

A. H. MORTON.
 THREAD BOARD FOR SPINNING, TWISTING, AND THE LIKE MACHINES.
 APPLICATION FILED JULY 5, 1912.

1,051,249.

Patented Jan. 21, 1913.

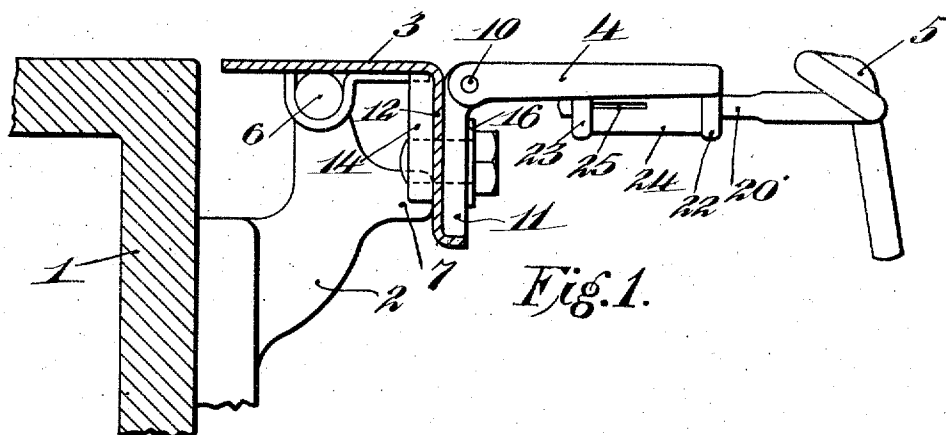


Fig. 1.

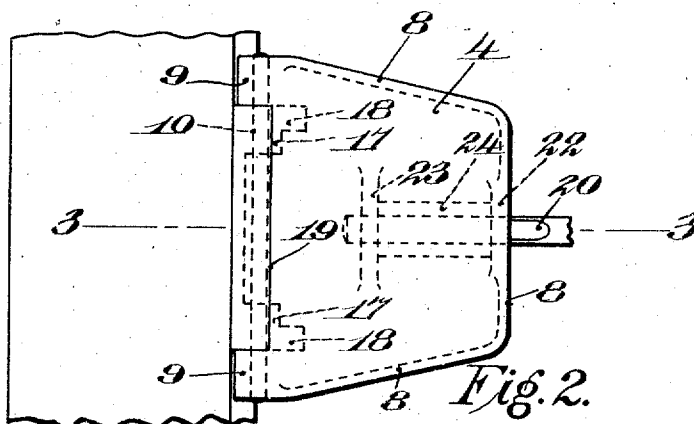


Fig. 2.

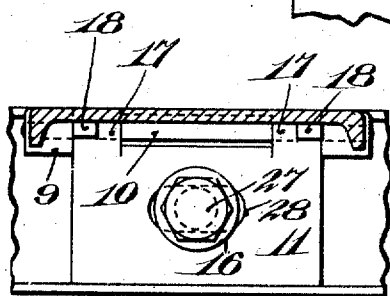


Fig. 5.

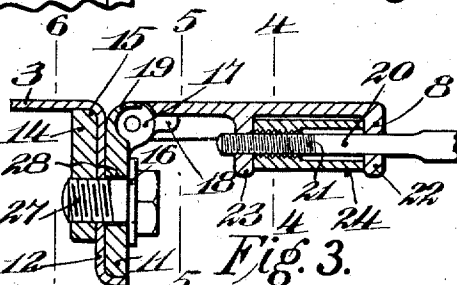


Fig. 3.



Fig. 4.

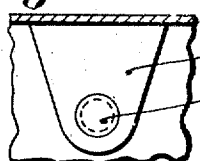


Fig. 6.

WITNESSES:

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ALBERT H. MORTON, OF LOWELL, MASSACHUSETTS.

THREAD-BOARD FOR SPINNING, TWISTING, AND THE LIKE MACHINES.

1,051,249.

Specification of Letters Patent.

Patented Jan. 21, 1913.

Application filed July 5, 1912. Serial No. 707,734.

To all whom it may concern:

Be it known that I, ALBERT H. MORTON, a citizen of the United States, residing at Lowell, in the county of Middlesex and State of Massachusetts, have invented certain new and useful Improvements in Thread-Boards for Spinning, Twisting, and the Like Machines; and I do hereby declare the following to be a full, clear, and exact description of the invention, such as will enable others skilled in the art to which it appertains to make and use the same.

