

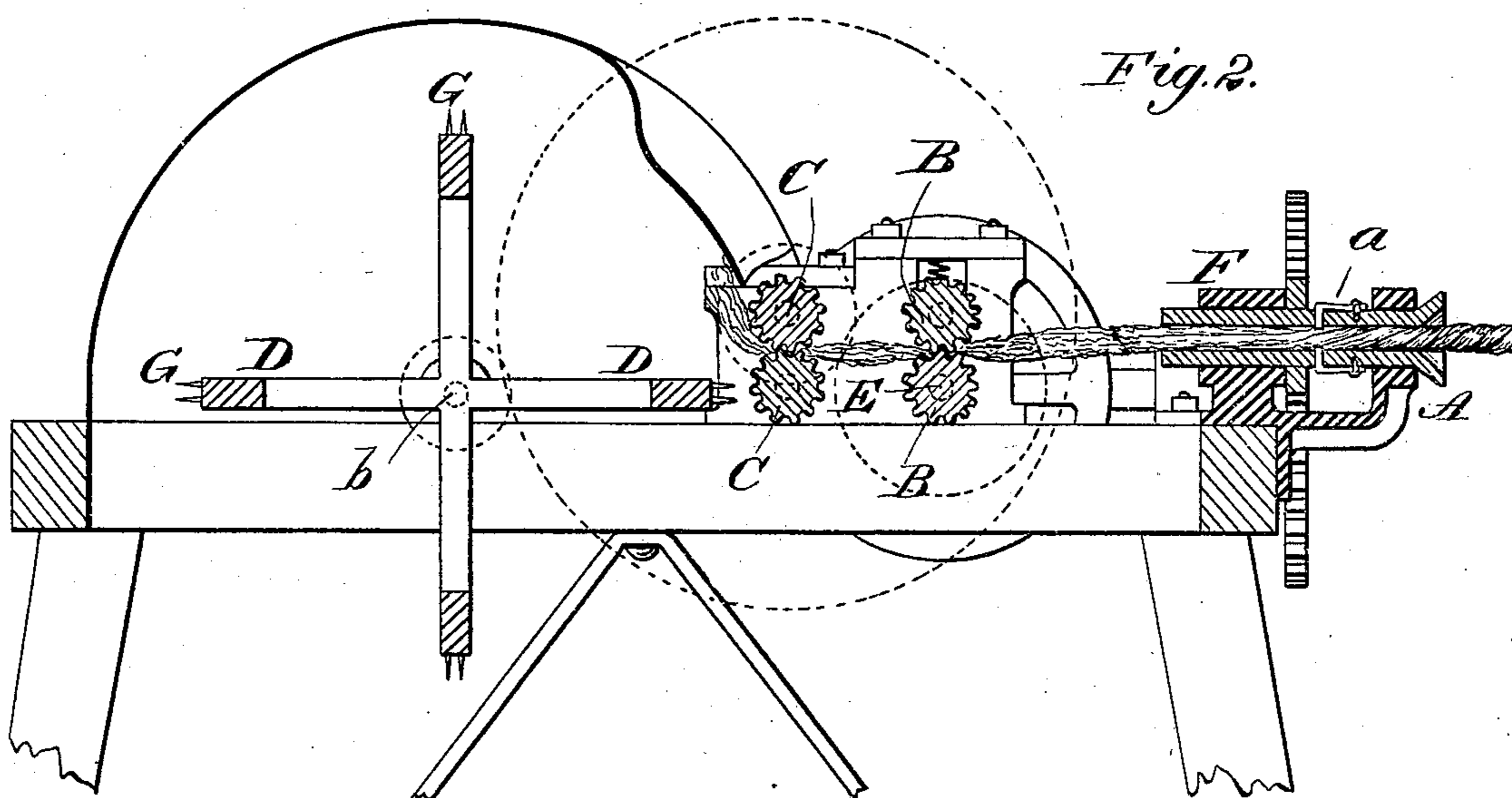
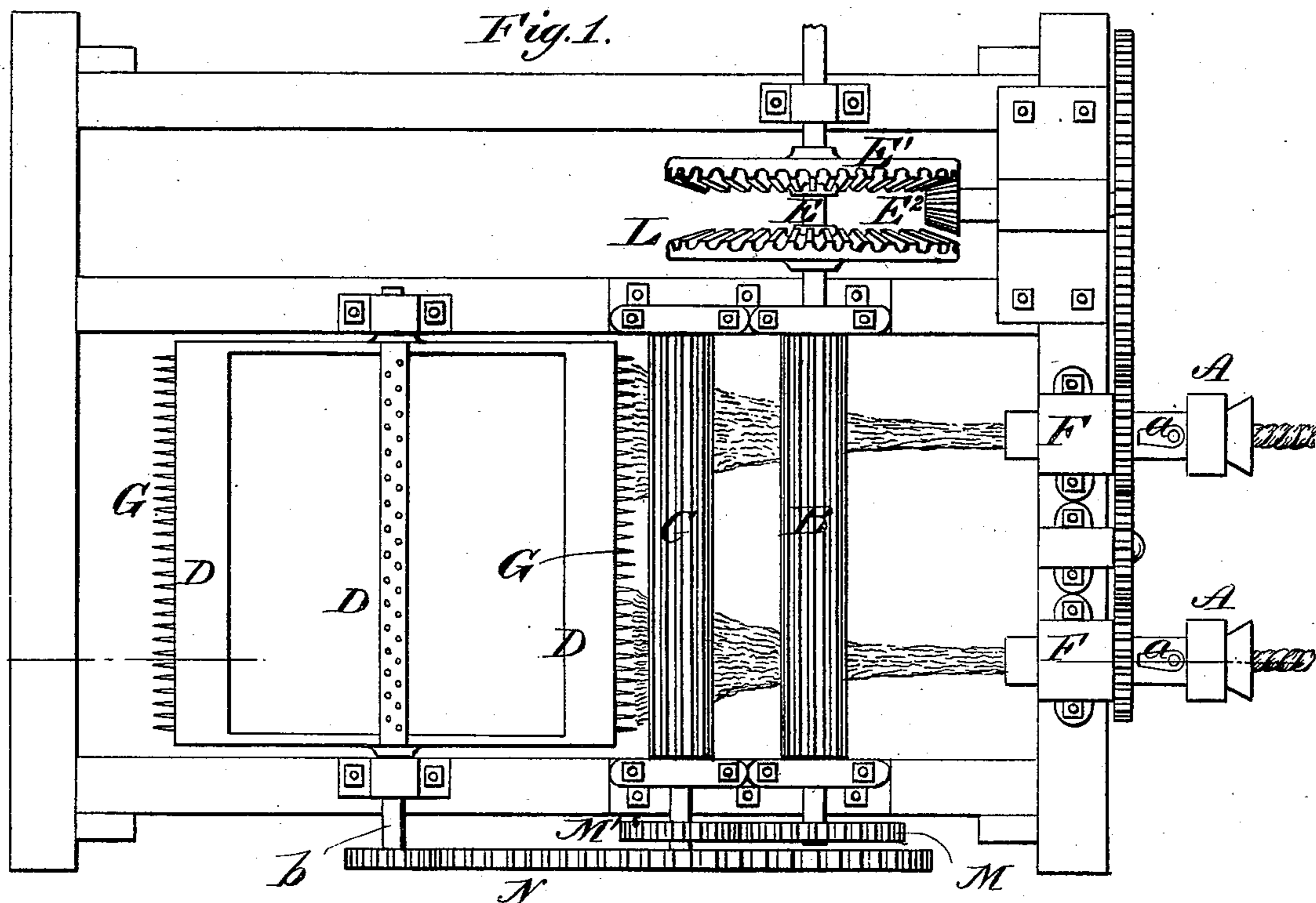
(No Model.)

