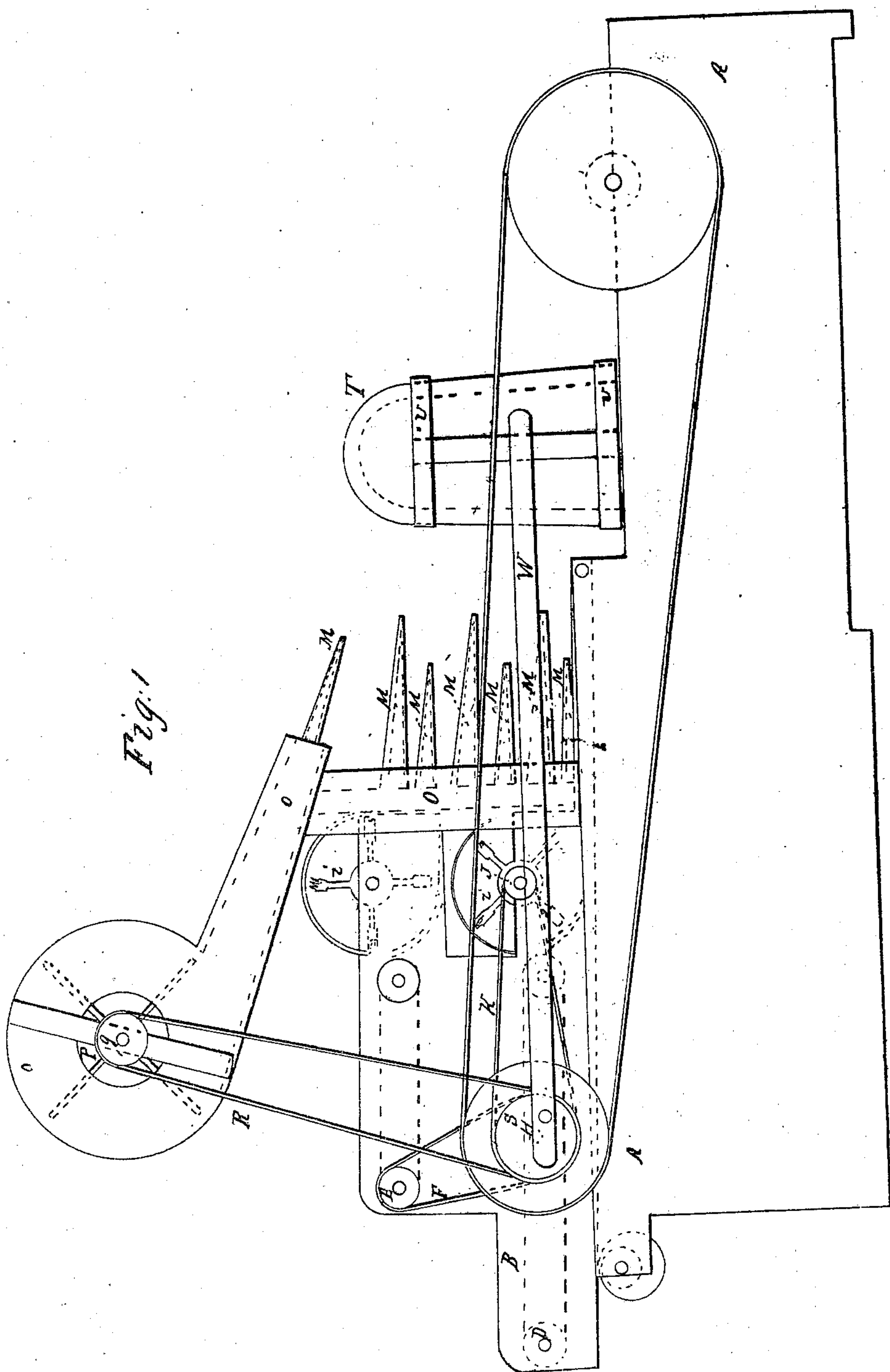


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Forming Bats.

