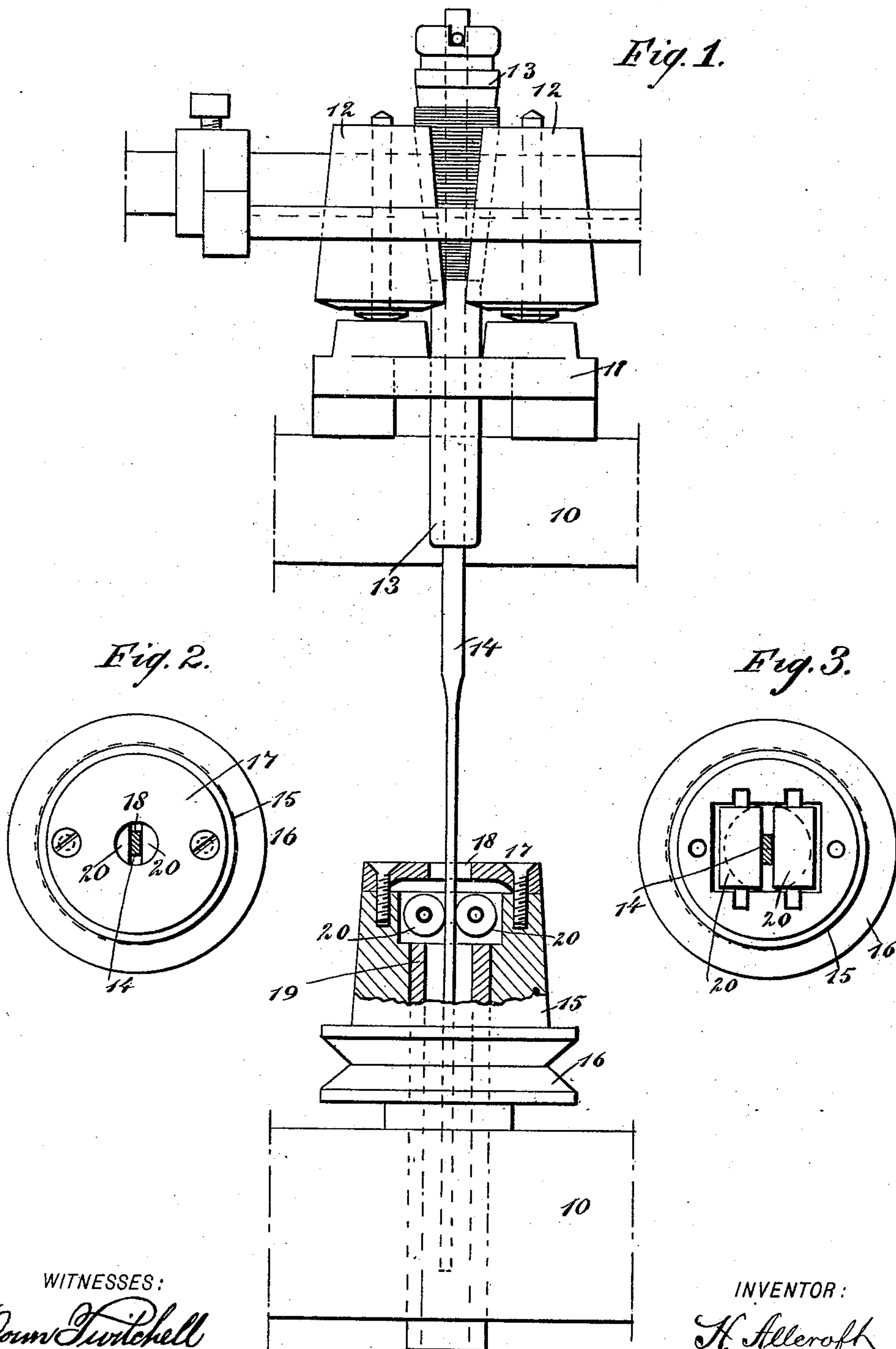


(No Model.)

