

No. 675,132.

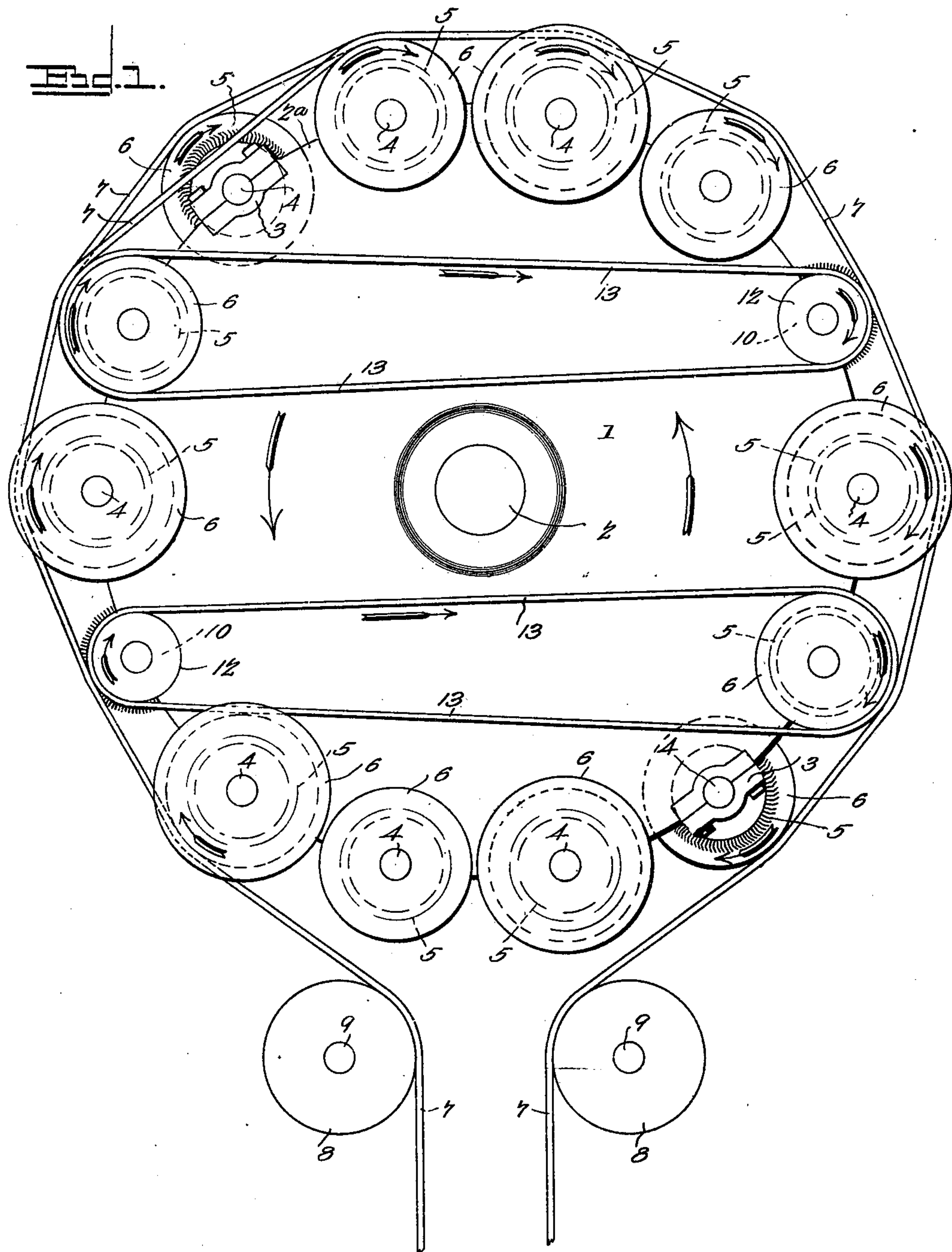
Patented May 28, 1901.

H. C. FOWLER.
NAPPING MACHINE CYLINDER.

(Application filed Mar. 8, 1901.)

(No Model.)

