

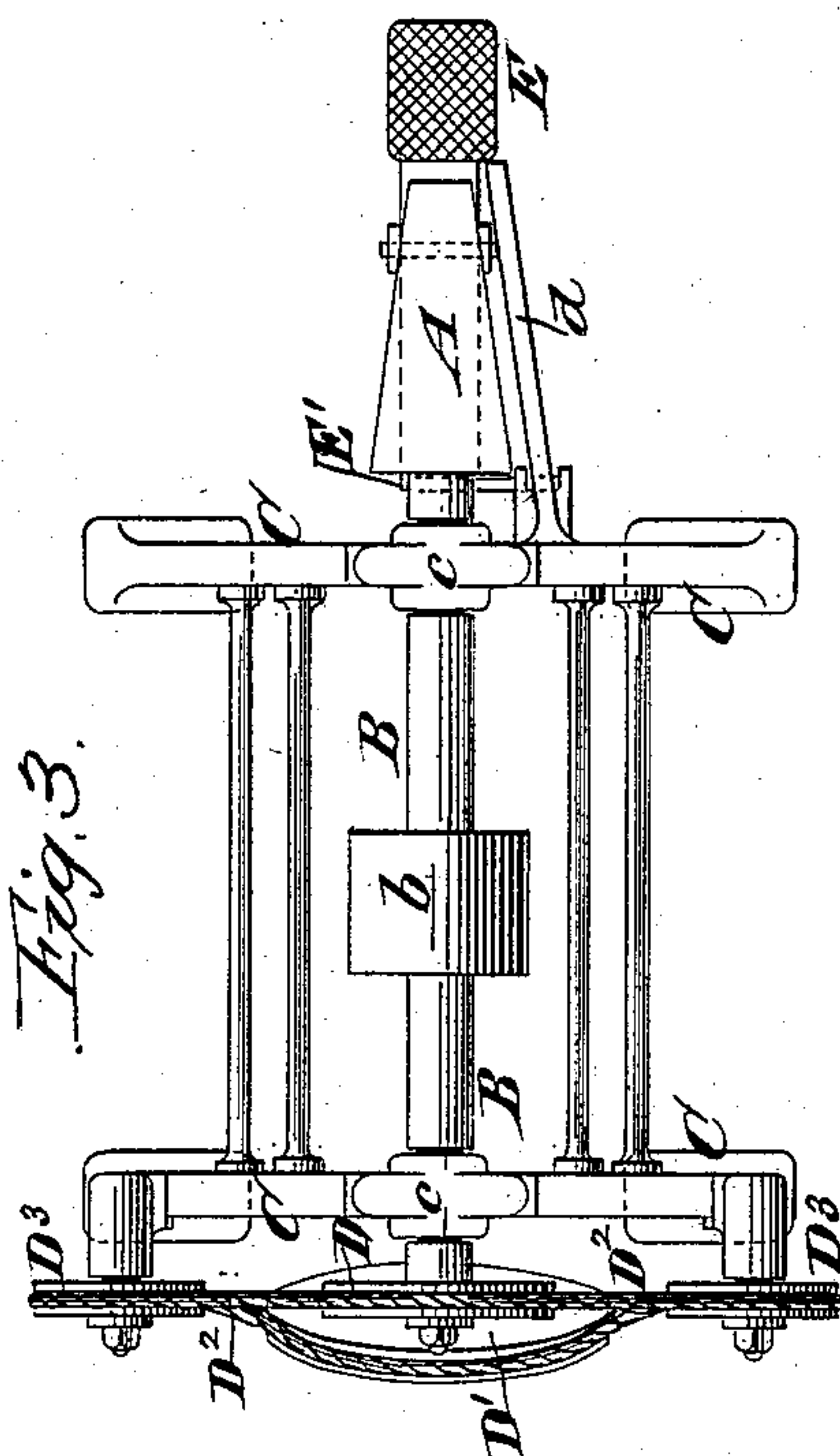
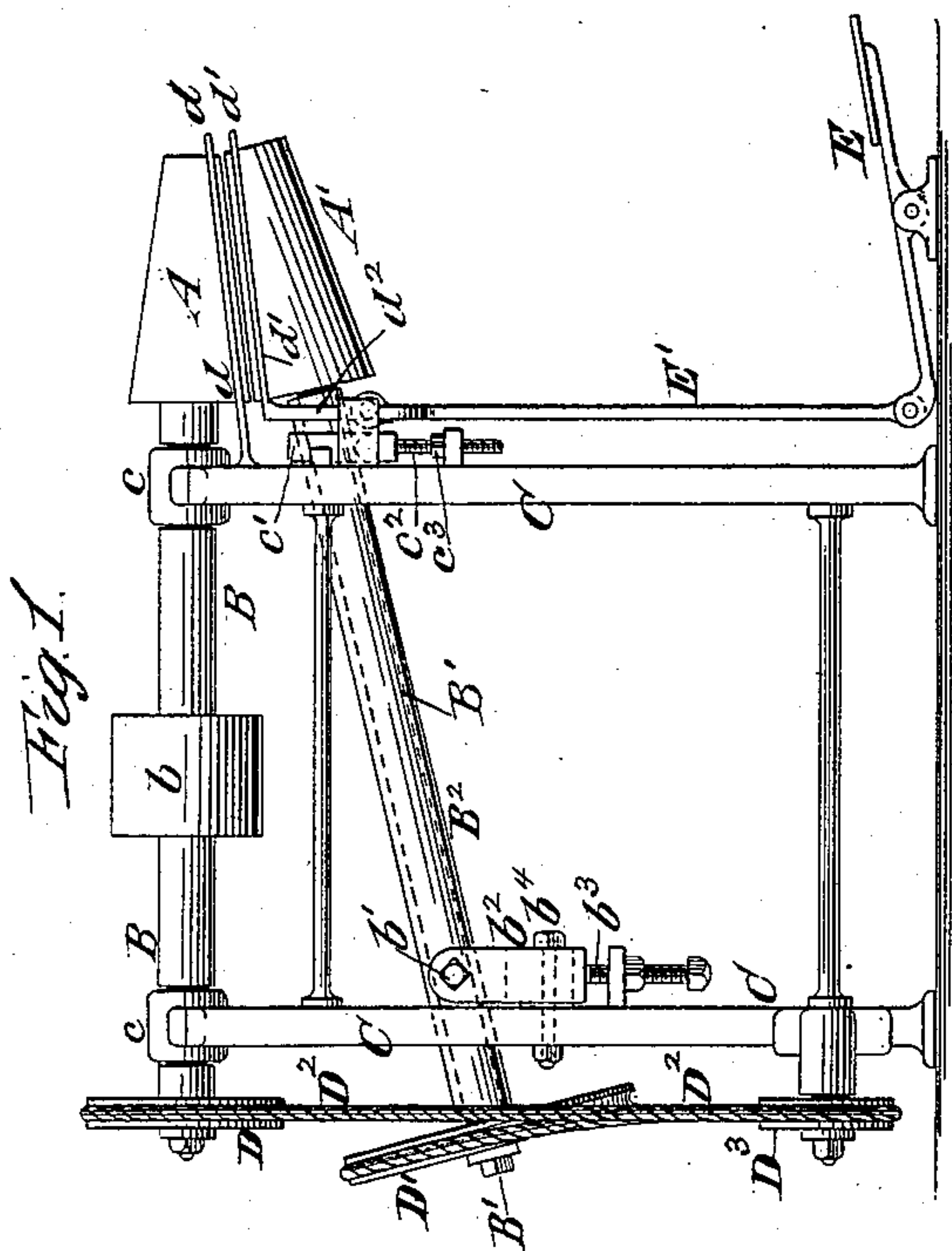
