

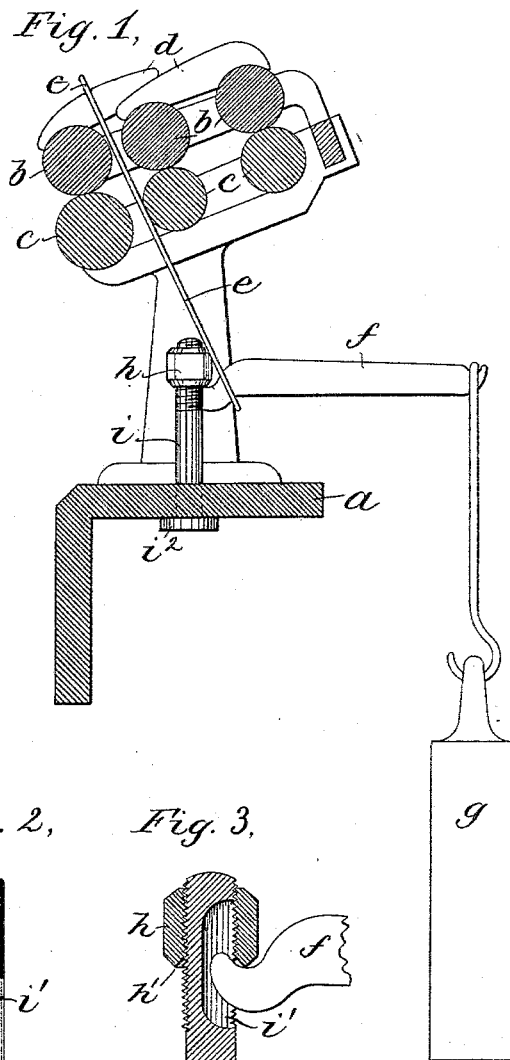
(No Model.)

W. DRISCOLL & J. F. BOYLEN.

FULCRUM FOR THE WEIGHT LEVERS FOR THE ROLLS OF SPINNING FRAMES.

No. 381,681.

Patented Apr. 24, 1888.



Witnesses,  
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# UNITED STATES PATENT OFFICE.

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FULCRUM FOR THE WEIGHT-LEVERS FOR THE ROLLS OF SPINNING-FRAMES.

SPECIFICATION forming part of Letters Patent No. 381,681, dated April 24, 1888.

Application filed January 7, 1888. Serial No. 260,081. (No model.)

*To all whom it may concern:*

Be it known that we, WILLIAM DRISCOLL and JAMES FRANCIS BOYLEN, of Taunton, county of Bristol, and State of Massachusetts, have invented an Improved Fulcrum for the Weighted Levers for the Rolls of Spinning-Machines, of which the following description, in connection with the accompanying drawings, is a specification, like letters on the drawings representing like parts.

Our invention relates to the fulcrum for the weighted lever employed in spinning-machines to produce the required pressure on the drawing-rolls, the said pressure being transmitted from the lever by a stirrup to the saddles, that rest on the top rolls in the usual manner.

The object of the invention is to provide a fulcrum-piece of inexpensive construction that is simple and durable and easily adjustable for the purpose of bringing the lever into the proper position without disengaging the lever from the fulcrum or stirrup. The fulcrum-pieces have heretofore consisted of a screw or bolt the lower end of which turns into a threaded opening in the top board of the spinning-frame, and in some cases the said bolt has been made in two parts, the upper part, that engages the lever, being swiveled to the lower part, that screws into the top board, so that the lower part can be turned in or out in the socket in the top board for the purpose of adjusting the position of the upper part without disengaging the latter from the lever.

In the present invention the fulcrum is connected by a screw-thread with a supporting-piece which is engaged with the top board, but not adjustable therein and not necessarily movable with relation to the top board, and the adjustment of the fulcrum is effected by the longitudinal movement of the fulcrum-piece with relation to the said threaded piece that is engaged with the top board, which movement is effected by rotating one of the said parts with relation to the other. In other words, in the present device the fulcrum-piece is adjustable on the support connected with the top board, which support is not adjustable with relation to the top board itself, while in devices heretofore used the entire fulcrum or

support of the lever has been adjustable in the top board itself.