2 Sheets—Sheet 1.



Witnesses
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Attorneys

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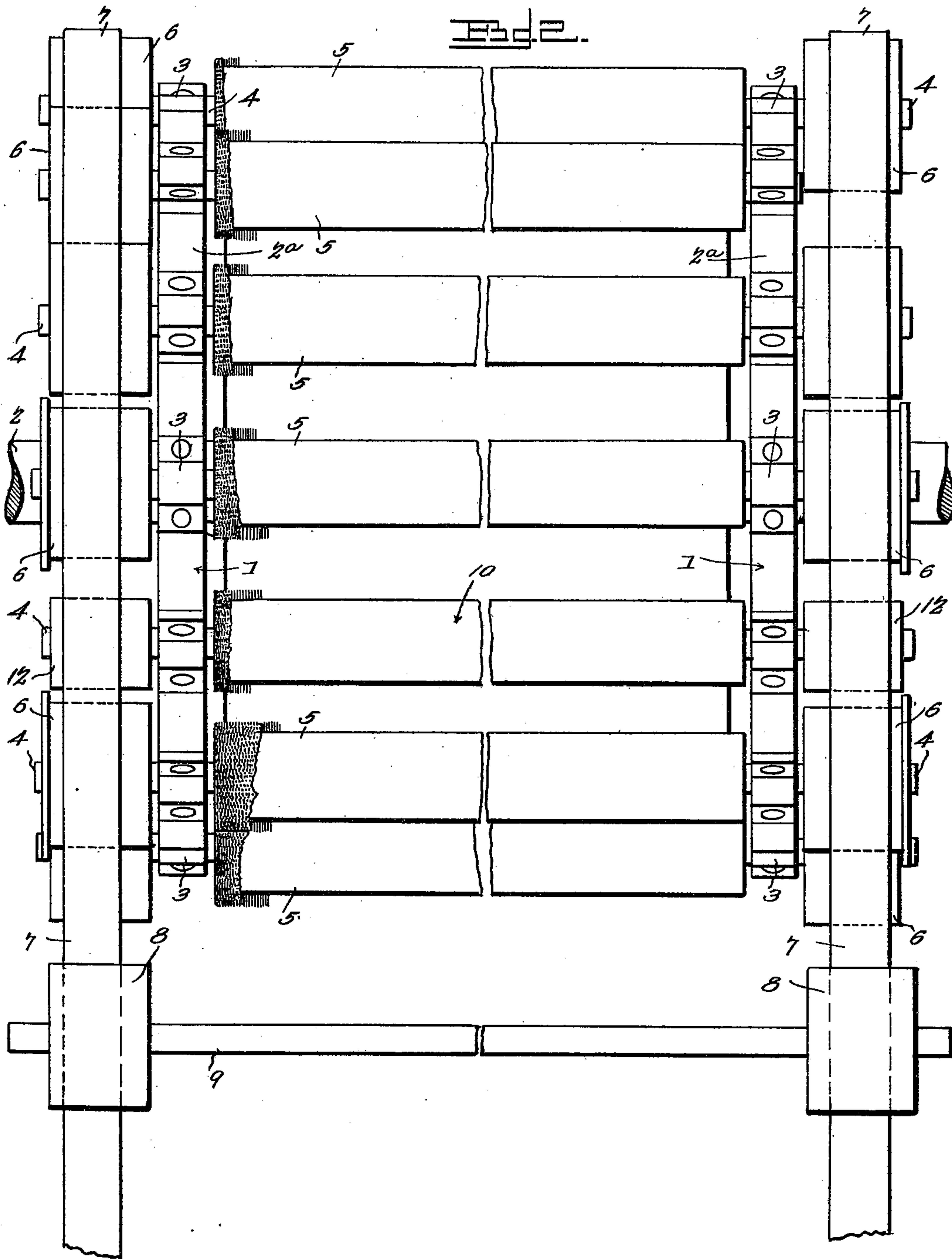
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UNITED STATES PATENT OFFICE.

HENRY CLAY FOWLER, OF BURLINGTON, NORTH CAROLINA.

NAPPING-MACHINE CYLINDER.

SPECIFICATION forming part of Letters Patent No. 675,132, dated May 28, 1901.

Application filed March 8, 1901. Serial No. 50,378. (No model.)

To all whom it may concern:

Be it known that I, HENRY CLAY FOWLER, a citizen of the United States, residing at Burlington, in the county of Alamance and State of North Carolina, have invented a new and useful Napping-Machine Cylinder, of which the following is a specification.

