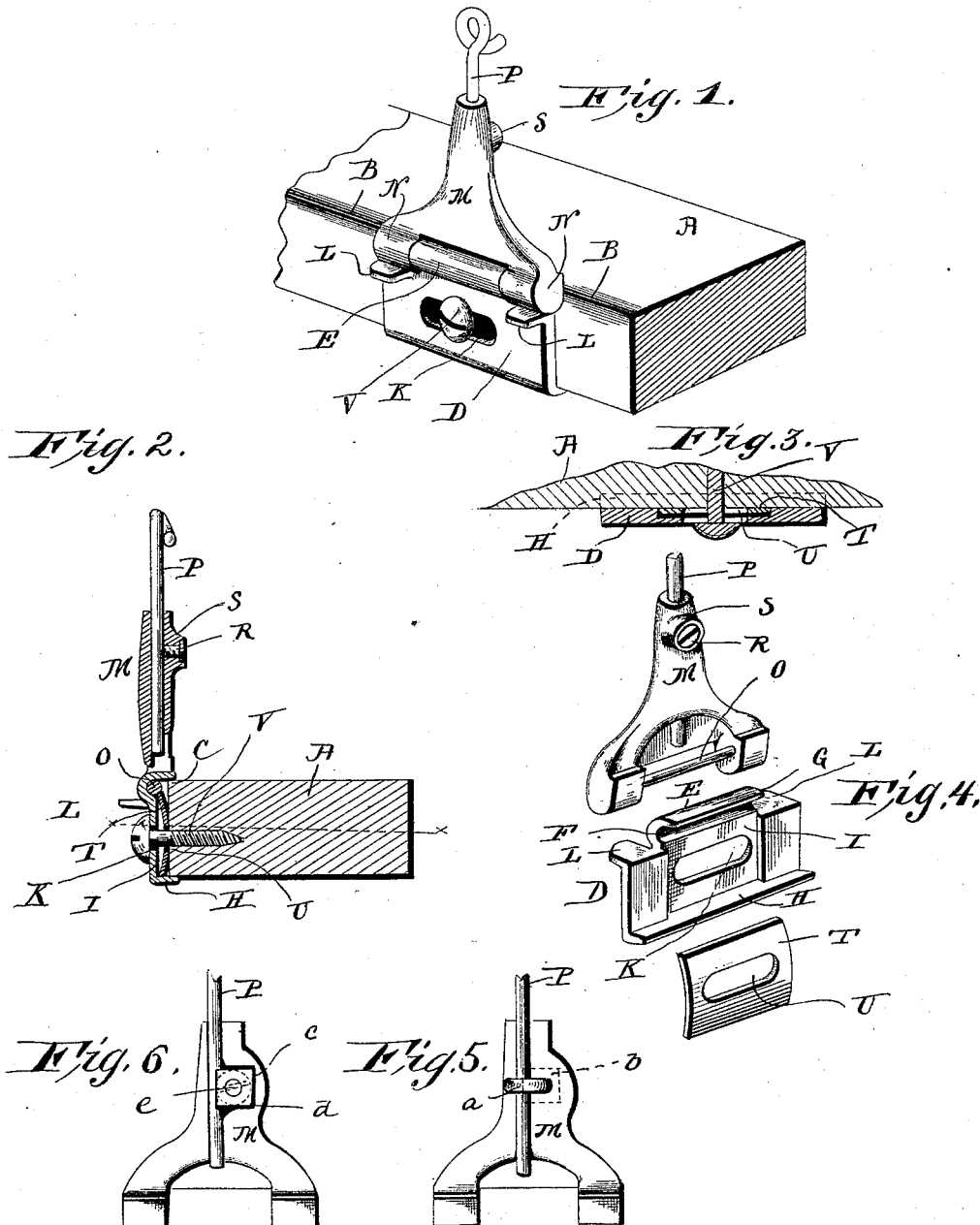


(No Model.)

C. B. BURT & A. D. DAVOL.  
THREAD GUIDE FOR SPINNING MACHINES.

No. 421,237.

Patented Feb. 11, 1890.



Witnesses

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# UNITED STATES PATENT OFFICE.

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## THREAD-GUIDE FOR SPINNING-MACHINES.

SPECIFICATION forming part of Letters Patent No. 421,237, dated February 11, 1890.

Application filed October 3, 1888. Serial No. 287,042. (No model.)

*To all whom it may concern:*

Be it known that we, CHARLES BRADFORD BURT and ALBERT D. DAVOL, citizens of the United States, residing at Taunton, in the county of Bristol and State of Massachusetts, have invented a new and useful Improvement in Thread-Guides for Spinning-Machines, of which the following is a specification.

Our invention relates to an improvement in thread-guides for ring-spinning machines; and it consists in the peculiar construction and combination of devices that will be more fully set forth hereinafter, and particularly pointed out in the claims.

The object of our invention is, first, to provide means whereby the clamping-plate may be longitudinally adjusted on the wire-board; secondly, to provide means whereby the said plate may be rigidly secured at any desired adjustment; thirdly, to provide means whereby the friction between the clamp-plate and the guide-arm may be increased to such an extent as to maintain the guide-arm in position when the latter is raised to permit the doffing of the spindle; fourthly, to provide means whereby the guide may be adjusted in the direction of its length in the guide-arm; and a final object of my invention is to effect an economy in the construction of the parts of the device.

