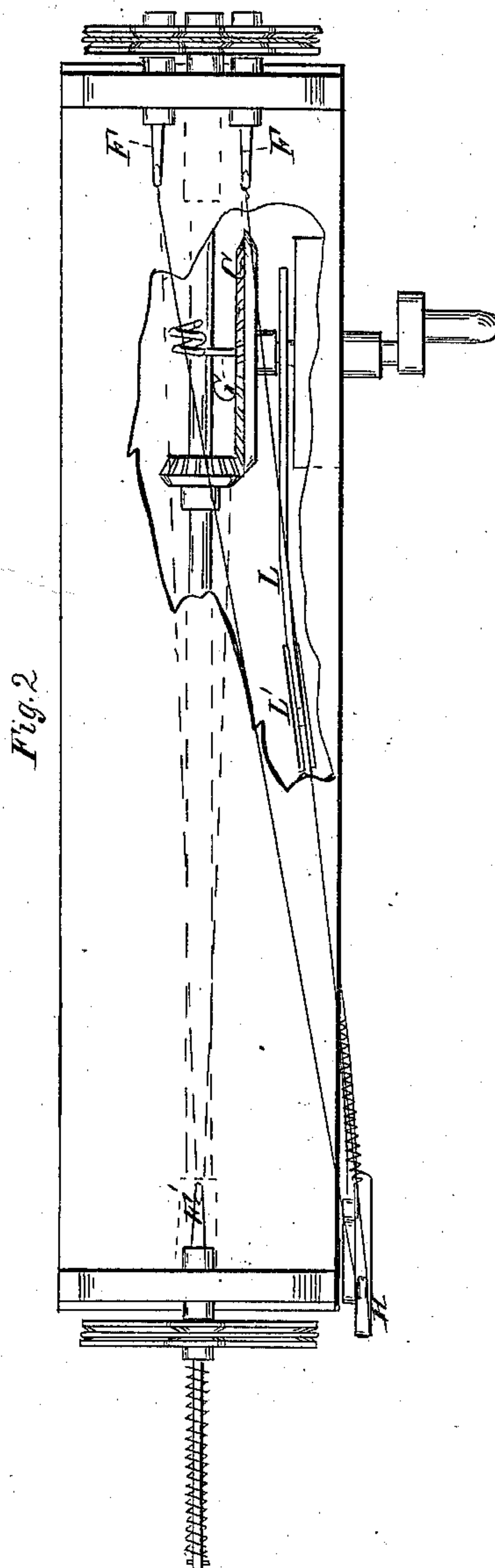
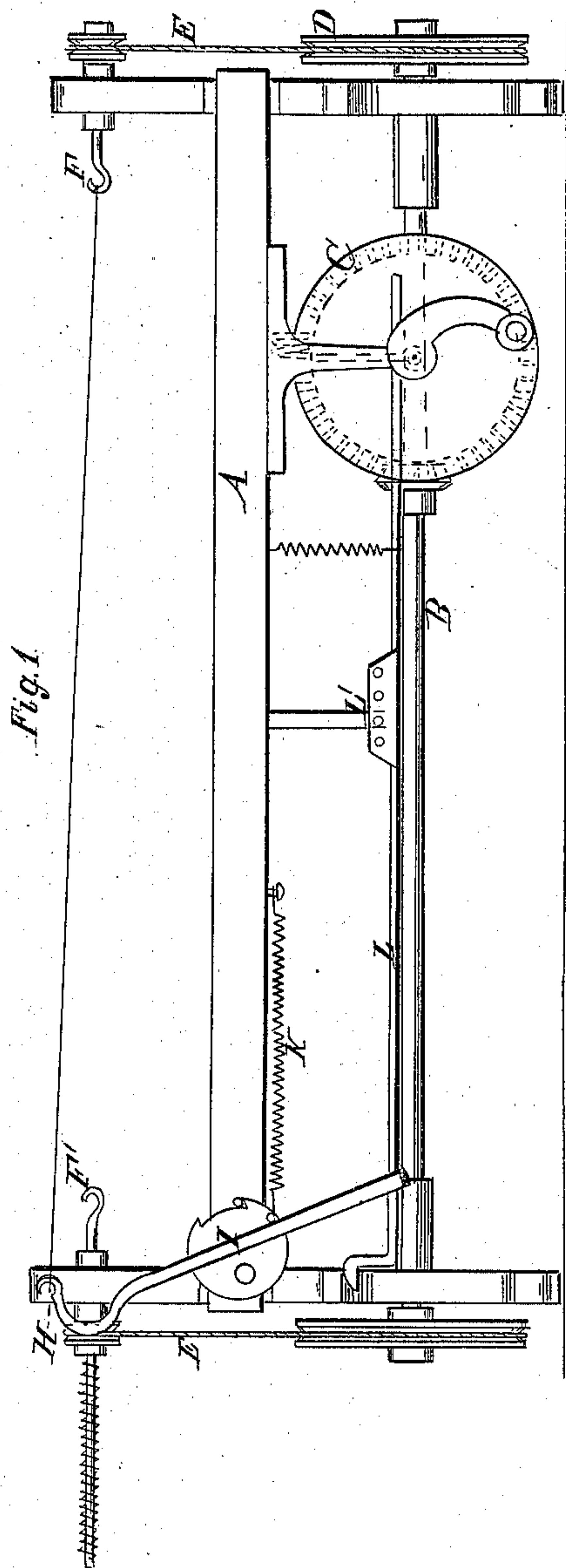


