No. 11,106. PATENTED JUNE 13, 1854.

E. VICTORY.

MACHINERY FOR SPINNING.

Fig. 2.

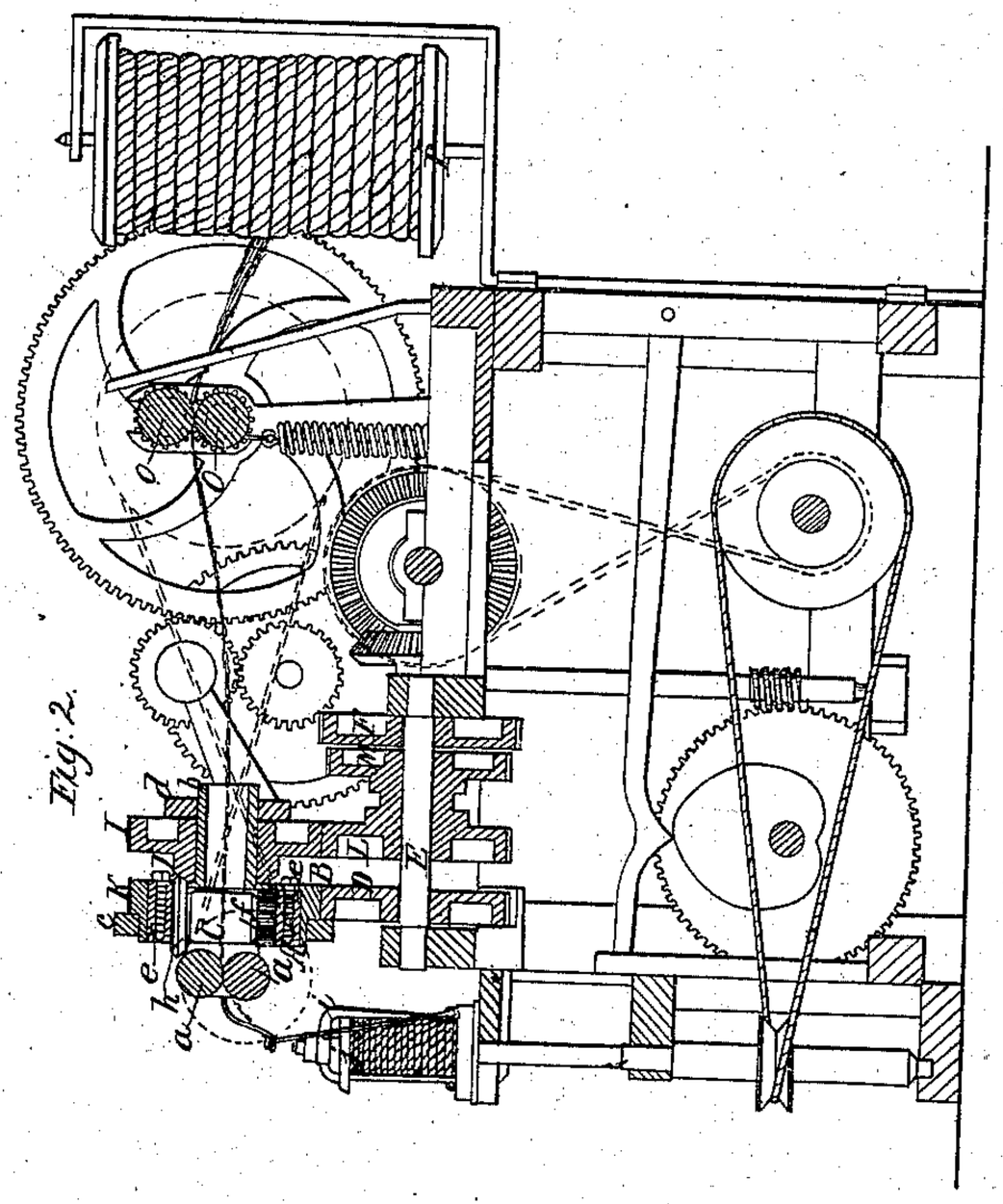


Fig. 4.

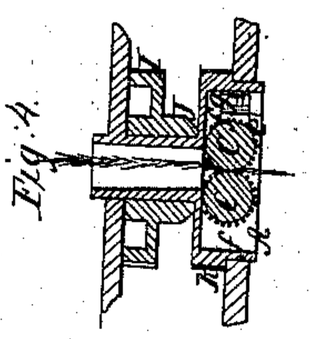


Fig. 1.

