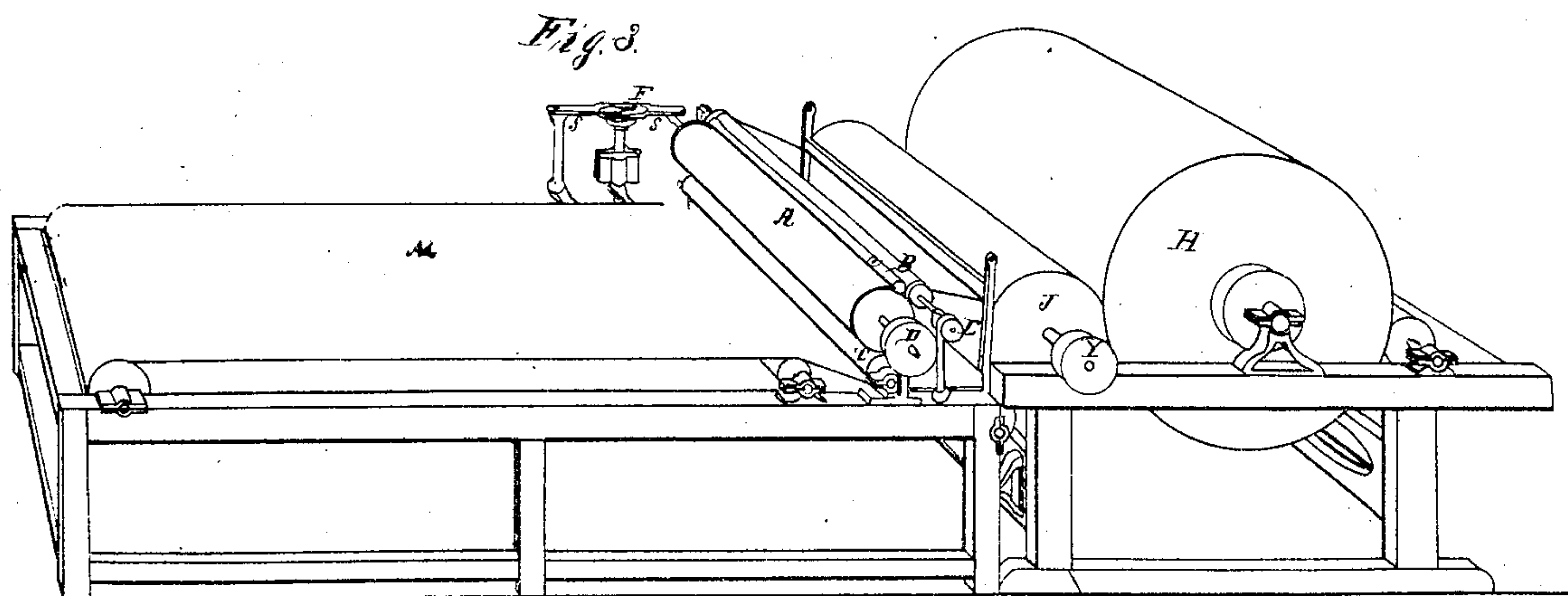
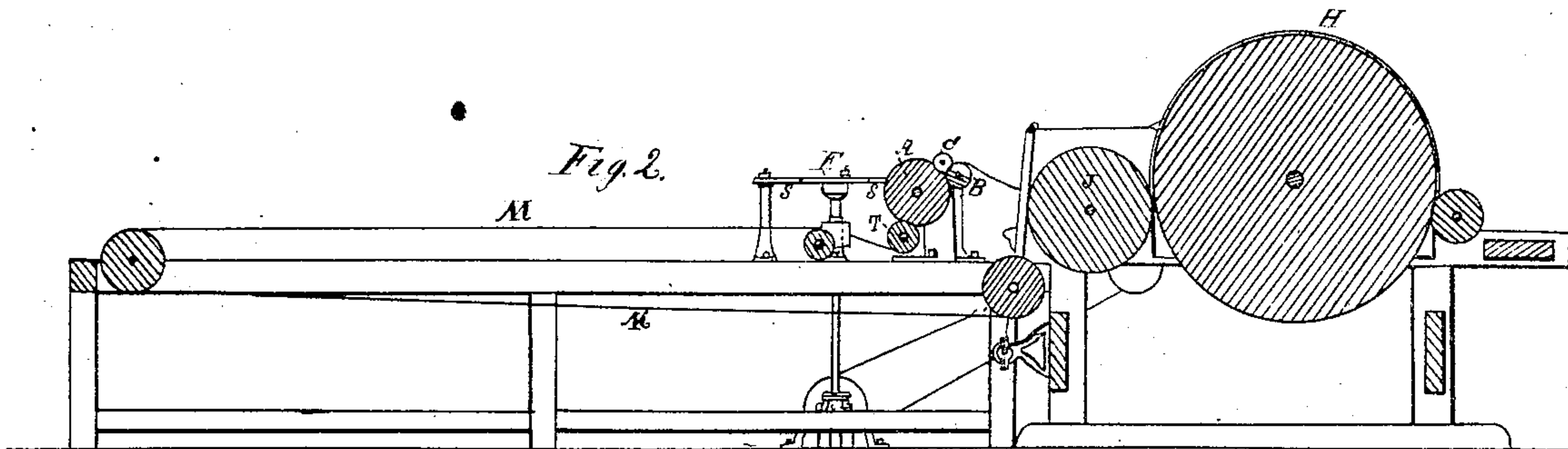