H. ALLCROFT.
WHIRL FOR FILLER FRAMES.

No. 472,844.

Patented Apr. 12, 1892.



WITNESSES:
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UNITED STATES PATENT OFFICE.

HERBERT ALLCROFT, OF PATERSON, NEW JERSEY, ASSIGNOR TO HOLDEN RIGBY, OF SAME PLACE.

WHIRL FOR FILLER-FRAMES.

SPECIFICATION forming part of Letters Patent No. 472,844, dated April 12, 1892.

Application filed May 26, 1891. Serial No. 394,231. (No model.)

To all whom it may concern:

Be it known that I, HERBERT ALLCROFT, of Paterson, in the county of Passaic and State of New Jersey, have invented a new and Improved Whirl for Filler-Frames, of which the following is a full, clear, and exact description.

My invention relates to improvements in whirls for filler-frames.

The whirl for filler-frames as commonly used is provided with a simple socket or aperture to receive the spindle which supports the silk or yarn quill, and owing to the rapid rotation of the whirl the spindle and the adjacent bearing portion of the whirl soon wear, so that the spindle is likely to stick and not rise easily with the quill. In this case the silk or yarn is likely to burn or chafe and it is not wound evenly upon the quill. Moreover, the spindle and whirl soon wear out and new ones have to be provided.

The object of my invention is to obviate this difficulty by producing a simple form of whirl which will afford an even bearing for the spindle and which will support the spindle in such a manner that it cannot possibly stick.

To this end my invention consists of a whirl constructed substantially as hereinafter described and claimed.

Reference is to be had to the accompanying drawings, forming a part of this specification, in which similar figures of reference indicate corresponding parts in all the views.

Figure 1 is a broken detail view, partly in section, showing the application of the whirl to a filler-frame. Fig. 2 is a plan view of the whirl, showing the spindle in section; and Fig. 3 is a similar view, but with the whirl-cap removed.

In the drawings, 10 represents a portion of a filler-frame, on the upper part of which is mounted a small stand 11, which carries the removable and conoidal friction-rollers 12, these rollers being adapted to press evenly upon the silk or yarn which is wound upon the quill 13, and the quill is allowed to rest between the three rollers in the ordinary way. The third roller is not seen in the drawings; but these friction-rollers are usually arranged in threes and their arrangement is well understood. The above construction is of the

common kind and forms no part of my invention.

The spindle 14 extends downward through the quill 13 in the usual manner, and the rotation of the spindle serves to rotate the quill. The lower end of the spindle is flattened and extends downward into the whirl 15, which in exterior appearance is like an ordinary whirl, having a pulley 16 formed thereon, to which a belt is applied to run the whirl. The whirl is hollow and turns on a hollow bearing 19 and is provided at the top with a removable cap 17, having a central aperture 18, through which the spindle extends.

The upper portion of the whirl is recessed internally, and pivoted in this recess is a pair of rollers 20, which are preferably made of steel or case-hardened, so that they will not easily wear, and the spindle 14 extends downward between these rollers, as shown in Figs. 2 and 3. It will thus be seen that the spindle will be held firmly, so that it will revolve with the whirl and impart its motion to the quill 13, and as the quill rises it lifts the spindle in the usual way and the upward movement of the spindle turns the rollers; so that a new face of the latter is constantly presented to the spindle, and as a result neither the spindle nor the rollers will be much worn. The rollers not only prevent the wear of the spindle, but they enable it to run very easily, so that as the silk or yarn is wound upon the quill the spindle will be easily raised and the winding will be very evenly and nicely done.

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

The tubular whirl 15, provided with the pulley 16 and with a recess in its upper portion, said recess having bearings at opposite sides, two transverse parallel-spaced anti-friction rollers 20, provided with trunnions resting in the said bearings, and the cap 17, detachably secured to the upper end of the whirl and provided with the opening 18, aligning the space between the said rollers, substantially as herein shown and described.

HERBERT ALLCROFT.

Witnesses:

ALLEN CHESTERS,
JOSEPH RIGBY.