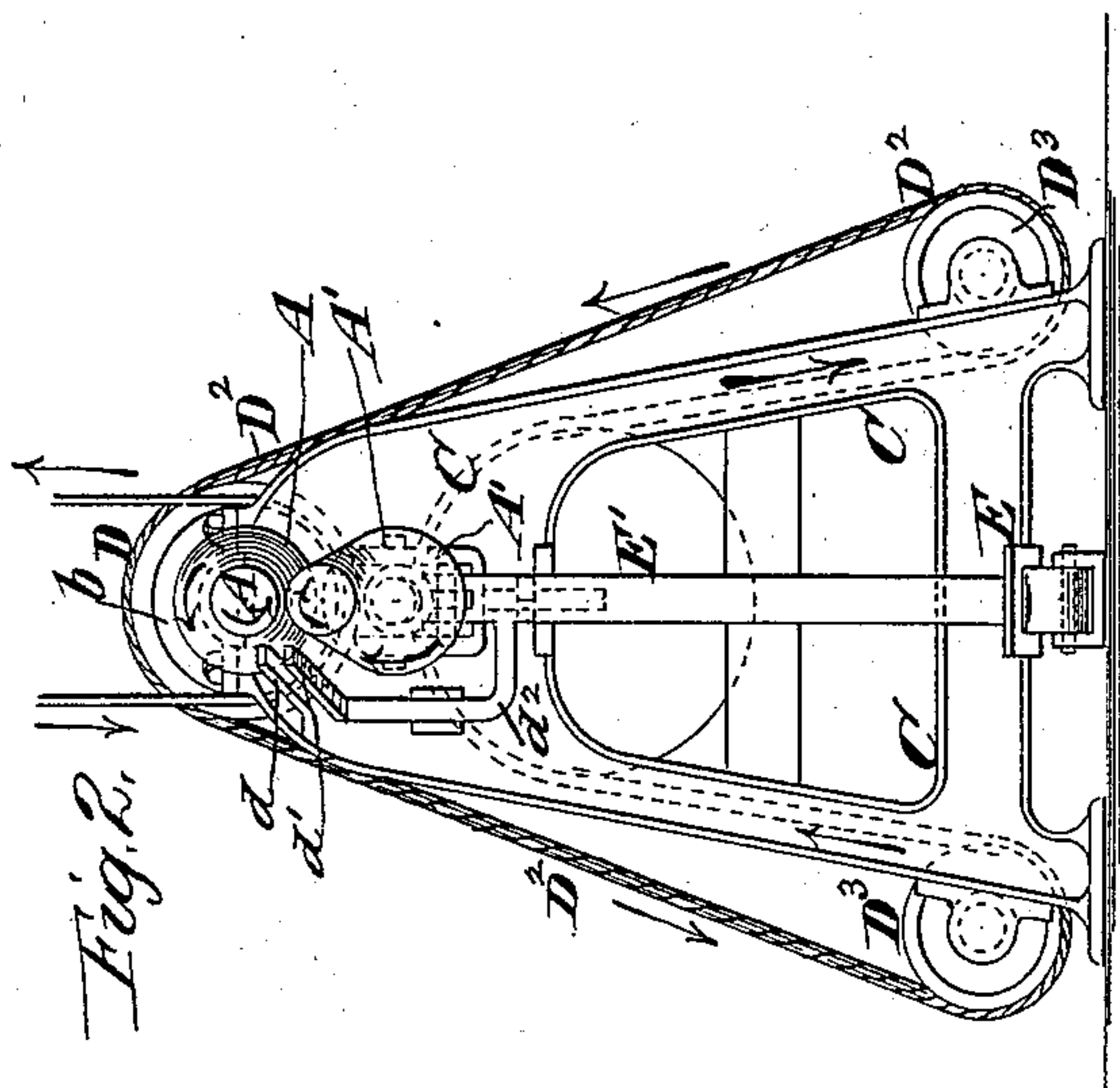
(No Model.)

