

J.C. Richardson.
Hat Pouncing Mach.
N^o 93,836. Patented Aug. 17, 1869.

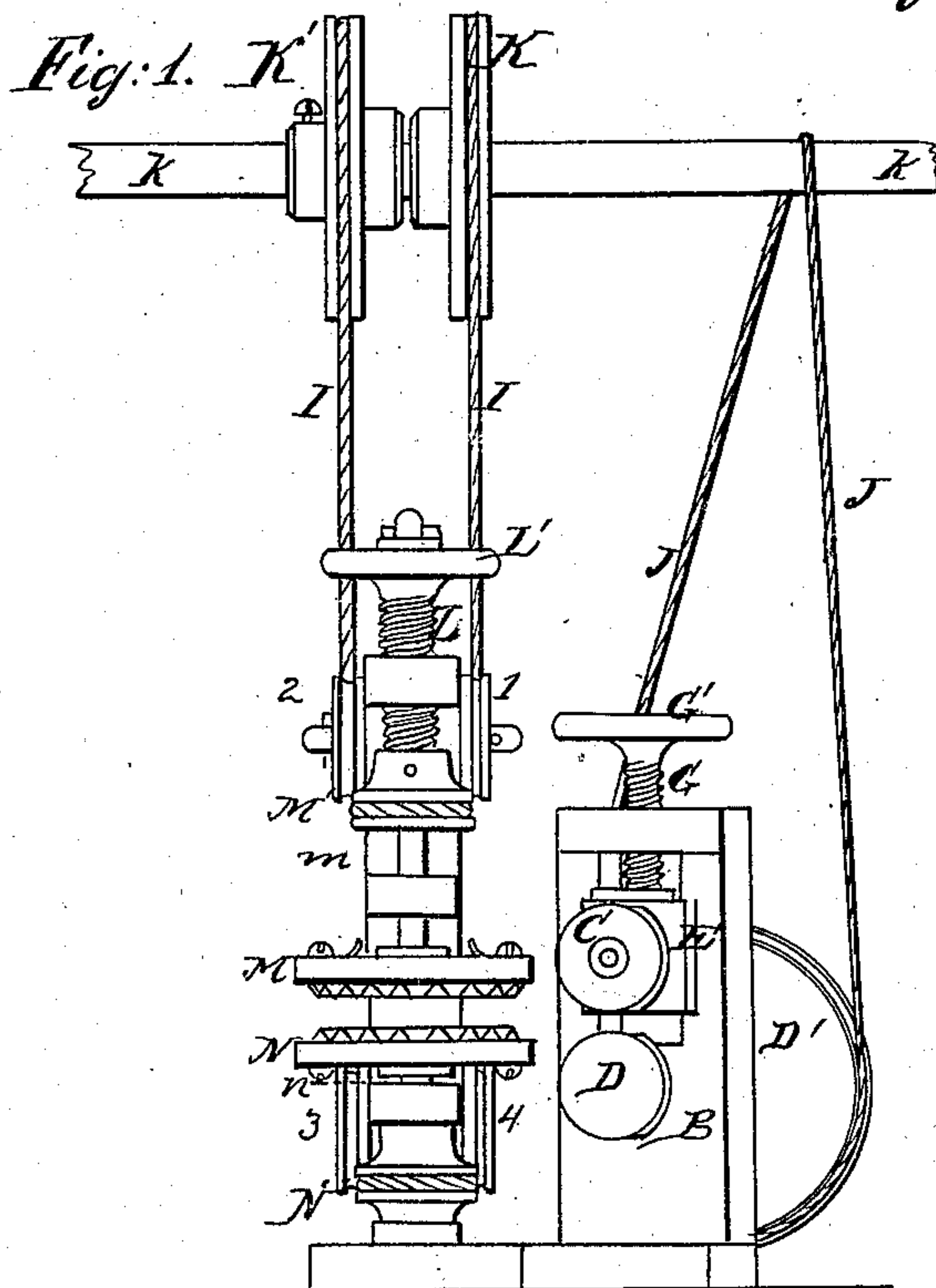


Fig: 2.

