(No Model.)

W. E. SHARPLES.

TRAVELER CLEANING DEVICE FOR RING SPINNING FRAMES.

No. 418,475. Patented Dec. 31, 1889.

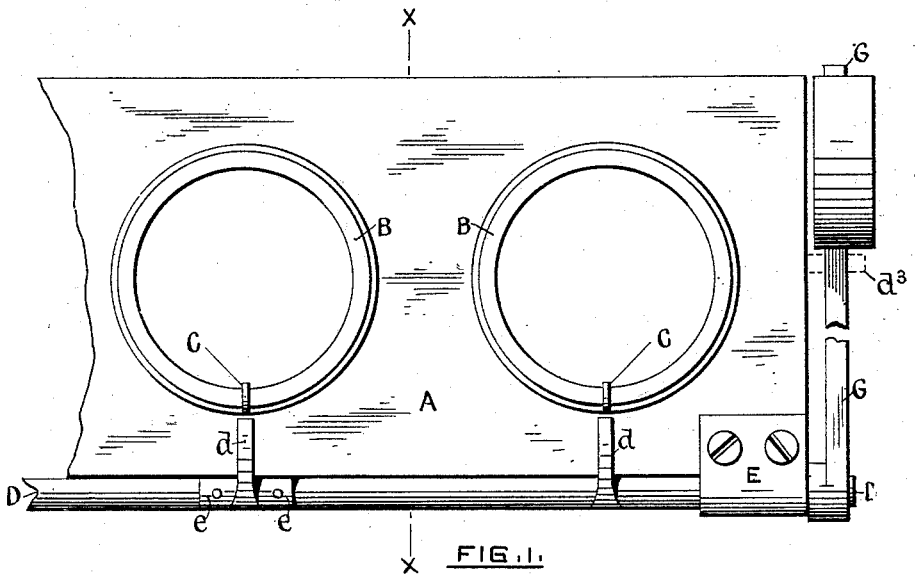

FIG. 1.

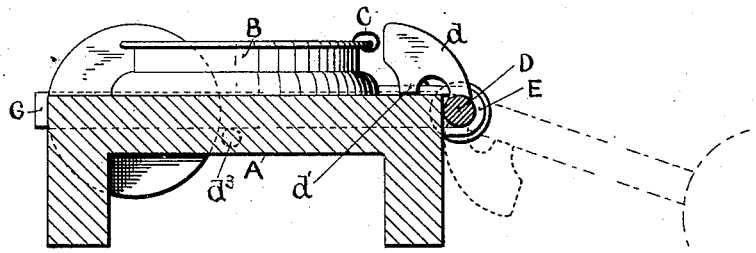

FIG. 2.

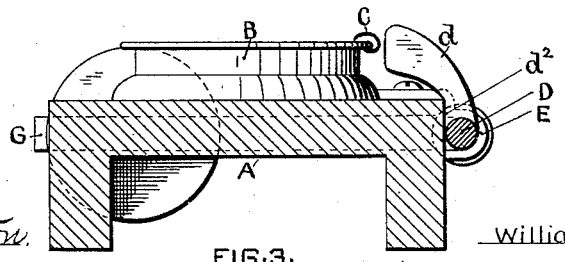

FIG. 3.

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TRAVELER-CLEANING DEVICE FOR RING-SPINNING FRAMES.

SPECIFICATION forming part of Letters Patent No. 418,475, dated December 31, 1889.

Application filed January 24, 1889. Serial No. 297,403. (No model.)

To all whom it may concern:

Be it known that I, WILLIAM E. SHARPLES, of Fall River, county of Bristol, and State of Massachusetts, have invented a new and useful Improvement in Traveler-Clearing Devices for Ring-Spinning Frames, &c.; and I do hereby declare the following specification, taken in connection with the accompanying drawings, forming a part of the same, to be a description thereof.

This invention relates to a device for clearing or cleaning the travelers of a ring-spinning frame or twisting-frame by removing the lint, &c., from them while they are in motion; and the invention consists in certain features of construction and arrangement hereinafter described and claimed, whereby the clearers may be brought into and be held in proper position to clean the travelers, and may also be turned backward or be withdrawn to enable the top of the rail to be easily and conveniently cleaned, the said features of construction and arrangement being such that the rail can be more speedily, easily, and thoroughly cleaned than heretofore.

In the drawings, Figure 1 represents a top view of a portion of the ring-rail of a spinning-frame with my improved traveler-clearer attached thereto. Fig. 2 shows a transverse section of the same on line *x x* of Fig. 1. Fig. 3 represents a similar section showing clearer-fingers of a slightly different form.

