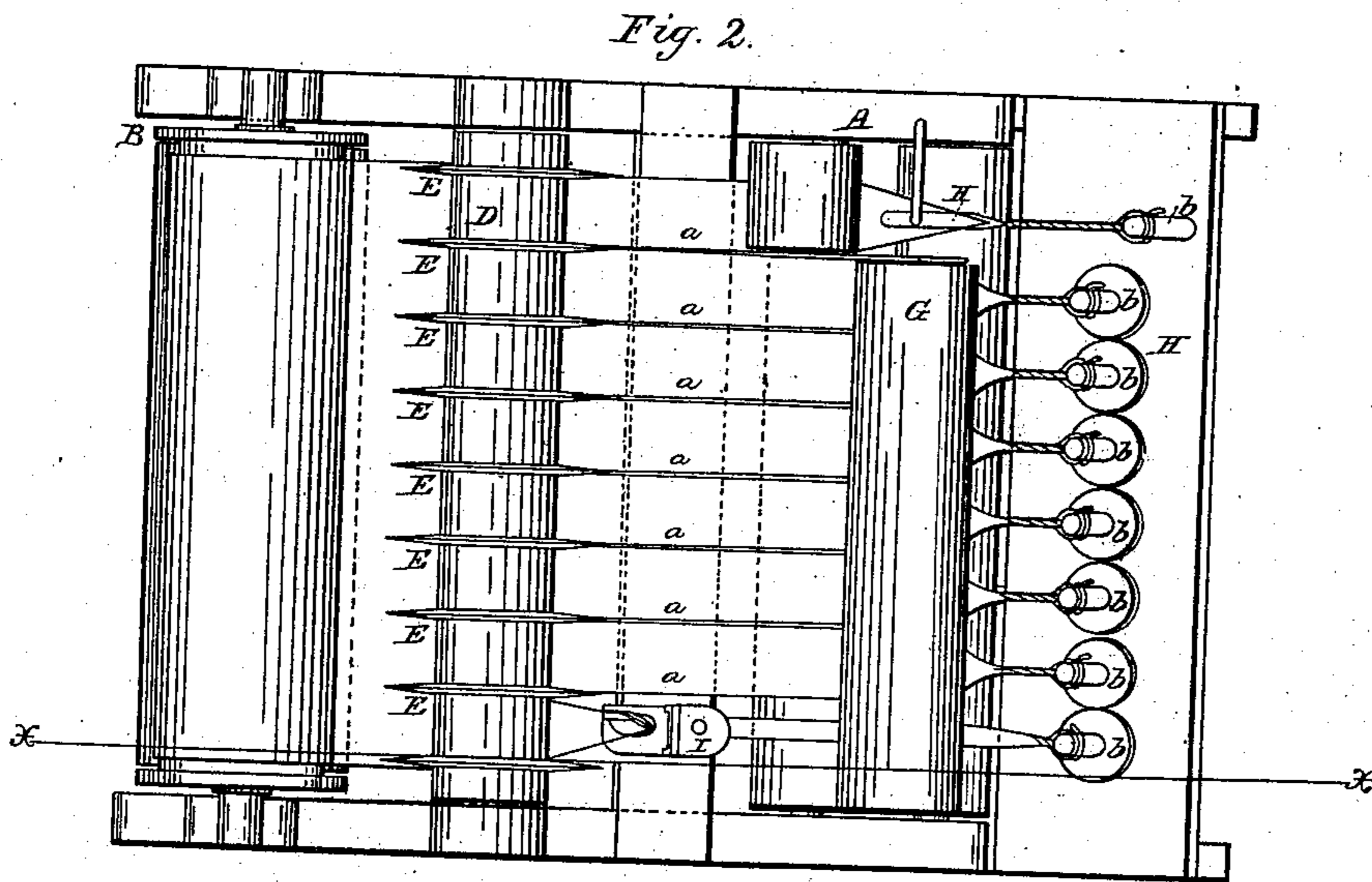