The invention is shown embodied in a fulcrum or support for the lever, consisting of a nut turning on the threaded end of a rod or bolt which passes through an opening in the top board, and the end of the said bolt is shown as provided with a recess that receives the end of the lever, and the under portion of the nut or fulcrum proper is provided with an annular V-shaped ridge which engages a notch in the lever and constitutes the bearing therefor.

Figure 1 is a vertical section of a portion of a spinning-frame provided with this invention, the weighted lever and its fulcrum being shown in elevation; Fig. 2, a rear elevation of the part that supports the adjustable fulcrum; Fig. 3, a side elevation, partly in longitudinal section, of the adjustable fulcrum and its support; and Fig. 4, a front elevation of a fulcrum-support of a modified construction.

The top board, *a*, top and bottom rolls, *b c*, saddles *d*, stirrup *e*, lever *f*, and weight *g*, the pressure of which is transmitted through the lever *f*, stirrup *e*, and saddles *d* to the top rolls, may all be of usual construction.

The short arm of the lever *f* rests upon a fulcrum, *h*, connected with a support, *i*, engaged with the top board, *a*, but having no longitudinal adjustment with relation thereto, as is the case with the fulcrum-supports heretofore commonly used in spinning-machines.

The position of the lever *f* tends to change as the bearing-surfaces of the rolls and saddles wear, and in order to compensate for such wear and to restore the lever *f* to the proper position the entire fulcrum-support has heretofore been adjustable in the top board, *a*, the said support having been made as a screw turning in a threaded opening in the top board, *a*.

In the present invention the adjustment of the lever *f* is provided for by the movement of the fulcrum *h* on its support *i*, the said fulcrum and support being connected by a screw-thread, so that the rotation of one with relation to the other produces a longitudinal movement of the fulcrum with relation to its support, and thereby adjusts the height of said fulcrum above the top board, *a*.

In the construction illustrated in Figs. 1 to 3 the support *i* is a bolt passing through a smooth or unthreaded opening in the top board, *a*, and having its upper portion threaded, as shown at *i'*, and engaging corresponding threads in the fulcrum *h*, as best shown in Fig. 3. The said fulcrum is made as a nut, having an annular V-shaped projection, *h'*, on its under side, which engages the short arm of the lever, as shown in Fig. 3.

The support *i* is provided with a recess that receives the short arm of the lever. The said recess may be made by milling into one side of the shank of the bolt, as shown in Figs. 2 and 3, or by slotting or cutting wholly through the bolt, as shown in Fig. 4.

The adjustment of the fulcrum and consequent position of the lever *f* may be effected with any degree of nicety by rotating the fulcrum with relation to its support, as will be readily understood. By having the adjustment effected by the movement of one part of the lever support with relation to the other part, as herein shown, the said parts may be carefully constructed and hardened, and thus rendered very durable, and the entire lever support may be easily replaced, if required, while if the adjustment is effected by the turning of a screw in a threaded passage in the top board and the thread should become worn or be stripped the defect can be remedied only by tapping a new thread in the top board and using a bolt or screw of larger size.

The support *i* may be provided with a head, *i''*, engaging the under side of the top board, as shown in Fig. 1, or it may be connected with the top board in any other suitable manner—as, for example, by screwing it into a threaded socket in the top board, in which case the

lower end of the bolt will have no head, but will be threaded, as shown at *i''*, Fig. 4. This thread, however, in this construction is not depended upon for adjustment, and when the bolt is once screwed in place in the top board it will remain, so that there is no wear on the threads, as is the case when the lever support is adjusted by the screw-thread in the top board.

The invention is not limited to the specific construction shown, as it can be modified without departing from the principle of operation set forth; the essential feature of the invention being that the fulcrum is adjustable on its support instead of the said support being adjustable in the top board.

We claim—

1. The combination of the weighted lever for the rolls of a spinning-frame with a support connected with the top board and a fulcrum longitudinally adjustable with relation to said support, substantially as and for the purpose described.

2. The combination of a supporting-bolt threaded at one end and provided with a recess in said threaded portion with a nut cooperating with said threaded portion and provided with an annular V-shaped projection at one end, substantially as and for the purpose described.

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

WILLIAM DRISCOLL.  
JAMES FRANCIS BOYLEN.

Witnesses:

EVERETT THOMAS WETHERELL,  
JOHN CHARLES CLARKE.