This invention relates to napping-machine cylinders; and the object of the same is to provide simple and effective means in connection with the cylinder whereby a short thick nap may be obtained by shearing the long and uneven portion off without materially disorganizing the ordinary or well-known form of cylinder on which napping-rollers alone are used.

The invention consists in the construction and arrangement of the several parts, which will be more fully hereinafter described and claimed.

In the drawings, Figure 1 is an end elevation of a cylinder embodying the features of the invention. Fig. 2 is a side elevation of the same broken through the center.

Similar numerals of reference are employed to indicate corresponding parts in the views.

The cylinder 1 designates the large or main cylinder, which is rotated in the direction of the large arrows (shown by Fig. 1) by a driving-shaft 2, adapted to be suitably controlled as to its motion or rate of speed, as will be readily understood by those skilled in the art. The cylinder has opposite heads 2^a and therein at regular predetermined intervals bearings 3 to rotatably receive the journals 4 of napping-rollers 5, which are provided with suitable clothing. The journals 4 are located at both ends of the rollers and have thereon a plurality of pulleys 6, one pulley on each journal, and some of the pulleys are flanged to retain the operating means therefor in contact therewith. The operating means for the pulleys consist of opposite end bands 7, which are drawn therearound with sufficient tautness and contracted under the main cylinder and caused to bear against the inner portions of oppositely-disposed pairs of idle pulleys 8, mounted on stationary shafts 9. The bands 7 are driven from a shaft below and impart a rotative motion to the pulleys 6 and the rollers 5 in a direction reverse to the movement of the main cylinder. With-

out further explanation the reasons for the movement of the cylinder and the rollers will be understood, and the particular features of the improvement reside in the provision of one, two, or more shearing-rollers 10, which are the usual brushing or napping rollers with the usual card-clothing stripped therefrom and replaced by clothing 11, having the points of the teeth angularly bent, as shown by Fig. 1. In the present instance two of the shearing-rollers are shown, and in preparing the brushing-rollers for this purpose the large pulleys 6 are removed therefrom and at one end a small pulley 12 is applied and engaged by transversely-extending belts 13, running from the larger pulleys 6 in alinement with the said smaller pulleys. In the present instance the proportions of the pulleys 12 and the pulleys 6, belted thereto, are in the ratio of two to one, or, in other words, the pulleys 12 are one-half the diameter of the pulleys 6, and thus the shearing-rollers are caused to revolve twice as fast as the brushing or napping rollers, and thus effectively shear the nap of the cloth presented to the cylinder 1 for treatment and produce a short thick nap, which is very desirable. The pulleys on the brush-rollers adjacent to the belts 13, which would interfere with the latter, are removed, as shown by Fig. 1, so as not to retard the operation of the belts 13 in the least.

By the improved arrangement of parts as set forth the driving means are condensed and the use of a series of mechanical parts adjacent to the main cylinder is avoided. A positive motion of the required rate of speed is imparted to the shearing-rollers without detracting from the operation of the brushing or napping rollers, and the expense incident to the change is reduced to a minimum. The cloth to be treated is applied in the usual manner, and the operation of shortening the nap can be expeditiously carried on without any particular or special attention after the parts are disposed as set forth.

Having thus described the invention, what is claimed as new is—

1. The combination of a main napping-machine cylinder, a plurality of napping-rollers mounted in and rotatable with said cylinder and also having an individual rotation reverse to that of the said cylinder, a shearing-

roller having a reduced pulley thereon, and a belt extending transversely across one end of the cylinder from a larger pulley on one of the napping-rollers to the reduced pulley on 5 the shearing-roller.

2. The combination of a main napping-cylinder, a plurality of napping-rollers mounted in and rotatable with said cylinder and also having an individual rotation reverse to that 10 of the said cylinder, said napping-rollers having pulleys, oppositely-disposed shearing-rollers having reduced pulleys, and transversely-arranged belts extending from two of

the larger pulleys on two of the napping-rollers to the said reduced pulleys of the shearing-rollers, whereby the latter are revolved 15 at a higher rate of speed than the napping-rollers.

In testimony that I claim the foregoing as my own I have hereto affixed my signature in 20 the presence of two witnesses.

HENRY CLAY FOWLER.

Witnesses:

ANNIE SHOFFNER,
CHAS. E. MCLEAN.