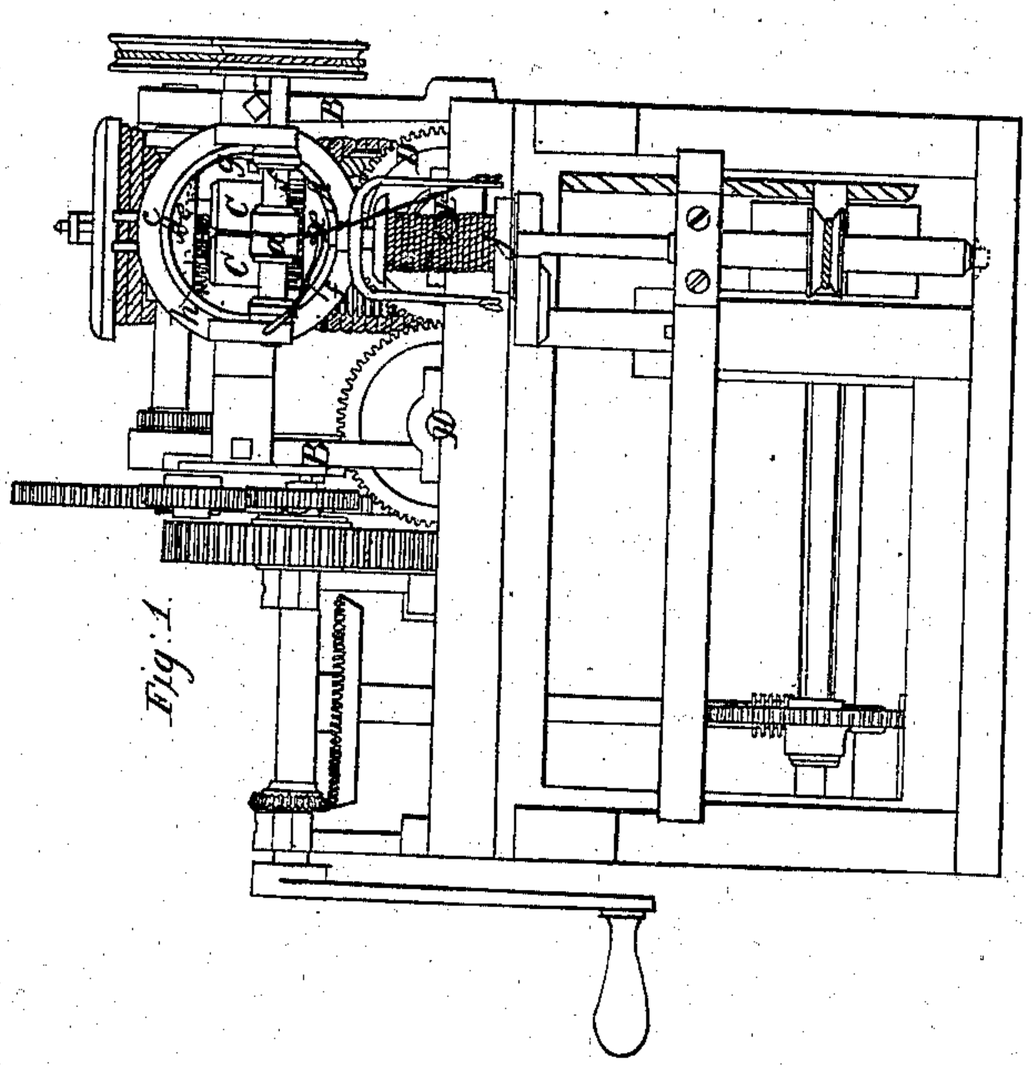
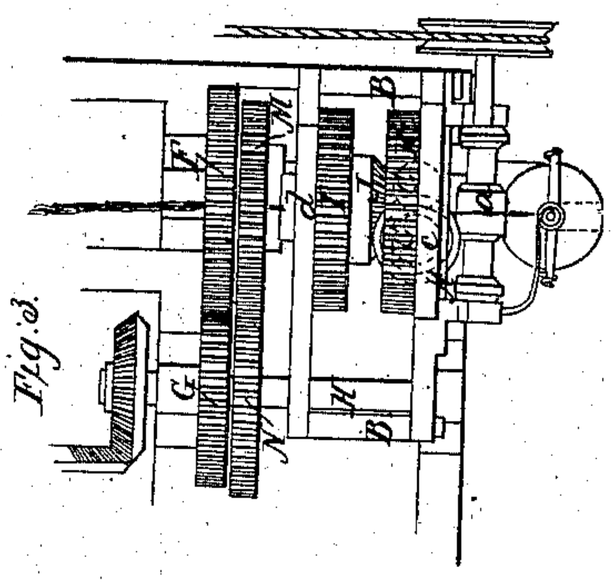


Fig. 3.



UNITED STATES PATENT OFFICE.

EDMUND VICTORY, OF WATERTOWN, NEW YORK, ASSIGNOR TO D. M. LINSLEY AND G. GOULDING.

MACHINERY FOR SPINNING WOOL.

Specification of Letters Patent No. 11,106, dated June 13, 1854.

To all whom it may concern:

Be it known that I, EDMUND VICTORY, of Watertown, in the county of Jefferson and State of New York, have invented certain new and useful Improvements in Machinery for Spinning Wool, Cotton, Flax, or other Fibrous Materials; and I do hereby declare that the following is a full, clear, and exact description of the same, reference being had to the accompanying drawings, making part of this specification, in which—

Figure 1, is a front elevation of part of a spinning frame, having my improvements. Fig. 2, is a transverse vertical section of the same. Fig. 3, is a plan of part of the same; and Fig. 4, is a horizontal section of part of the same.