T. ADCOCK.

MACHINERY FOR UNTWISTING AND CARDING CURLED HORSE HAIR.

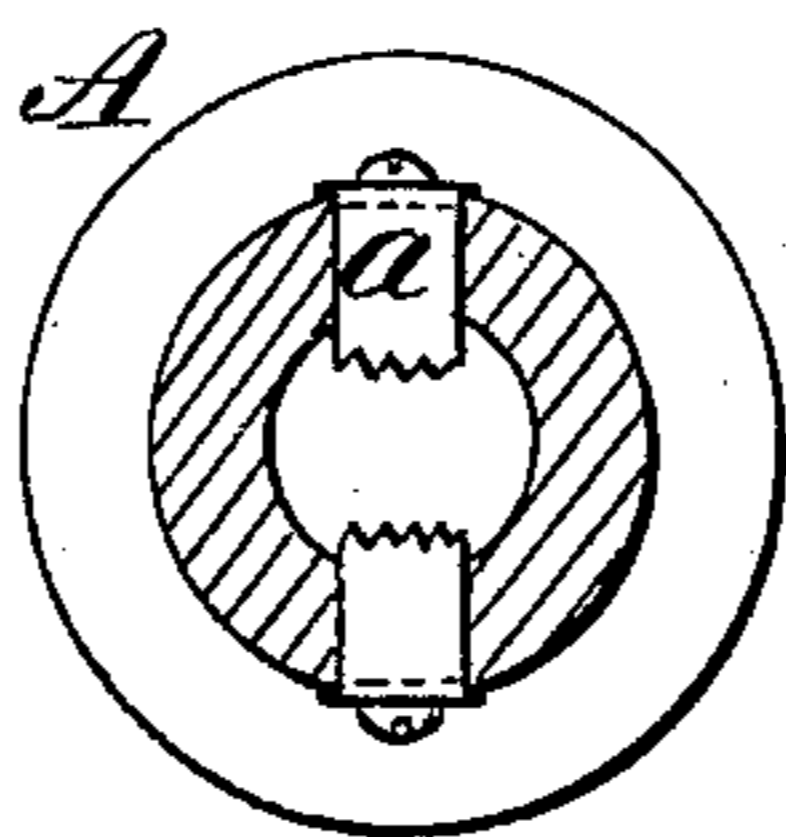
No. 254,583.

