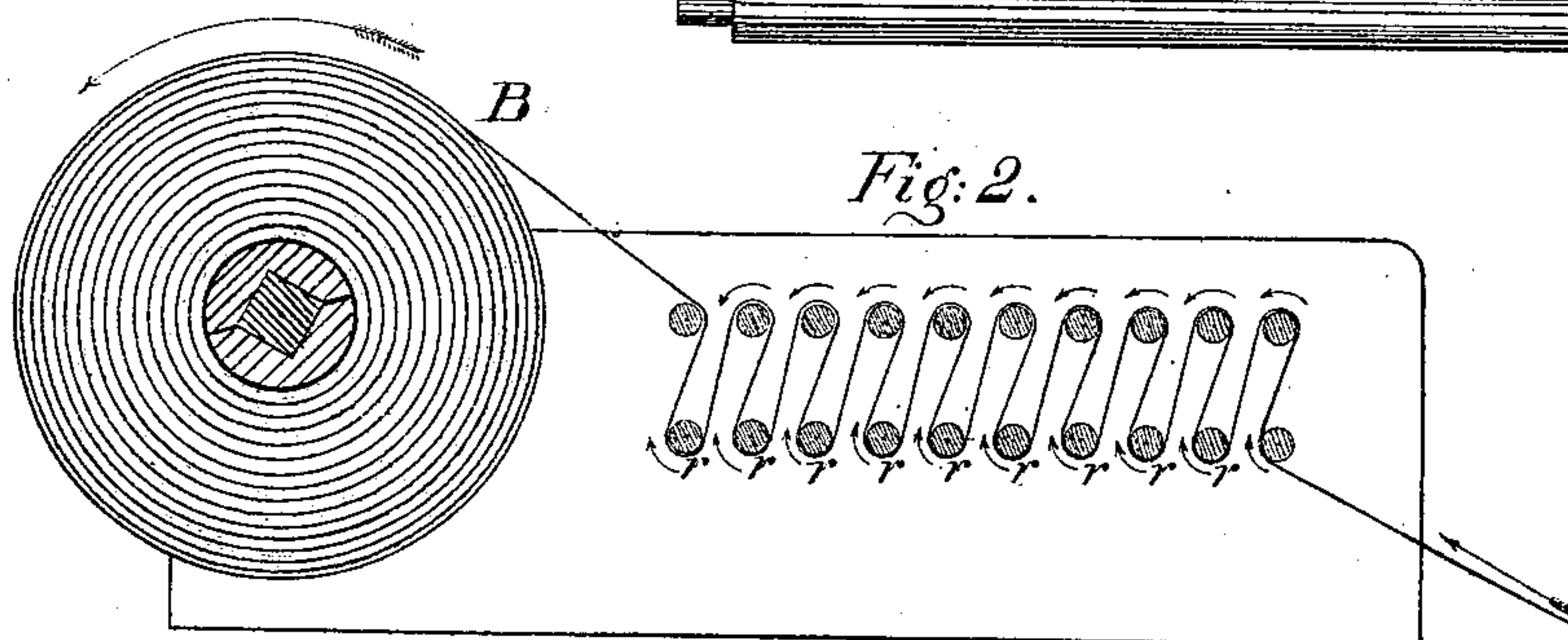
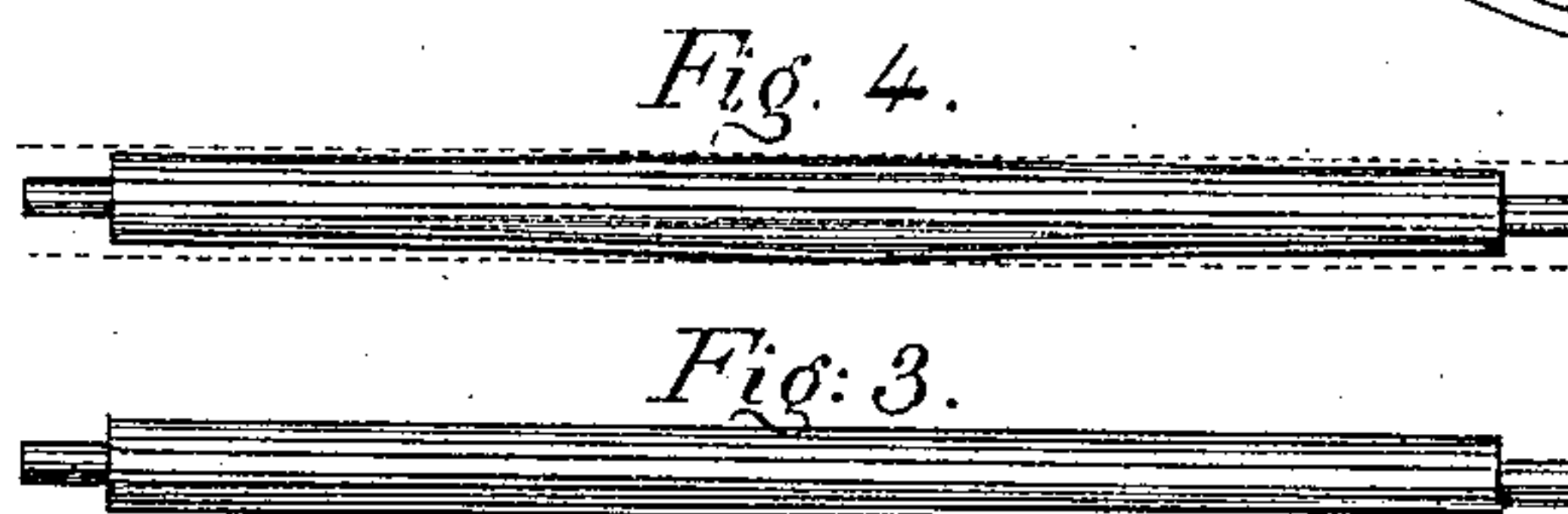