Similar letters of reference indicate corresponding parts in the several figures.

My improvement has reference to a well known arrangement for drawing and twisting simultaneously the sliver or roving of a revolving head through which the sliver passes, carrying drawing rollers in front, said rollers revolving with the head as well as rotating on their own axes.

To enable those skilled in the art to make and use my invention, I will proceed to describe its construction and operation.

The revolving head, A, is intended to be used either in a separate machine or in combination with the bobbin and fly frame or cop spinner with live spindles. It is shown in the drawing applied to the bobbin and fly frame and is placed immediately behind the rollers, *a*, *a*, which conduct the roving to the flyer. It consists of a short cylinder, with a concentric tube, *b*, at the back, which is fitted to work in bearings in two plates, *c*, *d*, which are supported by standards, B, B, secured to the main frame of the machine. Inside the cylinder or head, A, two blocks, *e*, *e*, are bolted to form bearings for the journals of a pair of drawing rollers, C, C, which are geared together by gears, *f*, *f*, and made to grasp any thread passing between them with considerable tightness by a spring, *g*. The head is furnished outside with spur teeth, which form a spur wheel, K, gearing with a spur wheel, D, on a shaft, E, which is fitted in bearings below the head, which said shaft also carries a spur wheel, F, through which it derives motion from a spur wheel, G, on another shaft, H, which is fitted in bearings parallel with, E, and receives rotary motion by suitable means not necessary to describe. The tube, *b*, of the revolving head carries a loose spur wheel, I, and a bevel toothed wheel, J, both secured together. The bevel wheel, J, gears with a bevel wheel, *h*, on one of the drawing rollers, C, C, part of the said bevel wheel, *h*, working through a slot in the back of the head, and the spur wheel, I, which has the same pitch and number of teeth as the spur wheel, K, gears with a spur wheel, L, which is similar to the wheel, D, but turns loosely on the shaft, E. A wheel, M, which is rather smaller than, F, is secured to the wheel, L, so that both turn together on the shaft, E; and this wheel, M, derives motion from a wheel, N, of larger size than, G, secured to the revolving shaft, H. The wheels, G, and, N, give rotary motion to the head, A, and to the wheels, I, and, J; but in consequence of the wheel, N, being larger than, G, and the wheel, M, smaller than, F, the wheels, M, and, L, revolve more rapidly than the wheels, F, and D, and consequently the spur wheel, I, and bevel wheel, J, revolve faster than the head, A, and thus the bevel wheel, J, is made to give revolution to the bevel wheel, *h*, and by it to the drawing rollers, C, C.

The sliver is taken from a spool, P, by a pair of rollers, O, O, which revolve at a slower speed than the rollers, C, C, and the latter are thereby made to draw or stretch it, while the motion which is given to the axes of the rollers by the revolution of the head, A, gives a twist to the thread. Thus the thread between the rollers, O, O, and the rollers, C, C, is drawn and twisted at the same time. After passing the rollers, C, C, the thread is conducted by the rollers, *a*, *a*, to the flier, *i*, by which the final twist is given, and it is wound upon the bobbin, *j*.

Any number of the heads, A, and drawing rollers, C, C, may be used in the same frame, and when used in combination with bobbins and fliers or live spindles there must be at least one head for every bobbin and spindle. More than one head may be used for each spindle, so as to reduce the roving more than once before giving the final twist by the flier.

By the arrangement herein shown and described of the drawing rollers within the revolving tube or head, while the head has a bearing on its whole circumference outside the said rollers, the double movement of the drawing rollers—on their own axes and

with the head—is rendered perfectly steady and that vibration, when running at a quick velocity, avoided which tends to produce an uneven thread and which is a common defect with other arrangements of a like character (rendering it impossible to work some descriptions of wool) wherein the drawing rollers, rotating with the head as well as revolving on their own axes, are placed on the outside of the revolving head and the head itself supported on a reduced bearing behind the drawing rollers. The guide rollers (*a a*) in front of the revolving head not only serve to conduct the thread to the flier (*i*) but lessen the liability to breakage of the thread by steadying its run to the flier, which gives the thread its final twist previously to its being wound upon the bobbin (*j*), and in case of breakage of the thread by the flier or otherwise the said rollers (*a a*) prevent all entanglement of the thread within the revolving tube or head and continue to deliver it in its proper line or course even though broken.

I do not claim, of themselves, the employment of drawing rollers revolving with the head and made, in addition, to rotate at a suitable velocity on their own axes, for the purpose of drawing and twisting the sliver or thread, as such have before been used, but,

What I do claim as my invention, and desire to secure by Letters Patent, is—

Arranging the drawing rollers to operate in the manner specified within the revolving tube or head while the head is sustained by a sufficient bearing on its whole circumference outside of the said rollers as shown and described, whereby the double movement of the drawing rollers—on their own axes and with the head—is rendered perfectly steady and that vibration prevented which tends to produce an uneven thread.

EDMUND VICTORY.

Witnesses:
JOHN SIGOURNEY,
EVERETT B. WILMARTH.