Patented Mar. 7, 1882.



WITNESSES:

Donn Twitchell.
C. Sedgwick



INVENTOR:

T. Adcock
BY *Mum & Co*
ATTORNEYS.

UNITED STATES PATENT OFFICE.

THOMAS ADCOCK, OF ADELAIDE, SOUTH AUSTRALIA.

MACHINERY FOR UNTWISTING AND CARDING CURLED HORSE-HAIR.

SPECIFICATION forming part of Letters Patent No. 254,583, dated March 7, 1882.

Application filed January 5, 1882. (No model.) Patented in South Australia March 1, 1880.

To all whom it may concern:

Be it known that I, THOMAS ADCOCK, of Adelaide, South Australia, have invented certain new and useful Improvements in Machinery for Untwisting and Carding Curled Horse-Hair, of which the following is a specification.

The object of my invention is to untwist ropes of horse-hair and to card the hair by a continuous operation in one machine.

10 Similar letters of reference indicate corresponding parts in all the figures.

In the drawings, Figure 1 is a plan view of the machine. Fig. 2 is a vertical longitudinal section of the same, and Fig. 3 is a cross-section of one of the untwisters.

15 The operating mechanism is mounted on a suitable frame. At one end of the frame are hollow spindles A A, fitted for revolution in boxes F, and provided with springs *a*, that have serrated edges.

20 B B and C C are two pairs of corrugated feed-rollers, sustained across the frame in suitable boxes. The upper roller B of the first pair is sustained in sliding boxes that are forced downward by spiral springs, as shown, so that the roller may adapt itself to the quantity of material passing through.

30 D is the beater, consisting of bars armed at the outer edges with small spikes G and attached to arms on a cross-shaft, *b*.

Power is applied to shaft E of lower roller B, on which shaft is a bevel-gear wheel, E', meshing with a bevel-pinion, E², that drives the spindles A by suitable gearing. On the other end of shaft E is a gear-wheel, M, engaging a smaller wheel, M', on the shaft of upper roller C, by which the rollers C are revolved nearly twice as fast as rollers B. N is a large gear-wheel on the shaft of roller C, meshing with a small pinion on shaft *b* of the beater. To obtain a reverse motion of the untwisters

in case the rope is wound the reverse of the usual way, I provide the shaft E with a second gear-wheel, L, in reverse of wheel E'.

In operation the hair rope is inserted in the mouths of the hollow spindles, and the springs *a* catch and hold the rope to cause it to turn with the spindles, while at the same time allowing the rope to be drawn away by the feed-rollers B. On leaving the ends of spindles A the rope is in an untwisted condition, and in that state it is carried by the rollers B to the second pair of rollers, which, being revolved at greater speed, draw the hair out loose, as indicated in the drawings, so that it is properly presented to the beater. The beaters act to draw the hair out and throw it beneath the machine carded and finished.

This machine will perform the work much more rapidly than can be done by hand and in a superior manner.

One, two, or more untwisters may be used as desired, and the machine driven by hand or other power.

I am aware that it is not new to feed the rope through a rotating tube which untwists it and through feed-rolls which deliver it to pickers; but

What I claim is—

The combination of the hollow spindles A, having serrated springs *a*, the fluted feed-rolls B B, the rolls C C, revolved at greater speed than the rolls B, and the beater D, said beater consisting of arms and bars provided with small spikes at their ends, whereby the hair rope, after being untwisted and the fibers loosened, is carded and finished, as described.

THOMAS ADCOCK.

Witnesses:

JNO. FAIRFAX CONIGRAVE,
ALBERT COLLINS.