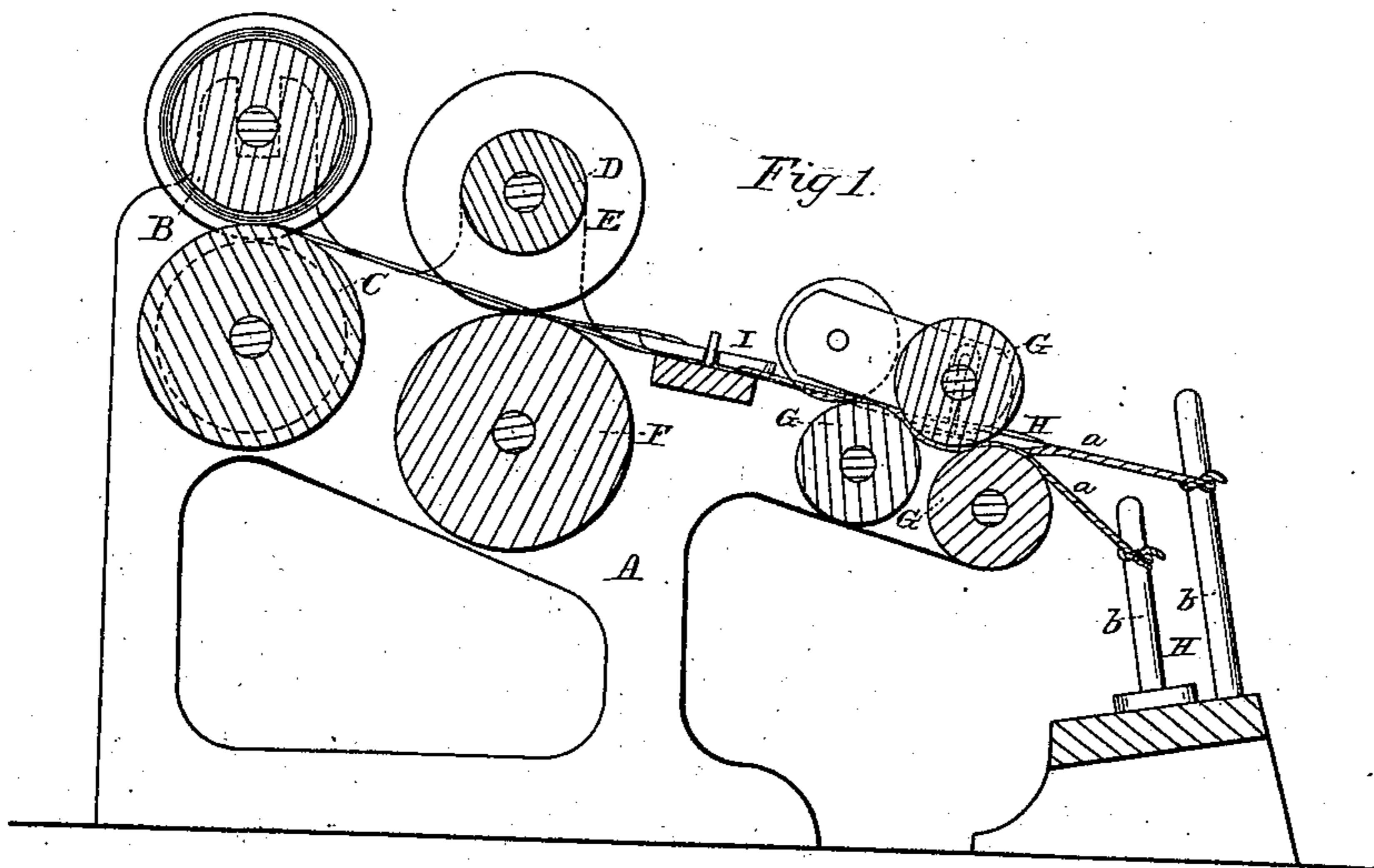