J. C. WILSON.

ART OF POUNCING FELTED ARTICLES.

No. 363,930.

Patented May 31, 1887.



Witnesses.
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UNITED STATES PATENT OFFICE.

JOHN C. WILSON, OF YONKERS, NEW YORK, ASSIGNOR TO JOHN T. WARING,
OF SAME PLACE.

ART OF POUNCING FELTED ARTICLES.

SPECIFICATION forming part of Letters Patent No. 363,930, dated May 31, 1887.

Application filed February 10, 1887. Serial No. 227,115. (No model.)

To all whom it may concern:

Be it known that I, JOHN C. WILSON, of the city of Yonkers, in the county of Westchester and State of New York, have invented a new and useful Improvement in the Art of Pouncing Felted Articles, of which the following is a specification.

According to the methods heretofore practiced hats and other felted articles have been pounced by subjecting them to the action of rubbers while on a block on a rotary spindle, and in pouncing brims a bed which may be raised and lowered by a treadle, but is otherwise destitute of movement, has been employed for pressing the brim against a rapidly-rotating wheel or roller covered with sand-paper or other pouncing material.

My invention includes an improvement in the art of pouncing felted articles, consisting in subjecting both sides of the article simultaneously to the action of directly-opposed rotary cutting or pouncing surfaces.

The invention also includes an improvement in the art of pouncing felted articles, consisting in passing the article between directly-opposed endless pouncing-surfaces—such as rolls—each of which has a continuous and rapid rotation always in the same direction. The two endless pouncing-surfaces will usually be operated at different speeds—as, for example, the one surface or roller at about three thousand six hundred revolutions and the other at about two thousand six hundred revolutions—and the two rollers or surfaces may be driven so that their operative parts move in the same direction. In order to obtain the maximum result, I prefer to retard or pull back on the article as it is passed to and between them, and this result may be accomplished by the employment of a pair of clamps or frictional retarding devices or rolls.

In the accompanying drawings, Figure 1 is a side elevation of a machine which may be employed in carrying out my invention, and Figs. 2 and 3 are respectively an end elevation and a plan of the machine.