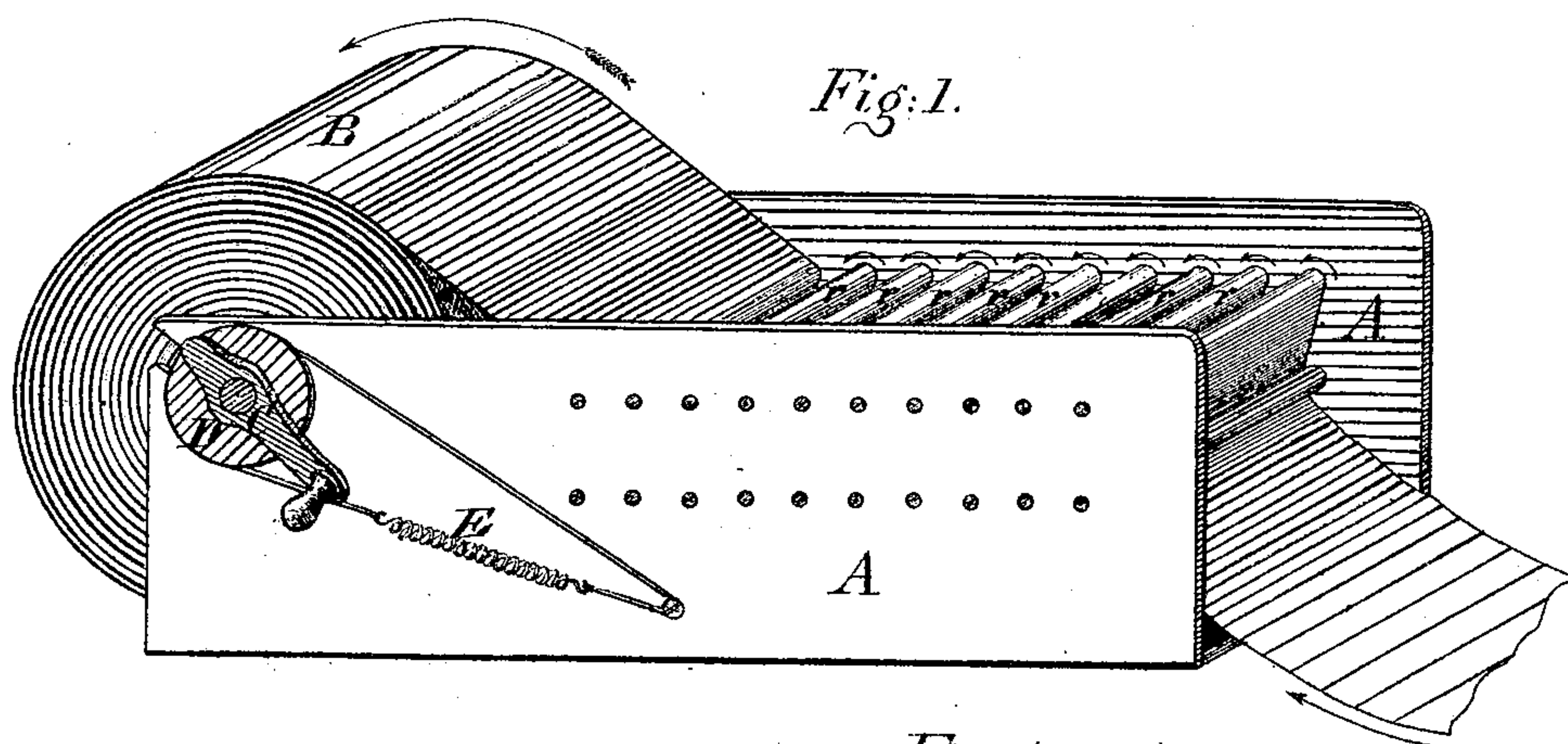