N<sup>o</sup> 10832

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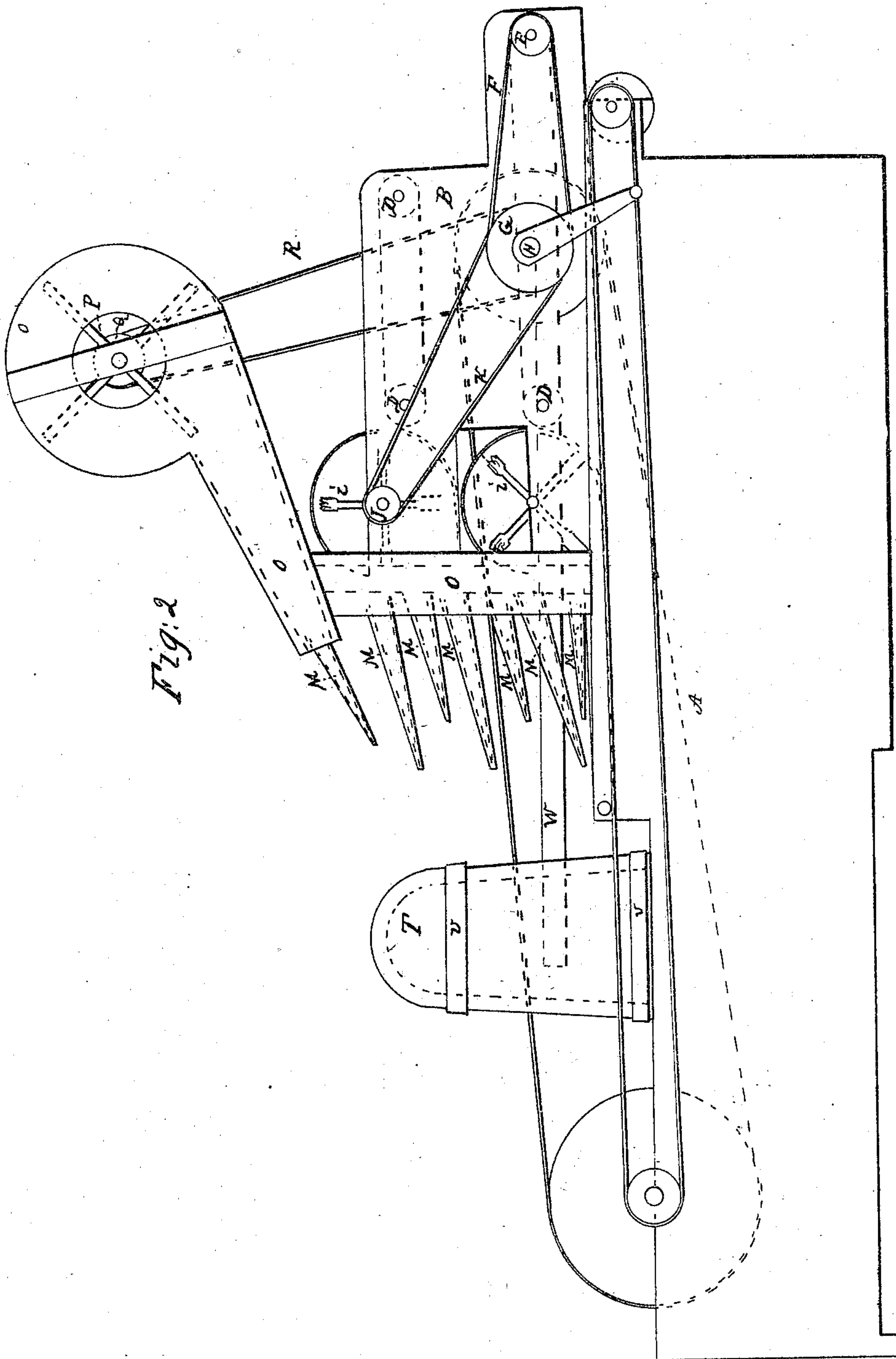


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Patented Apr. 25, 1854.





# UNITED STATES PATENT OFFICE.

A. SPENCER AND A. LOESCHNER, OF NEW YORK, N. Y.

## FORMING AND HARDENING HAT-BODIES.

Specification of Letters Patent No. 10,832, dated April 25, 1854.

*To all whom it may concern:*

Be it known that we, ALBERT SPENCER, of the city, county, and State of New York, and AUGUSTE LOESCHNER, of Brooklyn, Kings county, and State aforesaid, have invented certain new and useful Improvements in Machines for Forming Hat-Bodies; and we do hereby declare the following to be a full description of the same.

The nature of our invention consists in the use and arrangement of two or more sets of endless feed rollers and aprons and fan brushes in combination with a blower, and a series of blow pipes, so arranged in connection with the fan brushes as to cause the fur or wool to be thrown upon the former cone, and thereby form the hat body with more evenness than could otherwise be done if thrown upon the cone from the mouth of a funnel. But to describe our invention more particularly we will refer to the accompanying drawings forming a part of this schedule, the same letters of reference wherever they occur referring to like parts.

Figure 1, is the view of the right side of the machine. Fig. 2, is a view of the left side of the machine. Fig. 3, is a plan view of the machine. Fig. 4, is a detached view of the hardening case.

Letter A is the frame of the machine having at the front end of it side boards B, between which are arranged two sets of endless aprons C, C, running over and around rollers D. On the ends of these feed rollers are pulleys E, E, and are propelled by bands F, F, running around them, and on pulley G, on the main driving shaft H. Letters I, I, are the fan brushes. These fan brushes are propelled by a band K, running over pulleys on the ends of the shafts of the fan brushes, and around pulleys G, G on the main driving shaft H.

Letter O, is the fan blower case. This is arranged over the feed rollers and aprons, and has side tubes or reservoirs for confining the air, so as to cause it to be discharged through the series of blow pipes M to carry the fur or wool thrown off by the fan brushes to the forming cone.

P, is the fan blower, having on one end of

its shaft a pulley Q around which a band R, passes, and over a pulley S, on the main driving shaft H, for the purpose of rotating it.

Letter T, is the spring clasp hardening case for hardening the hat body when formed on the hardening cone, around this case are two clasp springs U, U, for the purpose of holding the case together. This case is lined with an india rubber lining or other elastic wadding V, made smooth so as not to injure the hat body while being hardened by the vibratory action given to it for that purpose by the connecting rod W, attached to it and to a crank pin on the main driving shaft pulley S, secured on the shaft H.

The operation of our invention is that when the fur is fed into the machine on the endless aprons, it is taken off the rollers as it passes in by the upper and lower fan brushes and thrown off again by them toward the forming cone, at the same time this is being done the fan blower causes currents of air to issue from the blow pipes toward the cone, and consequently forming a partial vacuum behind them causes the fur to fly forward till it is taken up by the currents of air which are so directed as to convey the fur directly upon the forming cone and is there held by the exhaustion of the air from the under side of it acting through the perforations of the forming cone as it rotates.

Having now described our invention we will proceed to state what we claim and desire to secure by Letters Patent of the United States.

What we claim is—

The use and arrangement of the series of blow pipes substantially as set forth, when used in combination with two or more fan brushes, and feeding apparatus, for the purposes heretofore set forth.

ALBERT SPENCER.  
A. LOESCHNER.

Witnesses:

CHARLES L. BARRITT,  
A. F. HOOK.