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

Machines of other forms than that hereshown may be employed for carrying out my inven-

tion; but that shown is sufficient for purpose of illustration. In this machine the pouncing-surfaces are formed by rollers or wheels A A', which have imparted to them a high speed of rotation by any suitable mechanism. As here represented, the upper roller, A, is upon a shaft, B, which has upon it a pulley, b, for the reception of a driving-belt, and is mounted to rotate in bearings c in a frame, C, of suitable construction. The lower roller or wheel, A', is upon a shaft, B', which in this example of my invention is journaled in a long sleeve, B². This sleeve does not rotate, but, as here represented, has at one end trunnions b', which have bearings in a box, b³, and the box may be raised and lowered by an adjusting-screw, b³, and held in place after adjustment by a clamping screw or bolt, b⁴. At its opposite end, adjacent to the roller A', I have represented a fork, c', which has a screw-threaded stem, c², and by a nut, c³, may be raised and lowered as desired.

Any suitable mechanism may be employed for rotating the rollers A A', which are covered with sand-paper or otherwise prepared to form pouncing-surfaces. As hereshown, the shafts B B' have pulleys D D', and D² is an endless driving-belt, which passes around said pulleys, and also around idler-pulleys D³, which give it proper direction, as shown in Fig. 2. The positive rotary motion imparted through the pulley b to the shaft B is by the belt D² transmitted to the lower shaft, B', and it will therefore be understood that in this example of my invention the two rollers A A' will be rotated in opposite directions, as indicated by arrows in Fig. 2, and hence the adjacent surfaces of the rollers will move in the same direction, and the rollers, being directly opposed, will pounce both surfaces of the brim at the same point simultaneously.

I find that the best results are secured by driving one roller faster than the other, and to secure this result I have shown the pulley D' as larger than the pulley D. This difference in size may be such as to cause the roller A to make from three thousand to three thousand six hundred revolutions per minute, and the roller A' from two thousand to two thousand six hundred revolutions per minute; but

I do not confine my invention to any particular speeds of rotation.

E designates a treadle connected by a rod, E', with the sleeve B², and by which said sleeve 5 and the roller A' may be raised to increase the pressure and pouncing action of the revolving surfaces on the brim of the hat introduced between them. The rollers A A', when rotated in the directions described, have a tendency to 10 feed or draw the hat-body forward, and it may be held back or retarded by hand to secure the necessary operation of the rollers or surfaces upon it. For this purpose I may employ a pair of clamps, d d', or other devices for holding back the hat or retarding the feeding or 15 forward movement of the hat which the rollers A A' tend to produce, or for otherwise regulating or controlling the feeding movement of the hat between the rollers, or for producing 20 such feeding movement. As here shown, the upper clamp, d, is fixed in position, and the lower clamp, d', may be raised and lowered by a rod-connection, d², from the treadle-rod E'.

In carrying out my invention both surfaces 25 of the hat or other article are operated on or pounced at the same time, and although the pouncing is rapidly performed the hat-body or other felted article will not be injured.

I am aware that a pouncing-roller has before been operated in connection with a stationary bed, and that one such roller and bed have been arranged in advance of another roller and bed, so that as the hat is fed along one face of its brim and then the other face 35 thereof is pounced. I do not include such a method of operation in my invention. According to my invention there are employed two directly-opposed rotary endless cutting or pouncing surfaces, which cut or pounce opposite faces of the brim at the same point simultaneously, each surface serving to support the 40 brim against the action of the other surface.

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

1. The improvement in the art of pouncing 45 felted articles, consisting in subjecting both sides of the article simultaneously to the action of directly-opposed rotary pouncing or cutting surfaces, substantially as herein described.

2. The improvement in the art of pouncing 50 felted articles, consisting in passing the article between directly-opposed endless pouncing-surfaces, each of which has a continuous and rapid rotary motion always in the same direction, substantially as herein described. 55

3. The improvement in the art of pouncing felted articles, consisting in passing the article between directly-opposed endless pouncing-surfaces having a rapid rotation and both moving in the same direction while in operation, 60 substantially as herein described.

4. The improvement in the art of pouncing felted articles, consisting in passing the article between directly-opposed endless pouncing-surfaces, each having a continuous rotary motion always in the same direction and the two moving at different velocities, substantially as 65 herein described.

5. The improvement in the art of pouncing felted articles, consisting in passing the article 70 between directly-opposed endless pouncing-surfaces having both a rapid rotation at different speeds and both moving in the same direction while in operation, substantially as herein described. 75

6. The improvement in the art of pouncing felted articles, consisting in passing the article between directly-opposed endless pouncing-surfaces, each having a rapid rotation always in the same direction, and in holding back on 80 the article or retarding its passage between the said surfaces, substantially as herein described.

JOHN C. WILSON.

Witnesses:

C. HALL,
JOHN T. WARING.