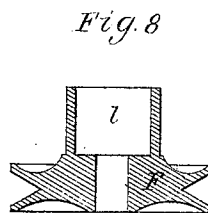
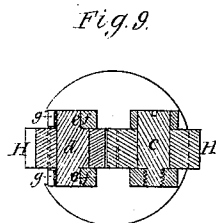
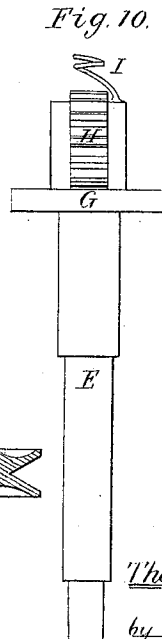
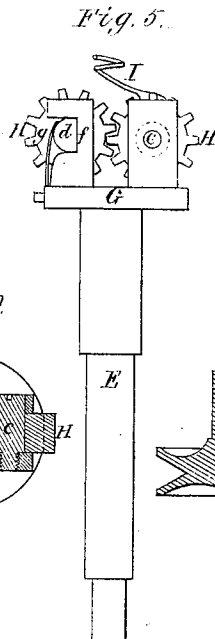
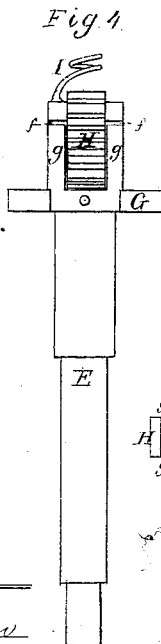
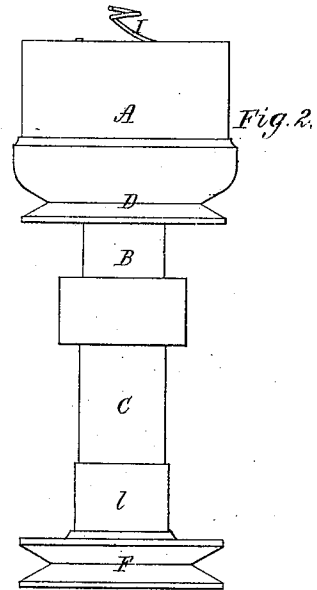
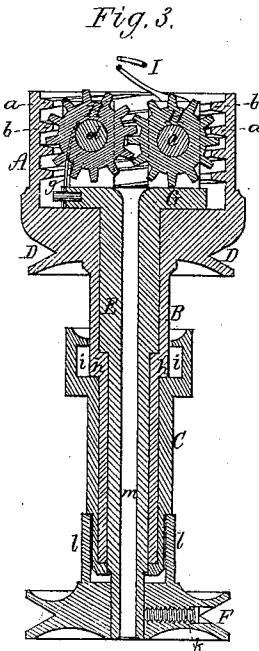
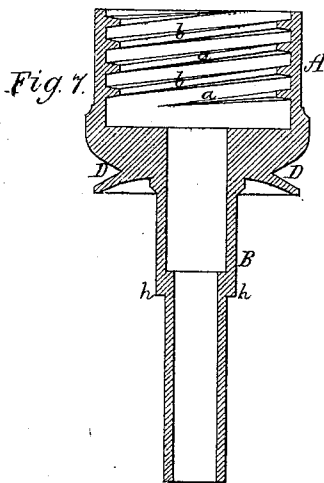
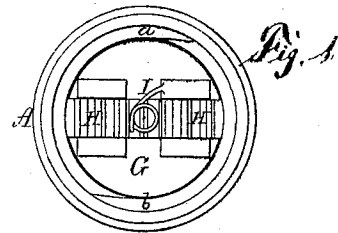
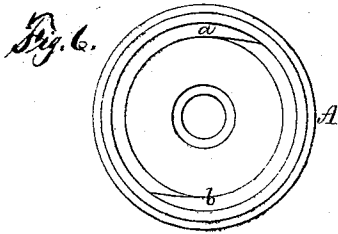


T. NUTTING.

Improvement in Drawing and Twisting Heads for Spinning.

No. 128,418.

Patented June 25, 1872.



Witnesses
S. H. Popen
L. W. McCall

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UNITED STATES PATENT OFFICE.

THOMAS NUTTING, OF GEORGIAVILLE, RHODE ISLAND.

IMPROVEMENT IN DRAWING AND TWISTING HEADS FOR SPINNING.

Specification forming part of Letters Patent No. 128,418, dated June 25, 1872.