*I. P. Tice.*  
*Paper Cord Mach.*

*N<sup>o</sup> 43,874.*

*Patented Aug. 16, 1864.*



*Witnesses*  
*Wm. J. McNamara*  
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# UNITED STATES PATENT OFFICE.

ISAAC P. TICE, OF NEW YORK, N. Y.

## MACHINE FOR CUTTING AND TWISTING PAPER.

Specification forming part of Letters Patent No. 43,874, dated August 16, 1864.

*To all whom it may concern:*

Be it known that I, ISAAC P. TICE, of the city, county, and State of New York, have invented a new and Improved Machine for Cutting and Twisting Paper; 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 sectional view of my invention, taken in the line *x x*, Fig. 2; Fig. 2, a plan or top view of the same.

Similar letters of reference indicate like parts.

This invention relates to a new and useful machine for cutting paper from a continuous roll into strips of a suitable width, and twisting the latter into threads or twine, to be used as such, or to be woven or knitted into any suitable fabric, the cutting and twisting operations being simultaneously performed.

The invention consists in using with an ordinary throstle or spinning frame a cutting device formed of a series of cutters working upon a cylinder, all arranged in such a manner as to admit of the cutting and twisting operations being simultaneously performed.

The invention further consists in a novel means employed for facilitating the twisting of the strips of paper, as hereinafter set forth.

A represents a framing, which may be constructed in any proper manner to support the working parts, and B is a cylinder placed on the upper and rear part of said framing, on which cylinder the paper to be cut and twisted is rolled, said paper being in a single or continuous sheet, and consequently forming a continuous roll. This roll of paper rests upon a cylinder, C, placed directly under it in the same axial plane, as shown clearly in Fig. 1.

D is a cylinder placed in the upper part of the framing A, in front of cylinder B, and having upon it a series of circular cutters, E, placed at suitable and equal distances apart, said cutters working on a cylinder, F, directly below the cylinder D, and in the same axial plane.

G G G represent three pressure-rollers at

the front part of the framing A, and H represents a throstle or spinning frame, which may be of ordinary construction and therefore does not require a minute description.

The cutters E cut the paper into strips *a*, of a suitable width, said strips passing between the rollers G G G, and being twisted as they leave said rollers by the bobbins *b* of the throstle or spinning frame.

In order to facilitate the twisting of the strips *a* of paper, I employ a pointed cylinder, H, one placed over each strip *a*, and between the bobbins and the pressure-rollers G. By this arrangement the strips *a* are twisted from the ends of the pointed cylinders H and the strips under the pull of the bobbins gathered around the pointed cylinders, so as to compact and roll the strips, insuring an even and regular twist. Only one pointed cylinder, H, is shown; but as they are all constructed alike that is sufficient.

It would be decidedly preferable to have the strips rolled or gathered before passing between the pressure-rollers G, as the latter have a tendency to flatten the roll or twist and cause the twine or thread to be of unequal thickness.

When superior work, however, is not required, a device, I, similar to an ordinary sewing-machine hemmer, may be used and placed between the cutters E and the pressure-rollers G.

The pressure-rollers G serve to keep the strips *a* of paper in proper relative position, and to feed them to the bobbins of the throstle, and likewise cause the strips to be twisted under a proper degree of tension.

Where superior work is required and an even twist of the strips *a*, in order to produce threads of an equal thickness throughout, the pointed cylinders H are very essential and cannot be dispensed with, as the gathering of the strips to a point, and the twisting of the same from said point, insures an evenness of twist which cannot otherwise be produced.

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

1. The combination of a paper-cutting de-

vice and a throstle or spinning frame, arranged, substantially as shown, for the purpose of cutting paper into strips from a continuous roll and twisting the same into threads or twine, the work being done simultaneously or at one operation, substantially as herein set forth.

2. The pointed cylinders II, applied to a

throstle or spinning frame in relation with the paper strips *a*, to operate substantially as and for the purpose herein set forth.

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Witnesses:

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