T. NUTTING.

Improvement in Drawing and Twisting Heads for Spinning Machines.

No. 125,686. Patented April 16, 1872.

Fig. 1.

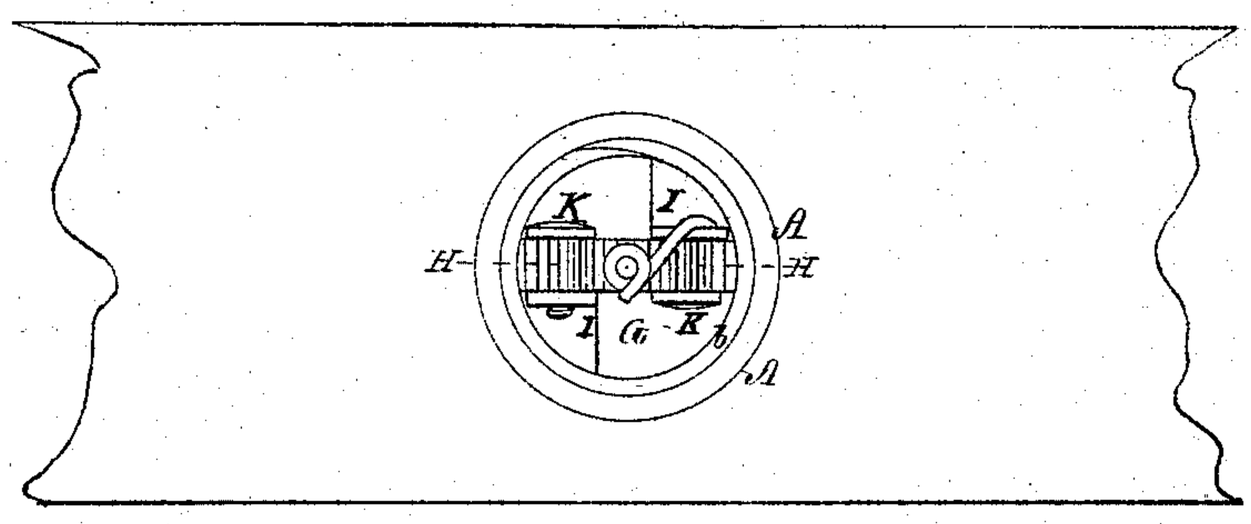


Fig. 2.