G. D. HARRINGTON.

Improvement in Apparatus for Winding Paper or other Fabrics in Rolls.

No. 129,660.

Patented July 23, 1872.



WITNESSES:

Geo. H. McKill.
C. H. Mason

INVENTOR:

G. D. Harrington

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Fig: 1.

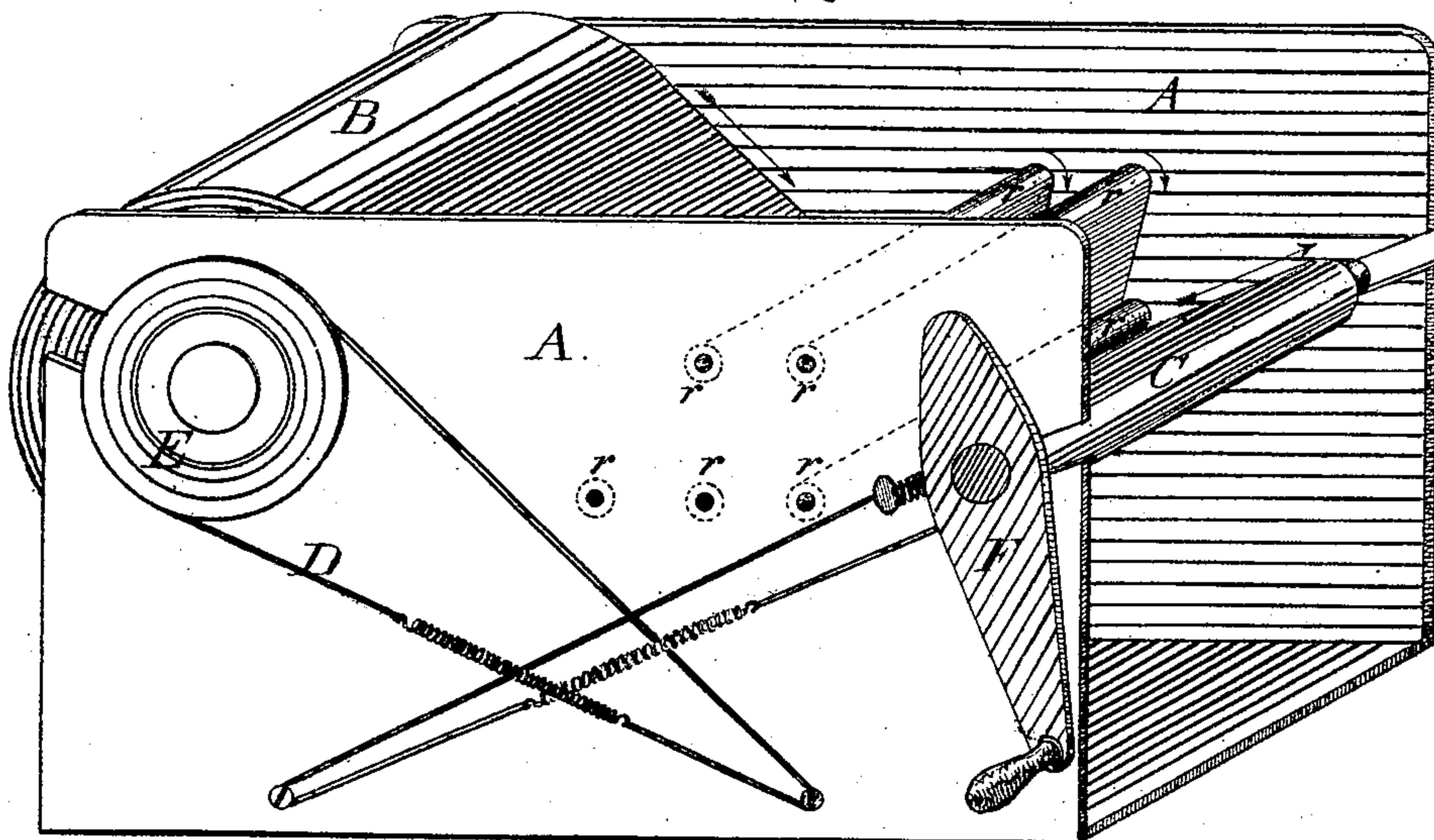


Fig: 3.



Fig: 4.

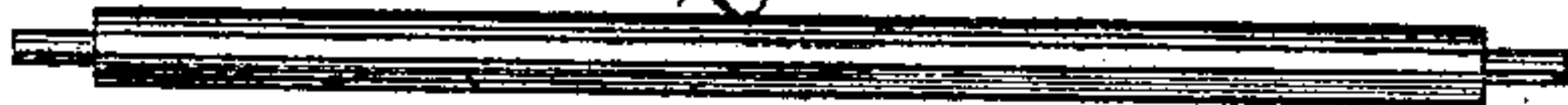
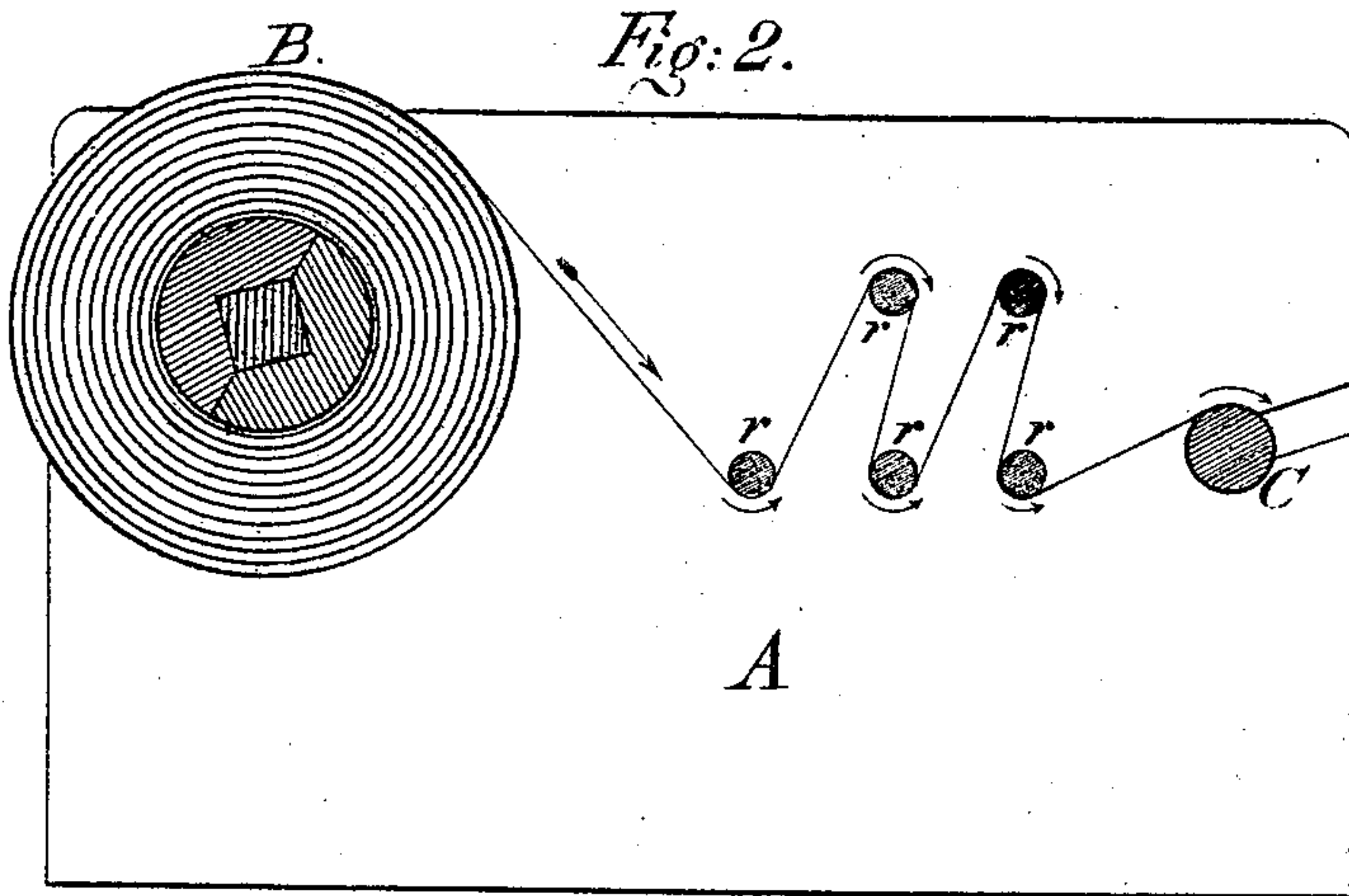