To all persons to whom these presents may come:

Be it known that I, THOMAS NUTTING, of Georgiaville, of the county of Providence and State of Rhode Island, have invented certain new and useful Improvements in Mechanism for Spinning Wool or various other fibrous matters; and do hereby declare the same to be fully described in the following specification, and represented in the accompanying drawing, of which—

Figure 1 is a top view, Fig. 2 a side elevation, and Fig. 3 a vertical section, of such mechanism. Figs. 4 and 5 are side views of the drawing gears and their carrier, to be hereinafter described. Fig. 6 is a top view, and Fig. 7 a vertical section, of the helical driver. Fig. 8 is a vertical section of the carrier-whirl and its oil-receiver. Fig. 9 is a horizontal section taken through the drawing-gears and the pivots and bearings thereof. Fig. 10 is another side view of the drawing-gears and their carrier.

The mechanism, hereinafter explained, is for use over a ring and traveler-bobbin and spindle of what is termed by spinners a ring-frame or ring-spinning machine, or between such and delivery or draw rollers, a mechanism of somewhat similar character so combined and arranged with the parts of a "ring-frame" being shown in Robert L. Walker's application for a patent, filed in the Patent Office April 20, 1869.

My present spinning mechanism, as herein-after explained, contains improvements with reference to that for which I have recently—to wit, on the 2d day of August, 1871—filed in the Patent Office an application for a patent, such application having been allowed on February 23, 1872.

In my present mechanism I employ in the helical driver two separate screw-threads, thereby causing the speed of the drawing-gears to be doubled in comparison to what it is with a single screw-thread made to encompass both wheels. Furthermore, I combine with the lower whirl and the bolster an oil-receiver, to extend from the whirl and encompass the bolster at its foot, the same being to protect the whirl from waste-oil, and to prevent waste of the oil employed in lubricating the interior or bore of the bolster. Furthermore, I arrange the pivot of one of the draw-

ing-gears in recesses of the gear-carrier provided with a pressure-spring or springs, such being to enable the gear to move horizontally away from and toward the other gear, so as to accommodate the two to inequalities in the size or diameter of the sliver or yarn.

In the drawing, A denotes the helical driver, and *a b* its two separate screw-threads, arranged within it and upon its inner periphery and encompassing the same, each thread having the same pitch and being run within the other, as shown, they being to engage with the two drawing-gears H H supported within and by a rotary carrier, G, provided with a sliver-guide, I, projected from it and formed as shown. One of the gears, H, revolves on a fixed pivot, *c*. The other gear has its pivot *d* furnished or made with notches or shoulders *e e* to keep it in place in the carrier. The said pivot is arranged in recesses *f f* in the gear-carrier, provided with a spring or springs, *g*, arranged against the pivot, as shown, and fastened to the carrier. The spindle of the helical driver is exhibited at B as supported within and extended down through the bolster C, which, when in use, is to go down through and be fixed in a bearing-rail. A shoulder, *h*, of the spindle B rests on the bottom of the oil-supply chamber *i* of the bolster. The rotary gear-carrier spindle E, formed as represented and tubular throughout its length, as shown at *m*, extends down through the tubular spindle B, a whirl, F, being arranged on the lower part of such spindle E and fixed to it by a clamp-screw, *k*. On the whirl F there is erected an oil-reservoir, *l*, into which the foot of the bolster is arranged in manner as shown. The whirl of the helical driver is represented at D, such whirl and the whirl F being driven by separate bands, so as to cause the gears to be revolved on their axes and also around horizontally within the helical driver, whereby a sliver, while between the two gears and extended down through the bore of their carrier-spindle, will be drawn and twisted.

I herein make no claim to a helical driver having a single screw-thread arranged in it to operate with and encompass the two drawing-gears coupled together, and arranged in a rotary carrier, as described. In the mechanism hereinbefore described,

I claim as my invention—

1. The cylindrical and shouldered pivot *d* constructed and arranged, as described, in the gear *H* and in recesses *f* of the carrier *G*, provided with a spring or springs, *g*, to bear against such pivot, as set forth, the said gear *H* being to revolve freely on the pivot, and the latter being held in place in the carrier by the shoulders *e e* and spring or springs *g* and recesses *f*, all as explained.

2. Also, the combination and arrangement

of the waste-oil intercepting-reservoir *l* with the whirl *F* and the bolster *C*, the helical driver *A*, the gears *H H*, their carrier *G*, and the spindles *B E*, all constructed and combined substantially in manner, and to operate as represented and explained.

THOMAS NUTTING.

Witnesses:

R. H. EDDY,
J. R. SNOW.