The present invention relates to an improvement in thread-boards for spinning, twisting and the like machines. The object of the invention is to reorganize and improve the construction of thread-boards, and to this end the invention consists of the thread-board hereinafter described and particularly defined in the claims.

In the accompanying drawing illustrating the preferred form of the invention, Figure 1 is a sectional elevation of the thread-board in side elevation; Fig. 2 is a plan view of the same; Fig. 3 is a section on the line 3-3, Fig. 2; Fig. 4 is a section on the line 4-4, Fig. 3; Fig. 5 is a section on the line 5-5, Fig. 3; and Fig. 6 is a section on the line 6-6, Fig. 3, looking in the opposite direction from Fig. 5.

The roller beam 1 has attached to it brackets 2 which support the doffing rail 3 which in turn supports the thread-board 4 having at its outer end the thread guide or finger 5. The doffing rail 3 is made of sheet metal, of about 18 gage, pivotally supported at 6 upon the bracket 2, so that it is adapted to be turned up to lift all of the guides for doffing. The projection 7 on the front of the bracket serves to support the thread-board in operative position. The thread-board 4 consists of a casting having a smooth continuous upper surface stiffened by flanges 8 at its sides and front. At the rear of the thread-board are two ears 9 which receive the hinge pintle 10. The thread-board support 11 is bolted to the depending flange 12 of the doffing rail 3 by a bolt 27 which passes through an elongated hole 28 in the support 11 and through a hole in the depending flange 12 of the doffing rail 3 and screws into a screwthreaded opening in the block 14 located on the rear side of the doffing rail. This block 14 is triangular in general outline, having one straight side engaging the under side of the horizontal portion of the

doffing rail for the purpose of holding the block from turning when the bolt is screwed into it. In order to secure the alinement of the hole in the block with the bolt, the upper inside edge of the block 14 is chamfered, as shown at 15, so as to permit the block to closely engage both the rear surface of the depending flange 12 and the lower surface of the doffing rail 3. A washer 16 is located under the head of the bolt. It will be observed that the support 11, by loosening the bolt, may be adjusted to the right or left within the limits of the elongated opening 28 so as to bring the guide directly over the spindle, and that it may then be clamped in adjusted position and securely held there by screwing the bolt into the block 14 which rigidly clamps the support to the doffing rail. The forwardly projecting lip on the lower edge of the flange 12 of the doffing rail accurately positions the thread-board support 11 with relation thereto. The upper portion of the support 11 is provided with ears 17 at its ends which have holes to receive the pintle 10. From the front of each of the ears 17 there projects forwardly a lug 18 which is adapted to engage the under surface of the thread-board casting so as thereby to support the fingerhead in horizontal position. The surfaces of these lugs 18 are comparatively small and may be easily machined or filed, if necessary, to engage the under surface of the thread-board casting so as to hold the latter in correct position. By reference to Fig. 2, it will be seen that the ears 9 project rearwardly beyond the body of the thread-board casting. The space left between the ears 9 is closed by providing the upper edge of the support 11 with a forwardly projecting lip 19 which closes the opening between the ears on the rear of the thread-board and prevents dirt from entering the opening and thereby obtaining access to the pintle. It also makes the upper surface of the part smooth and unobstructed by an opening which would be liable to catch the brush or other thing used to clean the top of the frame. The thread guide 5 consists of a bent wire, of ordinary form at its forward end, provided with a flattened shank 20 screwthreaded at 21 and projecting through correspondingly shaped holes in the central portion 22 of the depending flange 8 on the front of the thread-board casting and through a second hole in the lug 23 near the center of the underside of

the thread-board casting. A nut 24 embraces the threaded shank 20 of the thread guide and affords provision for adjusting it out and in. This nut is slotted at 25 upon opposite sides. This slot extends through the threaded portion of the nut 24, which is made of such a size as to resiliently and tightly fit the shank 20 of the thread guide. By inserting a flat instrument in one of the slots 25 the nut may be turned in the one direction or the other to adjust the thread guide in or out. The fact that the nut is slotted and resiliently engages the shank of the thread guide, secures it from accidental displacement, and the further fact that the nut requires a special tool or contrivance for use in turning it, insures the protection of the nut from the meddling operative, so that, once adjusted, the thread guide is secure from being interfered with by the operative.