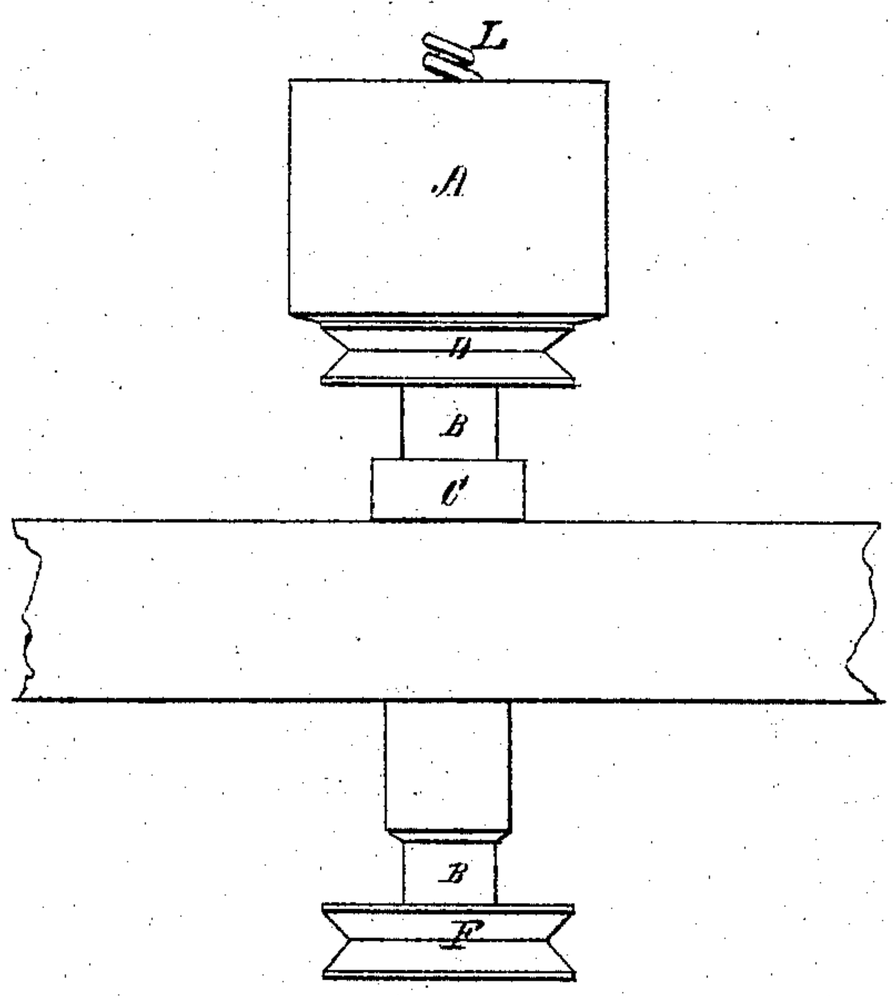
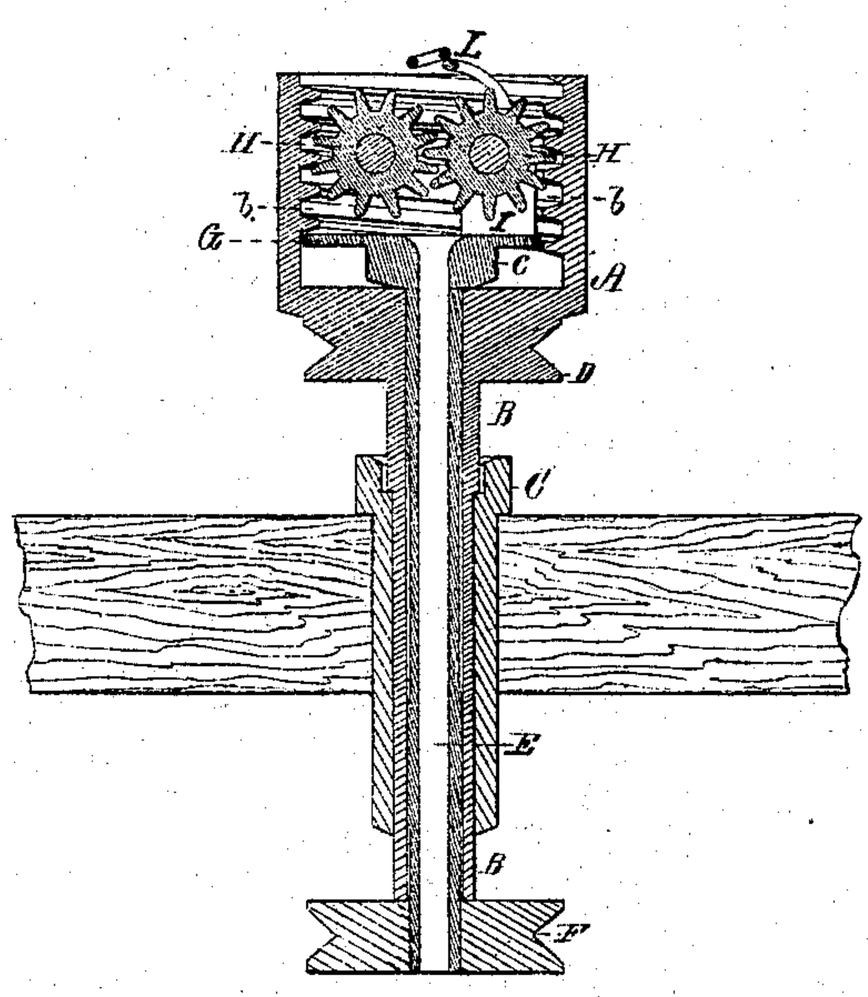


Fig. 3.



Witnesses.

S. N. Piper.

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UNITED STATES PATENT OFFICE.

