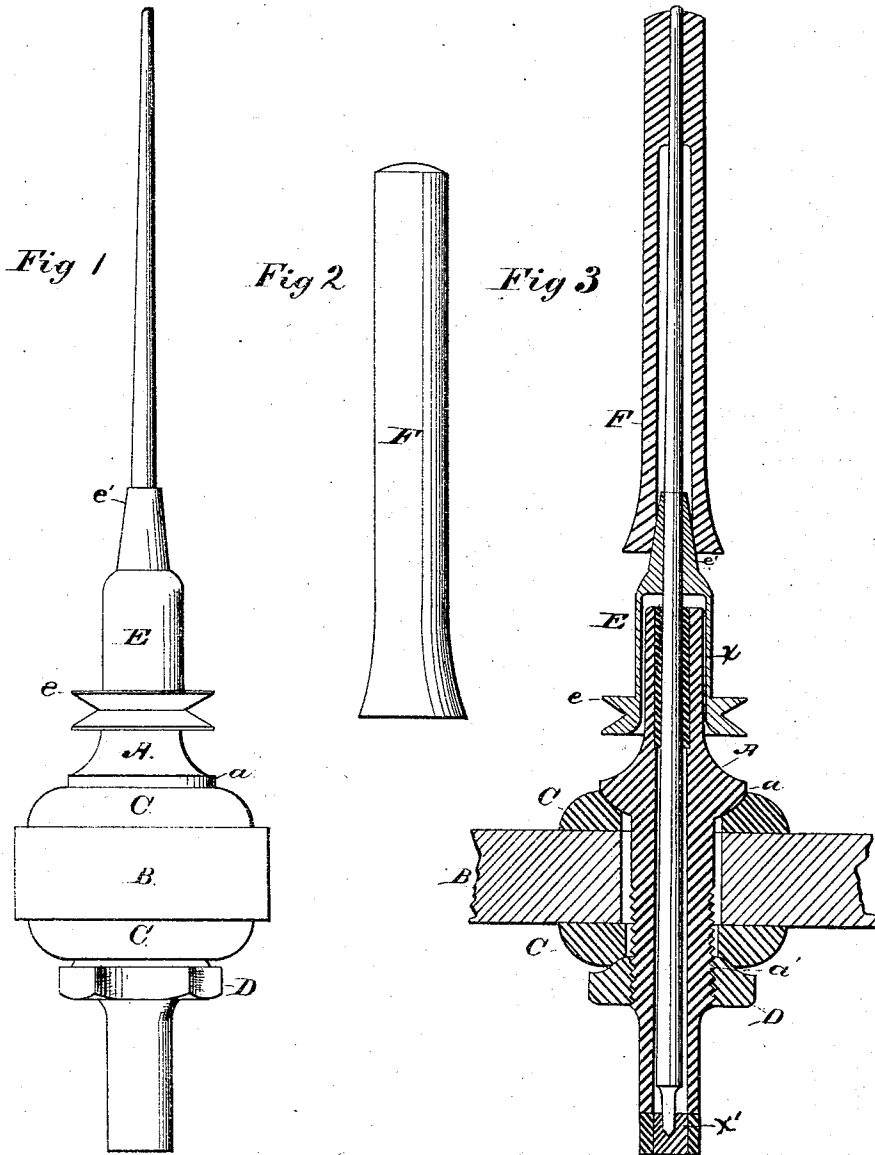


W. MASON.

Devices for Attaching Spindles to their Rails,

No. 155,382.

Patented Sept. 29, 1874.



Witnesses
Harry C. Clark
R. H. Sizer.

Inventor.
William Mason
by H. W. Beadle & Co.
Attys

UNITED STATES PATENT OFFICE.

WILLIAM MASON, OF TAUNTON, MASSACHUSETTS.

IMPROVEMENT IN DEVICES FOR ATTACHING SPINDLES TO THEIR RAILS.