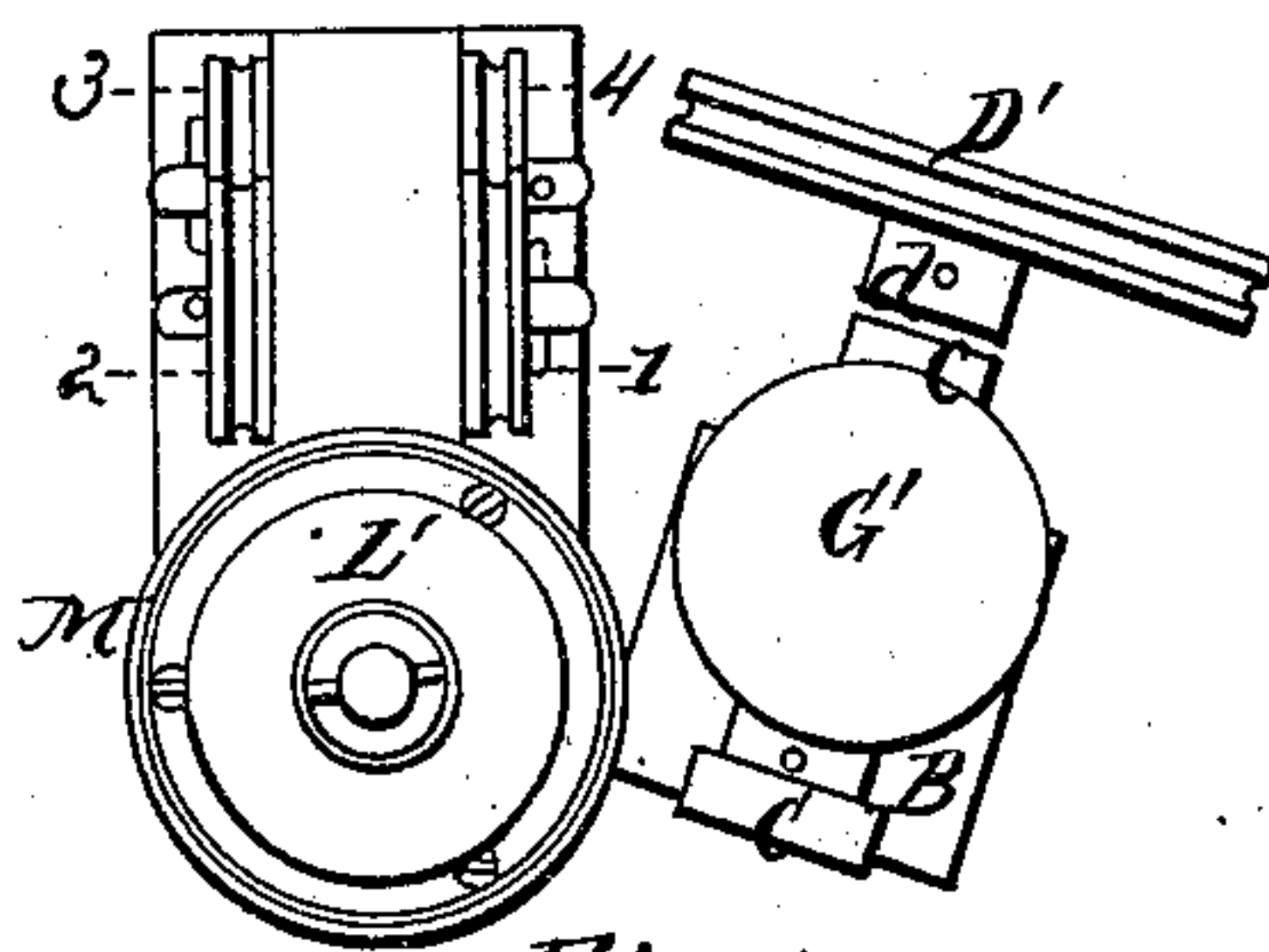


Fig: 3.

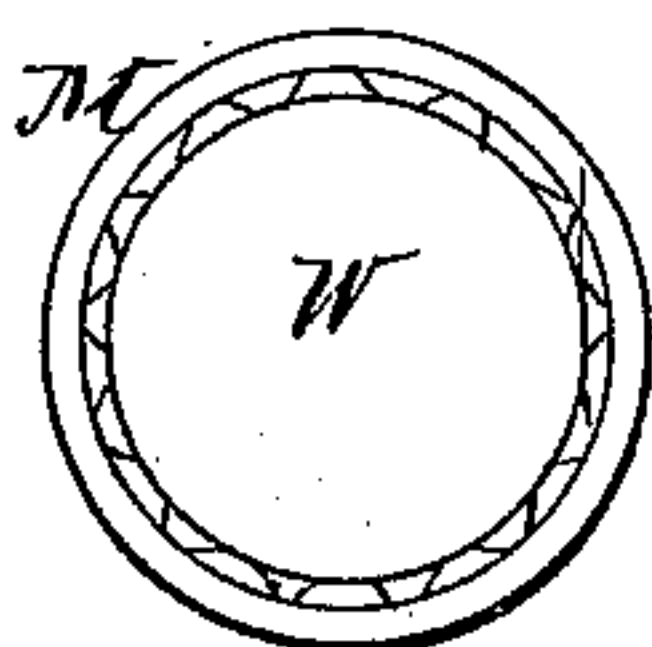
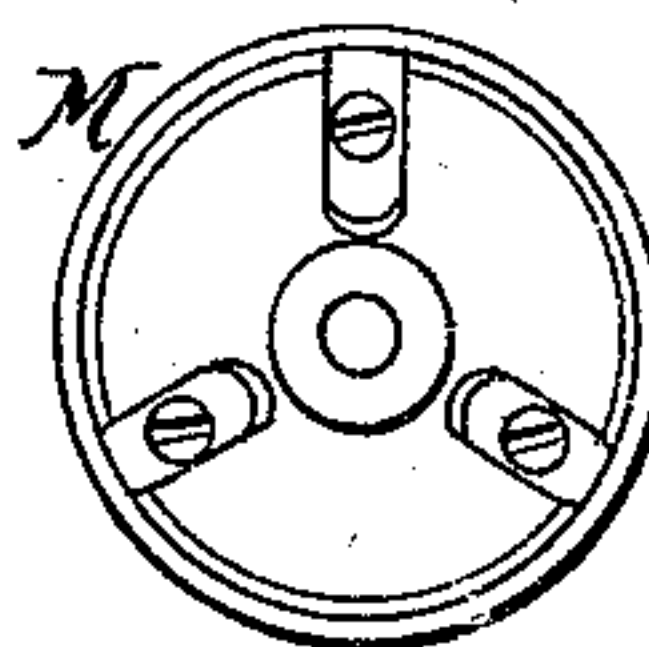