THOMAS NUTTING, OF SMITHFIELD, RHODE ISLAND.

IMPROVEMENT IN DRAWING AND TWISTING HEADS FOR SPINNING-MACHINES.

Specification forming part of Letters Patent No. 125,686, dated April 16, 1872.

To all persons to whom these presents may come:

Be it known that I, THOMAS NUTTING, of Smithfield, of the county of Providence and State of Rhode Island, have invented a new and useful Improvement in Mechanism for Spinning Wool or Various other Fibrous Matters; and I 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 front elevation; and Fig. 3, a vertical section of the spinning mechanism as improved by me.

My invention is an improvement with reference to that described and represented in the United States Patent No. 5,964, dated December 12th, 1848, and issued to Wendell Wright. The object of my invention is to obviate the difficulty experienced in Wright's mechanism and various others of like character, in getting ready access to the drawing-gears when clogged, in order to remove from them the fibrous matters that may gather on them to obstruct their proper operation. The liability of Wright's construction, and others of like nature since put in use, to become obstructed or fouled with fibrous matters, has operated much to impair their value, it being very difficult or inconvenient to remove the cause of obstruction without taking the mechanism either wholly or partially to pieces, thereby causing stoppage of the spinning-machine, and much delay in getting it in order.

In carrying out my improvement I make the helical driver or case, in which the drawing-gears are placed open at top, and furnish the gear-stand or carrier with a small yarn-guide to project from one of the gear-standards directly over the bite of the two gears, the driving-whirl of the gear-carrier being arranged below the helical driver. I also support the journals K of the drawing-gears, each in a single standard, I, projecting up at one side of its gear from the carrier at the bottom of the driver, so that an open space is left at the nip of the gears on each side, and between said gears and the sides of the case in which they are placed, rendering them fully and readily accessible, for the purpose of introducing the roving between them, and removing foreign matters that may obstruct their action. By my construction the whole top of the helical driver becomes uncovered, and the interior of it and drawing-gears are perfectly free of access.

In the drawing, A denotes the helical driver, which is a cylindrical box entirely open at top, and provided with a screw-thread, *b*, extending around its interior curved surface. This driver is mounted on the upper end of a tubular shaft or spindle, B, arranged and supported in a bolster or bearing, C, there being a whirl, D, fixed on such shaft just below the driver. An endless band is to run on this whirl in order to put the driver in revolution. A tubular shaft, E, provided with a whirl, F, goes up through and takes a bearing in the spindle B, and has fixed to its upper end the base or head *c*, of the supporter or carrier G, of the drawing-rollers or gears H H, arranged and engaged with each other, as shown. These gears engage with and are revolved by the screw-thread of the helical driver while the gears and carrier are in revolution therein, or it is made to revolve on them. An endless band is to run on the whirl of the gear-carrier shaft. The sliver to be drawn and twisted passes through the eye of the guide L, which is attached to the supporting-stand of one of the gears, thence between the two gears, and thence down through the bore of the shaft of the gear-carrier.

It will be observed that the guide L, when attached as herein described, revolves with the roller-frame, and, as a consequence, offers less resistance to the twisting of the sliver than would be the case were the guide separate and stationary. By being thus attached to the roller-frame and revolving with it the guide is brought close down to the bite of the rollers, so as to get the twist above instead of below the guide, and keep the sliver from slipping or being drawn laterally out of the bite.

The apparatus above described is intended for use over a ring and traveler-bobbin, and spindle of a "ring-spinning machine," or between such and delivery-rollers, in manner as shown in the specification and drawing of Rob-

ert L. Walker's application for a patent filed in the Patent Office April 26th, 1869, or it may be otherwise used.

I make no claim to any thing, combination, or arrangement of parts described or represented in the said patent of the said Wendell Wright.

I claim—

The combination and arrangement of the helical driver A, shaft B, bolster C, tubular shaft E, base *c*, carrier G, drawing-rollers H H, journal-standards I, and thread-guide L, al constructed and operating in the manner and for the purpose set forth.

THOMAS NUTTING.

Witnesses:

R. H. EDDY,

S. N. PIPER.