Specification forming part of Letters Patent No. **155,382**, dated September 29, 1874; application filed February 5, 1874.

To all whom it may concern:

Be it known that I, WILLIAM MASON, of Taunton, in the county of Bristol and State of Massachusetts, have invented new and useful Improvements in Spindles for Spinning-Machines; and I do hereby declare that the following is a full and exact description of the same, reference being had to the accompanying drawings, and to the letters of reference marked thereon.

This invention is designed to make easy and certain the securing of spindles to the spindle-rails in perpendicular planes, and also to enable them to be readily adjusted upon the spindle-rail, so as to be accurately in line with each other, and in the center of the rings, when used in ring-frames; and it consists mainly, first, in providing the spindle-holder with certain disks or washers, and a clamping-nut with correspondingly-formed convex and concave centering-surfaces, by means of which the spindle-holder is clamped to the rail, and accurately held in a perpendicular plane: and, second, in the combination of the spindle-rail, having an enlarged opening for the spindle-holder, with the clamping devices above referred to, all of which will be fully described hereinafter.

In the drawings, Figure 1 represents a side elevation of my improved spindle with the bobbin removed. Fig. 2 represents a side elevation of the bobbin; and Fig. 3, an elevation of the spindle, with the bobbin, spindle-motor, spindle-holder, and the clamping devices in section.

To enable others skilled in the art to make and use my invention, I will now proceed to describe fully its construction and manner of operation.

A represents the spindle-holder, having the central socket for the reception of the spindle, as shown. It is provided above with the projection *a*, having the convex centering-surface, and below with the screw-threads *a'*, as shown. B represents the spindle-rail, provided with proper openings at suitable and regular intervals for the spindle-holders, the circumference of the openings being somewhat larger than the circumference of the holders, as shown. C C represent disks or washers, provided upon one side with a flat face,

adapted to bear against the rail B, and upon the other with a concave recess corresponding in form with the convex projection *a* of the holder A and the corresponding face of the nut D, which latter is suitably threaded to adapt it to turn upon the threaded portion of the holder, as shown. E represents the spindle-motor, consisting of a cylinder provided with a pulley, *e*, and a conical top, *e'*, adapted to hold the bobbin F, as shown.

The manner of attaching the holder to the rail will be readily understood. The parts are placed in their proper positions, as indicated by the drawing, and secured in place by the clamping-nut.

From the foregoing description it will be readily understood that the devices described are adapted to clamp the holder firmly to the rail, and secure it in a perpendicular plane, the convex surfaces upon the spindle and lower nut, and the concave surfaces upon the disks, adjusting themselves together by the movement of the nut, so that the spindle-holder is accurately centered above and below the rail, the center line, of course, coinciding with the perpendicular plane.

It will be readily understood that, as the holder is smaller in area than the opening in the rail, it may be moved to a limited extent in any direction from the center to bring it in line with its fellows, and thus avoid the trouble occasioned when the rail is improperly drilled.

The devices described for attaching the spindle-holder to the rail enable it and the spindle which it holds to be placed easily and certainly in a perpendicular position, and in the center of the rings above, when used upon ring-frames, without the necessity of having the parts previously adjusted by the manufacturer.

The great difficulty of drilling the spindle-rails and ring-rails so as to have the holes in them correspond with each other makes these devices peculiarly important.

By means of the conical top of the spindle-motor and the upper bushing in the bobbin, the latter is held firmly in position.

Having thus fully described my invention, what I claim as new, and desire to secure by Letters Patent, is—

1. The combination of the holder A, the disks C C, and the clamping-nut D, provided with centering-surfaces, substantially as described.

2. The combination of the clamping devices described with the rail having enlarged openings, as and for the purpose set forth.

This specification signed and witnessed this 28th day of January, 1874.

WM. MASON.

Witnesses:

BENJ. DEAN,

AUGUSTUS ANDREWS.