Fig: 2.



WITNESSES:

Geo. H. McKell.
G. H. Seaton

INVENTOR:

G. D. Harrington

UNITED STATES PATENT OFFICE.

GEORGE D. HARRINGTON, OF COLUMBUS, OHIO.

IMPROVEMENT IN APPARATUS FOR WINDING PAPER OR OTHER FABRIC IN ROLLS.

Specification forming part of Letters Patent No. 129,660, dated July 23, 1872.

To all whom it may concern:

Be it known that I, G. D. HARRINGTON, of Columbus, Franklin county, Ohio, have invented a Method and Apparatus for Winding Evenly and Compactly Paper or other Material, of which the following is a specification:

The object of the invention is to overcome the longitudinal inequalities of the material which prevent evenness in winding. The way and manner of this result are attained, and the devices employed are hereinafter set forth.

In the accompanying drawing, Sheet 1 represents the machine as adapted to winding the material from a loose or unwound mass. In Figure 1, a perspective view, A represents the sides or frame supporting the small rolls *r r r*, made of wood or other material, arranged in sets one above the other, parallel, and in numbers sufficient to give the requisite tension, and only so far apart as shall secure the best results. These rolls may be of uniform thickness, as shown in Fig. 3, but in order to secure the very best results should be slightly tapered from the center to each end, as shown in Fig. 2. The two kinds of rolls may also be combined, a part of one kind being used and a part of the other kind. The arrow marks represent the paper threaded through the machine. B represents the cylinder on which the paper is to be wound; C, the crank; D, the friction-wheels to hold the cylinder steadily in position; E, the spiral or other springs, as used in connection with cord for friction-bands on wheels D. Fig. 2 a longitudinal section of same machine, showing more plainly the size, position, and arrangement of the rolls and paper.

Sheet 2 represents the machine as adapted for use in connection with tabulating-machine

patented by C. W. Seaton February, 1872. In Fig. 1, a perspective view, A represents the sides or frame; B, the roll of paper, as wound by the machine represented on Sheet No. 1, from which the smaller roll C is to be wound for use in tabulating-machine; *r r r*, the series of small rolls arranged one above another in such numbers and at such distances apart as to secure desired results; D, the devices for friction-bands of spiral or other springs in connection with cords, used as represented; E, the friction-wheel, on which the band C works; F, the crank for winding. Fig. 2, longitudinal section, showing more clearly the size, number, and arrangement of the different rollers, also the paper threaded through the machine, as indicated by the arrows; Fig. 3, small roll with enlarged center; Fig. 4, small roll of uniform thickness.

I claim as novel in this invention—

1. The arrangement and combination of the above-described rollers *r r r* on Sheet 1, so as to offer such resistance to the material in winding as shall overcome the longitudinal inequalities, and wind it evenly, and give to it a greater or less degree of compactness, according to the number of rolls introduced, the accompanying devices allowing a part or all the rolls to be used.

2. I claim the combination of the above-described small rolls with the friction-wheels and bands, as set forth and described on Sheet 2, so as to obtain the same results when the material is wound from a roll instead of loose mass.

G. D. HARRINGTON.

Witnesses:

GEO. H. MCNEILL,
C. W. SEATON.