In the accompanying drawings, Figure 1 is a perspective view of the thread-guide embodying our improvements, showing the same attached to the wire-board and with the guide-arm in a vertical position. Fig. 2 is a vertical transverse sectional view of the same. Fig. 3 is a longitudinal sectional view of the same, taken on the line *x x* of Fig. 2. Fig. 4 is a perspective view of the inner sides of the guide-plate and guide-arm, showing the same detached from each other. Figs. 5 and 6 are detail views illustrating modified forms of my invention.

A represents the wire-board.

D represents the clamp-plate, which is provided on its upper edge with a central extension E. The latter has a semicircular longitudinal groove F on its inner side, and the upper edge of the said extension is extended rearward to form a flange G, which is adapted

to bear upon the upper side of the wire-board. At the lower edge of the clamp-plate is formed a rearwardly-extending horizontal flange H, which bears against the under side of the front edge of the wire-board. On the inner side of the clamp-plate, in the central portion thereof, is formed a vertical rectangular recess I.

K represents the longitudinal slot, which is made in the center of the clamp-plate and communicates with the said recess. At the upper corners of the clamp-plate are formed horizontal outwardly-extending lugs L.

M represents the guide-arm, which has its lower end forked, so as to provide a pair of ears N, the undersides of which are rounded. The width of the space between said ears is very slightly greater than the width of the extension E, and the latter is thereby adapted to fit between the said ears, so that the groove F of said extension engages a pintle-rod O, that is secured in the ears N by casting the latter on the ends of the rod. By this arrangement and construction of devices the clamp-plate and the guide-arm are adapted to be hinged together. The projecting portion of the guide-arm is cylindrical in shape and is provided with a cylindrical bore, in which is fitted the stem of a thread-guide P, which is of the usual construction. A clamping-screw R engages the threaded recess in a stud or offset S, that projects from the guide-arm, and is adapted to impinge on the stem of the thread-guide, so as to secure the latter in the guide-arm at any longitudinal adjustment.

T represents a spring-plate, which is rectangular in shape, and is inserted in the recess I and caused to bear between the guide-plate and the wire-board. Said spring-plate is slightly concavo-convex in form, and is of sufficient width to cause its upper edge to bear against the inner side of the pintle-rod. The said spring-plate is further provided with a longitudinal slot U, which registers with the slot K of the clamp-plate, and a set-screw V passes through the said slots of the clamp-plate and spring-plate and enters the wire-board and serves to secure the clamp-plate firmly to the wire-board.

By reason of the slots in the clamp and

spring plates the same may be adjusted longitudinally on the wire-board, as will be readily understood. When the guide-arm is turned downward to its normal horizontal position, it engages the upper sides of the lugs L, and when the said guide-arm is turned to a vertical position its ears bear against the rounded upper edge of the wire-board. By tightening the clamping-screw the clamping-plate may be caused to bear upon the spring-plate with such force as to cause the latter to bear against the pintle-rod with any desired degree of compression, and thereby exert so much friction on the pintle-rod as to maintain the guide-arm M in its vertical position when the same is upturned to permit the doffing of the bobbin.

In Fig. 5 we illustrate a modified form of our invention, in which the rear side of the guide-arm is cut away to expose the bore thereof, and an eyebolt *a* is employed to secure the thread-guide, the eye of the bolt engaging the stem of the thread-guide and the end of the bolt having a clamping-nut *b*.

In Fig. 6 we illustrate another modified form of our invention, in which the guide-arm has a recess *c* on one side communicating with the bore, and in this recess is inserted a clamping-nut *d*, that engages the stem of the thread-guide. A bolt *e* extends through a transverse opening in the guide-arm, and has its threaded extremity engaging the threaded opening in the nut, by which means the latter is clamped on the stem to secure the thread-guide at any desired adjustment.

Having thus described our invention, we claim—

1. The clamp-plate having a slot to receive a fastening-screw, and provided at its lower edge with a rearwardly-extending flange and at its upper edge with forwardly-extending lugs, and a central extension grooved in its rear side and having a rearwardly-extending flange, in combination with the hinged member M, having the longitudinally-adjustable thread-guide, and means for retaining the guide in position, substantially as set forth.

2. The combination of the clamp-plate having the recess on its inner side, the groove F, and the slot communicating with the recess, with the guide-arm having the pintle-rod bearing in the groove, and carrying the thread-guide, the clamp-plate arranged in the recess and bearing on the pintle-rod, and the clamping-screw to secure the clamp-plate to the wire-board, substantially as described.

3. The clamp-plate having the recess in its rear side, and provided with a longitudinal slot and a central upward extension grooved in its rear side and having a rearwardly-extending flange, in combination with the slotted spring-plate arranged in the recess, the fastening-screw, and the hinged member M, having the longitudinally-adjustable thread-guide, and means for retaining the guide in position, substantially as set forth.

In testimony that we claim the foregoing as our own we have hereto affixed our signatures in presence of two witnesses.

CHARLES BRADFORD BURT.

ALBERT D. DAVOL.

Witnesses:

J. C. REYNOLDS,

THOMAS O. FALVEY.