A represents the ring-rail, B the rings, and C the travelers, of an ordinary spinning-frame. The device for clearing the travelers consists of a series of fingers *d*, one for each traveler, which fingers are secured to a rod or rock-shaft D in any preferred manner, as by soldering, brazing, or riveting. If riveted, the fingers may be furnished with lateral rings *e*, and the rivets pass through said rings into the rod, as shown in Fig. 1. The rock-shaft D is located on the rear face or side of the ring-rail, so as to be out of the way of harm, and is mounted in journals or bearings of any preferred kind, as brackets or straps E, one of which is shown in the drawings attached to the rail A, so that the shaft can be rocked or rotated axially to bring the clearer-fingers into proper position to clean the travelers, as shown by full lines in the several figures, and also to remove the fingers from proximity to the rings and the top of the ring-rail, as shown by dotted lines in Fig. 2, in order that the fingers shall not interfere with the top of the rail being easily and conveniently cleaned of lint, &c., which gradually collect thereon, and is necessary to be removed from time to time.

In accordance with my improvement and as shown in the drawings, the rock-shaft D is located substantially at the top of the ring-rail on its rear face. The object of locating the rock-shaft substantially at the top of the rail is to enable the rear face of the rail to be thoroughly and conveniently cleaned while the traveler-clearers are in a forward position performing their office, the hand of the operative being passed under the ring-rail, so that the threads running to the bobbins cannot possibly be injured or broken. The object, also, of locating the shaft substantially at the top of the rail is to enable that portion of the shaft which was not cleaned when the rear face of the rail was operated upon to be cleaned when the traveler-clearers have been withdrawn (by a rocking of the shaft) and when the top of the rail is being cleaned, such a position of the shaft enabling it to be easily reached by the operative at such time. The rock-shaft is also preferably located in contact with the face of the rail, or in as close proximity thereto as possible, in order to prevent the lint, &c., from collecting between the shaft and rail-face, which lint would be liable to get wound around the shaft, and be very difficult to dislodge after a short time were the location of the shaft removed from the rail-face. The shaft D may be of any preferred and proper length, as the full length of a short rail or half the length of a long one.

In order that the shaft may be conveniently rocked or turned, it is preferably supplied at one or both ends with a lever or handle G, of any preferred form. Preferably the fingers *d* are furnished with downward projections *d'*, as shown in Fig. 2, which, by contact with the top of the rail, form a stop to limit the inward movement of the fingers and deter-

mine their normal position, and the inner end of the lever G is weighted or made heavier by preference, the better to maintain the fingers in the desired relation to the rings. As shown in Fig. 3, however, the downward projections d' may be dispensed with and a stop for the fingers be secured by causing the lower portion of their inner faces to come in contact with the face of the rail A, as at d^2; or a proper stop may be secured by dispensing with either of said arrangements and furnishing the rail with a pin or arm d^3, (shown by dotted lines in Figs. 1 and 2,) upon which the lever G may rest when the fingers d are in normal position. As the travelers revolve upon the rings, any lint collected on the travelers will be removed by the clearer-fingers when the travelers pass the fingers, as will be readily understood.

The rear face of the rail A and a portion of the shaft D are cleaned when the fingers d are in a forward position, the hand of the operative being passed under the rail.

When the top of the ring-rail is to be cleared of the lint, &c., which settle upon it, the lever G is swung forward into the position shown by dotted lines in Fig. 2, which rocks or partially rotates the shaft D, and thereby swings the fingers outwardly and downwardly to the position shown by dotted lines in Fig. 2, thereby leaving the top of the rail unobstructed, so that the cleaning thereof, as well as the cleaning of the remaining portion of the shaft D, can be easily and conveniently effected. By swinging the lever G back to its original position the fingers d will be returned to normal position in readiness to perform their office.

In order that there may be as little obstruction as possible to the cleaning of the rear face of the rail, and that the shaft D may be the more easily removed, the brackets E are secured to the top surface of the rail, and in order that the shaft may be brought as close to the rail as possible said brackets are made hook shaped, or the journal portion thereof left open on the side toward the rail, as shown in Fig. 2.

What I claim, and desire to secure by Letters Patent, is—

1. The combination, with the ring-rail and its rings, of the rock-shaft D, having clearer-fingers d and located substantially at the top of the rear face of the ring-rail, and brackets secured to the top surface of the rail for supporting the rock-shaft, substantially as and for the purposes specified.

2. The combination, with the ring-rail and its rings, of the rock-shaft D, having clearer-fingers d and located substantially at the top of and in contact with the rear face of the ring-rail, and brackets for supporting said shaft, secured to the rail and having their journal portions open toward the rail, substantially as and for the purposes specified.

3. The combination, with the ring-rail and its rings, of the rock-shaft D, having clearer-fingers d and located substantially at the top of and in contact with the rear face of the ring-rail, brackets for supporting said shaft, which are secured to the rail and have their journal portions open toward the rail, and a stop, as described, for holding the fingers in normal position, substantially as set forth.

4. The combination, with the ring-rail and its rings, of the rock-shaft D, having clearer-fingers d and located substantially at the top of and in contact with the rear face of the rail, and the brackets E, in which the shaft is mounted, the said brackets being secured to the top of the rail and having their journal portions open toward the rail, substantially as set forth.

5. The combination, with the ring-rail and its rings, of the rock-shaft D, having clearer-fingers d and located substantially at the top of and in contact with the rear face of the rail, a stop, as described, for holding said fingers in normal position, a lever for rotating the shaft, and brackets E, secured to the top of the rail and having their journal portions open toward the rail, substantially as set forth.

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