This invention has a number of features which commend it to the user and manufacturer. The doffing rail is strong and light, and easily manufactured. The cast metal thread-board is strong and durable. It is adequately supported in operative position. It presents no openings to collect dirt or catch the cleaning brush. The thread-board may be adjusted longitudinally of the doffing rail with facility, and securely fixed in adjusted position. The lower lip on the front edge of the doffing rail efficiently operates to hold the thread-board horizontal, and the thread guide is not only securely fixed in adjusted position, but is capable of being easily adjusted to different positions, and it is, moreover, free from meddling adjustment by the operative.

The invention is not limited to the illustrated embodiment as it may be embodied in other forms within the scope of the following claims.

I claim—

1. A spinning frame having, in combination, a doffing rail consisting of a sheet metal rail having a horizontal portion and a vertical flange with a horizontal forwardly projected lip at its lower edge, the rail being pivotally supported upon the roller beam, and thread-boards having provision to engage the lip of the doffing rail so as thereby to be adjusted to and supported in correct position with relation thereto, substantially as described.

2. A spinning frame having, in combination, a sheet metal doffing rail having a horizontal portion and a vertical flange at its front edge, a thread-board, a thread-board support, and a bolt for securing the thread-board support to the vertical flange of the doffing rail, said doffing rail being provided with a hole to receive the bolt, a threaded block on the rear of the vertical flange of the doffing rail to receive the threaded end of the bolt, said block having a portion en-

gaging the horizontal portion of the doffing rail to hold it from being turned when the bolt is screwed into or out of it, substantially as described.

3. A spinning frame having, in combination, a thread-board, a thread guide having a shank, said thread-board having two depending lugs perforated to receive the thread guide and having openings therein for receiving the shank of the thread guide, said thread guide being screwthreaded and embraced by a nut located between the lugs on the lower side of the thread-board, substantially as described.

4. A spinning frame having, in combination, a cast metal thread-board and a separate thread guide supported from the thread-board, said thread-board being provided with an opening and the thread guide being provided with a shank received in said opening, said opening and shank being shaped to hold the shank from turning in the opening, and means for securing the shank in longitudinally adjusted position in the thread-board, substantially as described.

5. A spinning frame having, in combination, a cast metal thread-board having a thread guide supported therefrom, a thread-board support and a part to which the thread-board support is secured, said thread-board and thread-board support having co-operating ears and a pintle to hinge the thread-board to the support, one of said members being provided with a lip to maintain closed the space between the ears, substantially as described.

6. A spinning frame having, in combination, a sheet metal doffing rail, means for supporting it on the frame of the machine, a cast metal thread-board, a thread-board support, means for adjustably securing the thread-board support to the doffing rail, and pivotal connections between the thread-board and thread-board support, substantially as described.

7. A spinning frame having, in combination, a sheet metal doffing rail and means for supporting it on the frame of the machine, a cast metal thread-board, means for pivotally supporting it upon the doffing rail, and a wire thread guide adjustably secured to the thread-board, substantially as described.

8. A spinning frame having, in combination, a thread-board having an opening therein, a thread guide having a shank received in the opening of the thread-board, a single nut for adjusting the thread guide with relation to the thread-board, said nut being provided with radial openings to receive an instrument for turning the nut on the shank of the thread guide, substantially as described.

9. A spinning frame having, in combination, a thread-board having an opening

therein, a thread guide having a threaded shank received in the opening in the thread-board and a single elastic nut resiliently engaging the threaded shank of the guide for
3 holding the guide in adjusted position in the thread-board, substantially as described.

10. A spinning frame having, in combination, a sheet metal doffing rail, means for

supporting it on the frame of the machine, and a cast metal thread-board pivotally supported on the doffing rail and provided with a thread guide, substantially as described.

ALBERT H. MORTON.

Witnesses:

GEORGE E. STEBBINS,
ANNIE C. RICHARDSON,

Correction in Letters Patent No. 1,051,249.

It is hereby certified that in Letters Patent No. 1,051,249, granted January 21, 1913, upon the application of Albert H. Morton, of Lowell, Massachusetts, for an improvement in "Thread-Boards for Spinning, Twisting, and the Like Machines," an error appears in the printed specification requiring correction as follows: Page 1, line 85, for the word "fingerhead" read *thread-board*; and that the said Letters Patent should be read with this correction therein that the same may conform to the record of the case in the Patent Office.

Signed and sealed this 11th day of February, A. D., 1913.

[SEAL.]

C. C. BILLINGS,
Acting Commissioner of Patents.

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supporting it on the frame of the machine, and a cast metal thread-board pivotally supported on the doffing rail and provided with a thread guide, substantially as described.

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