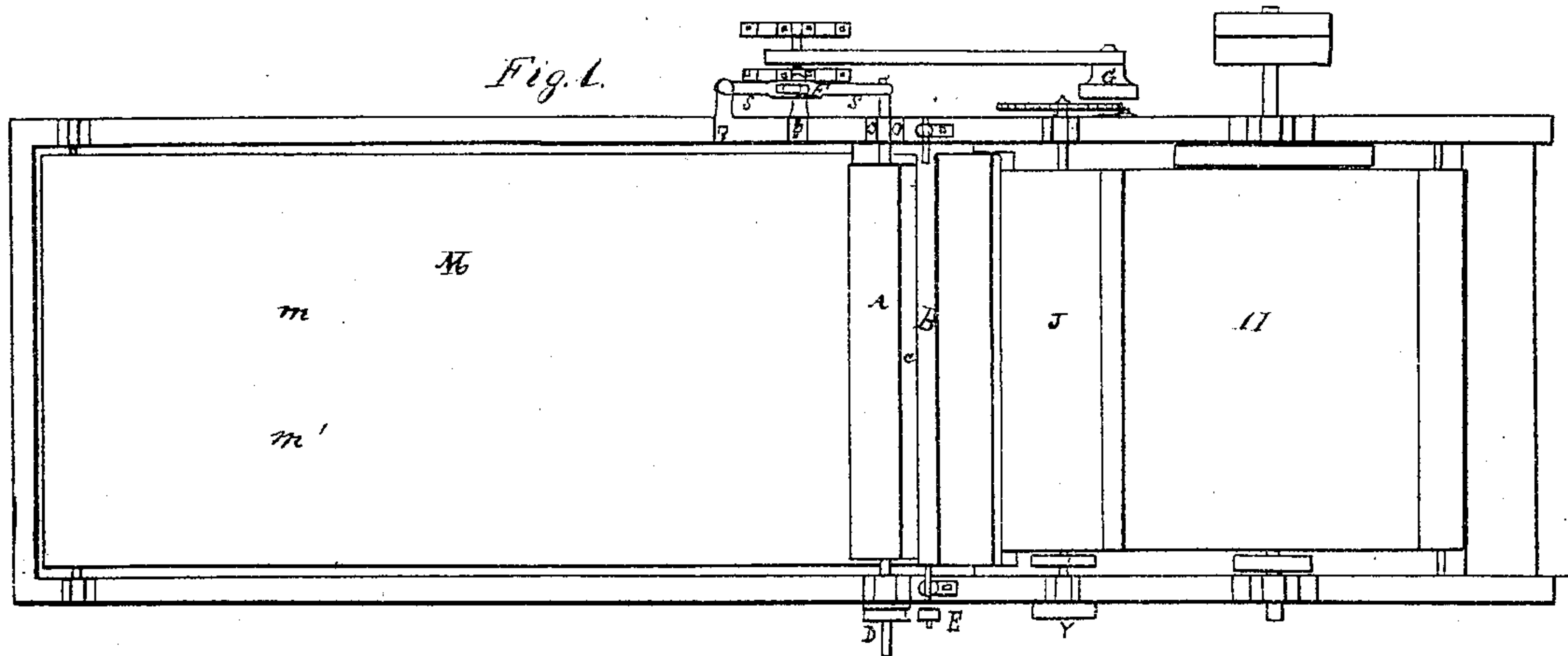


