and thread guide thrown up into vertical position.

3 designates the usual doffing rail which is commonly hinged to the roller beam of a spinning frame and which is the part to which the finger heads are usually hinged.

The thread guide, which is designated generally by 8, is of usual form and is provided with the shank 9. In the present embodiment this thread guide is hinged directly to the doffing rail 3 instead of being sustained by a finger head. This pivoting or hinging of the thread guide to the doffing rail may be accomplished in various ways

without departing from the invention, and in the embodiment of the invention herein selected, the shank 9 of the thread guide is sustained in the hub 10 of a hinge member 11 which is pivoted to another hinge member 12 that is secured to the doffing rail 3. One of the hinge members is preferably provided with a shoulder or lip adapted to engage the other hinge member when the thread guide is in operative position thereby to preserve such position, and in the embodiment shown we form such lip or shoulder on the hinge member 11, as shown at 13, said lip or shoulder being arranged to engage the face of the hinge member 12, as clearly seen in Fig. 4.

The doffing rail 3 is shown as provided with the depending flange 14 and the hinge member 12 is secured to the front face of this flange, although this construction is not essential. The shank 9 of the thread guide is capable of adjustment in the hub 10 and is held in adjusted position by some suitable means as the set screw 15. To secure lateral adjustment of the thread guide, the hinge member 12 is mounted for adjustment longitudinally of the doffing rail, this being herein accomplished by providing said hinge member with the slot 16 through which passes the clamping bolt 17 that clamps the hinge member 12 in place.

In order to protect the spindle and other parts beneath the thread guide from the lint which is always likely to be deposited beneath the drawing rolls, we have provided a shield or cover 4 which is associated with the thread guide and which is pivoted to the doffing rail 3. This shield or cover 4 may conveniently be made of sheet metal bent to provide the body portion having the flanges 6 at the sides and the flange 7 at the front edge. Said cover or shield is hinged to the front edge of the doffing rail by means of hinge members 7 which are shown as situated on each side of the hinge member 12. The front flange 5 of the cover is provided with a slot 18 through which the shank 9 of the thread guide extends. Since the cover or shield is secured to the doffing rail independently of the thread guide, it is possible to adjust the thread guide without disturbing the cover. Moreover, by connecting the thread guide directly to the doffing rail a solid support for the thread guide can be provided which does not depend for its

strength and rigidity upon the construction of a finger head. By extending the shank 9 of the thread guide through the aperture 18, the cover or shield 4 is connected to the thread guide so that when the thread guide is swung upwardly into the position shown in Fig. 7 for doffing the spindle, the cover or shield is carried with the thread guide and thus moved out of the way automatically.

10 Having fully described our invention, what we claim as new and desire to secure by Letters Patent is:—

1. In a device of the class described, the combination with a doffing rail, of a thread 15 guide pivoted directly thereto to swing up and down about an axis extending transversely thereof, a cover or shield associated with the thread guide and pivoted to the doffing rail independently thereof, said 20 shield protecting the spindle from lint, and a connection between said thread guide and cover to cause them to move in unison as they turn about their axes.

2. In a device of the class described, the 25 combination with a doffing rail, of a thread guide pivoted to the doffing rail, a cover or shield also pivoted to the doffing rail independently of the thread guide and provided

with a slotted flange at its front edge through which the thread guide shaft passes where- 30 by said thread guide and cover will move in unison.

3. In a device of the class described, the combination with a doffing rail, of a hinge 35 member secured to the front edge thereof for adjustment longitudinally thereof, a thread guide pivoted to said hinge member, and a cover or shield pivoted to the doffing rail independently of the thread guide.

4. In a device of the class described, the 40 combination with a doffing rail, of a hinge plate secured to the front edge thereof, a thread guide pivotally sustained by said hinge plate, and a stop projection associated 45 with the thread guide and adapted to engage the front face of the plate thereby to limit the downward swinging movement of said thread guide.

In testimony whereof, we have signed our names to this specification in the presence of 50 two subscribing witnesses.

GEORGE L. PIERCE.

NORVEN PROVENCHER.

Witnesses:

WALTER M. LANG,

J. E. JOHNSON.

Copies of this patent may be obtained for five cents each, by addressing the "Commissioner of Patents, Washington, D. C."