# *J. Collier, Banding Machine.*

*No. 83,465.*

*Patented Oct. 27. 1868.*



WITNESSES.  
*Wm A. Morgan*  
*G. C. Cotton*

INVENTOR  
*J. Collier*  
*per Munnell*

# United States Patent Office.

J. COLLIER, OF MORENCI, MICHIGAN.

Letters Patent No. 83,465, dated October 27, 1868.

## IMPROVEMENT IN MACHINE FOR TWISTING JACK-BANDS.

The Schedule referred to in these Letters Patent and making part of the same.

*To all whom it may concern:*

Be it known that I, J. COLLIER, of Morenci, in the county of Lenawee, and State of Michigan, have invented a new and useful Improvement in Machines for Twisting Jack-Bands; and I do hereby declare that the following is a full, clear, and exact description thereof, which will enable others skilled in the art to make and use the same, reference being had to the accompanying drawings, forming part of this specification, in which—

Figure 1 represents a side elevation of my improved machine, and

Figure 2 represents a plan view, with a part broken away.

Similar letters of reference indicate like parts.

The object of this invention is to provide a simple and improved machine for twisting jack-bands, and other similar cords.

It consists of an arrangement of rotating hooks, and a stationary hook, for twisting the yarn, with the devices for operating them, and which are automatically thrown out of gear when the yarn has been sufficiently twisted.

In the drawings, A represents a bench, provided with a shaft, B, which is actuated by a driving-wheel, C, and which actuates, by pulleys D, and belts E, at each end, the twisting-hooks F and F'.

The shaft to which the said wheel is attached, C, is arranged to slide loosely in its bearing, and is provided with a spring, G, which has a tendency to throw the said wheel out of gear with the pinion on the shaft B.

H represents a hook arranged upon the upper end of a vibrating bar, I, pivoted to the bench, and arranged to be limited in the amount of its vibration, and provided with a coiled spring, K, and a loop at its lower end.

L represents a lever, pivoted adjustably at L' to a bar dependent from the bench, and arranged at one end to drop between the hub of the wheel C and the bearing of the shaft of the said wheel. The other end is supported in the loop of the lever I, and is bent as shown in fig. 1.

The yarn is secured to one of the hooks F, and passed around the hook H to the other hook, F', the machine is set in operation, and the yarn is twisted. When it has been twisted the requisite amount, the hook H will have been drawn towards the twisting-hooks, and against the action of the spring K, sufficiently to allow the bent end of the bar L to fall out of the loop in the rod I, thereby raising the other end out of the space between the hub of the wheel C and the bearing; allowing the spring G to throw the wheels out of gear, and stop the machine.

The yarn is then taken from the hook H, and placed on the yielding and twisting-hook F', and the machine set in motion again, when the cord will be finished, as will be readily understood.

In twisting the two parts together, a stick may be held between them, to prevent them from winding together too fast.

Having thus described my invention,

I claim as new, and desire to secure by Letters Patent—

The combination of the hook H, levers I and L, sliding wheel C, hooks F, and springs G K, substantially as and for the purpose described.

J. COLLIER.

Witnesses:

T. S. BAKER,  
RUSSEL OLES.