*J. H. Bloodgood.*

*Forming Bats.*

*N<sup>o</sup> 16431*

*Patented Jan. 20, 1857.*



*Witnesses.*

*Frank Bloodgood*  
*Deshner*

*Inventor.*

*J. H. Bloodgood*



# UNITED STATES PATENT OFFICE.

JOHN H. BLOODGOOD, OF NEW YORK, N. Y.

MACHINE FOR FORMING BATS FOR FELTING.

Specification of Letters Patent No. 16,431, dated January 20, 1857.

*To all whom it may concern:*

Be it known that I, JOHN H. BLOODGOOD, of the city of New York, in the county and State of New York, have invented a new and useful Improvement in the Machinery Used in Making Felt Cloth; and I do hereby declare that the following is a full, clear, and exact description of the construction and operation of the same, reference being had to the annexed drawings, making part of this specification, in which—

Figure 1 is a ground plan, including a partial representation of a carding machine, Fig. 2 a sectional elevation and Fig. 3 a perspective view of the same, the same letters designating like parts in each.

H is the main cylinder of a carding machine divested of the superfluous parts.

J is the doffer to the same.

B represents the carrying roller of the crossing machine. This roller (B) is designed chiefly to convey the web as it comes from the doffer to the card, in a right incline to the vibrating drum A and also to prevent the web from swaying with the vibrations of the drum, this roller may be about 3 or 4 inches in diameter.

A is a drum about eight or ten inches diameter revolving like the former at the same surface speed as the doffer, at the same time that it is caused to vibrate say about four to six inches lengthwise and four or five times for each revolution according to the amount of crossing desired or the angle at which it is desired to lay the fibers, the effect of these combined motions as it appears upon the drum is shown by the red lines in Figs. 1 and 3. The rotary motion of the two cylinders A and B may be conveniently given from the doffer shaft as shown in figures by pulleys D, E, and V and the vibrations produced by any of the usual methods. I have in practice adopted that show at F, being a crank motion upon an upright shaft, vibrating the lever S S and through it the drum A. The web being thus laid diagonally upon the drum, is next transferred to the endless apron M (of the usual form) which lies immediately beneath, which transfer will take place by the simple rotation of the drum when once the web is properly started, but is more effectually produced by the use of the intermediate roll T which rests upon, and is turned by the apron while it is held quite near (say about an inch) to the vibrating drum, thus preventing any

material loss of the angular position of the fibers by the sway of the web.

C is a light wooden or metal roll very smooth, and without a center shaft, it rests upon the two cylinders A and B Figs. 2 and 3 and vibrates with the former, it is about two inches diameter and serves to diminish the distance between the point where the web leaves B and that where it first touches A, to produce the best possible effect.

m Fig. 1 represents in red, the appearance of a single layer of the web upon the apron M m' the appearance of two layers (the usual number of layers being 15 to 25) showing the manner in which the crossing is effected.

In operating this machine, the several motions may of course be produced in various ways as may be most convenient, care being taken to regulate the speeds to accord with the speed of doffer and the angle required for the crossing. In starting the machine the web is first laid by hand across the two drums A and B, (the cylinder C being for the moment removed) when as it proceeds it is directed under the roll T to the endless apron, the roll C is then replaced and the traction of the several parts will then keep the web in place without further attention. The advantage of this arrangement is first its great simplicity, secondly the facility of adjusting the angle, and the perfect manner in which the crossing is done, while it does not interfere with the formation of a straight web if desired. The benefit of crossing the fiber thus is well known to felt manufacturers as improving the strength and quality of the fabric at the same time that it effects a saving of material.

Having thus fully described my improvement in machines for forming the bats for felting what I claim as my invention and desire to secure by Letters Patent is—

1. The combination of the rollers B and C with the vibrating drum A in the manner and for the purpose described.

2. I also claim the combination of the rollers B and C with the vibrating drum A and the roller T substantially in the manner and for the purpose specified.

JNO. H. BLOODGOOD.

Witnesses:

FRANK BLOODGOOD,  
C. DETHRIPS.