Fig: 4.



Fig: 5.



United States Patent Office.

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Letters Patent No. 93,836, dated August 17, 1869; antedated August 5, 1869.

IMPROVEMENT IN MACHINE FOR POUNCING HATS.

The Schedule referred to in these Letters Patent and making part of the same.

To all whom it may concern:

Be it known that I, JOHN C. RICHARDSON, of Newark, in the county of Essex, in the State of New Jersey, have invented certain new and useful Improvements in Machines for Pouncing the Brims of Hats; and I do hereby declare that the following is a full and exact description thereof.

I will first describe what I consider the best means of carrying out my invention, and will afterward designate the points which I believe to be new.

The accompanying drawings form a part of this specification.

Figure 1 is a front elevation, and

Figure 2 a plan view of the entire machine, together with a portion of a shaft, rotated by a steam-engine or other suitable power, not represented, which gives motion to the revolving parts by means of belts.

The additional drawings represent some of the details detached.

Figure 3 is a face view,

Figure 4 is a section, and

Figure 5 is a rear view of one of the wheels which carry the sand-paper or emery-paper which operates on the material of the hat.

Similar letters of reference indicate like parts in all the figures.

Tints are employed merely to aid in distinguishing parts, and do not, necessarily, imply material. The material of the principal parts may be iron and steel.

A is the fixed framing which supports the pouncing-wheels and their connections, and also supports the stand B, which carries the feeding-parts.

The pouncing is effected by means of horizontal wheels, M and N, mounted on vertical shafts, *m* and *n*. These wheels are provided with sand-paper, or analogous material, mounted in the wheels M and N, in the manner indicated in the figures. This mode of mounting the sand-paper, allows it to be secured and removed with great facility, as will be more fully described below.

The belt I gives motion to both the pouncing-wheels M and N, turning one in one direction, and the other in the opposite direction. The arrangement by which this is effected is peculiar.

K is a large pulley, firmly fixed on the shaft *k*, and turning therewith. The belt I is carried in a groove in this pulley K, and descending, passes around the idle-wheel 1; thence around the pulley M', which is fixed on the shaft *m*; thence around the idle wheel 2. This arrangement of the belt imparts a rapid motion to the pouncing-wheel M, in the direction indicated by the arrow.

The belt I extends up from the idle-wheel 2, over the idle-pulley K'. This pulley, it must be distinctly observed, is not fixed on the shaft *k*, but turns freely and loosely thereon, and turns in the direction oppo-

site to the fast pulley K. The belt I, after running over this idle-pulley K', which might, if desired, be mounted on a separate centre, independent of the shaft *k*, descends and passes around the idle-wheel 3. From thence it extends horizontally, and passes around the pulley N', which is fixed on the shaft *n*, and gives a rotation to the pouncing-wheel N, in a direction opposite to that of the pouncing-wheel M. From this pulley N', the belt extends around the idle-wheel 4, and from thence up to the point of starting, to wit, the pulley K.

It is desirable that the belt I be round, and that the grooves provided in the several pulleys and wheels be correspondingly formed; but I do not consider this absolutely essential.

The upper pouncing-wheel M is adjusted vertically as required, by means of the screw L, turned by the hand-wheel L'.

C and D are the feed-rollers.

The lower roller D is mounted in a fixed bearing in the stand B, and is rotated by means of a belt, J, coming from the shaft *k*, and running on the large pulley D'. This imparts a slow rotary motion to the lower feed-roller, or feed-wheel, D.

The upper and corresponding feed-wheel, C, is carried in an adjustable bearing-box, E, which is moved vertically in the frame B, by means of the screw G and the hand-wheel G'.

The shafts *c* and *d* may be geared together if desired, it being important to provide teeth of sufficient depth, or to provide some of the devices employed in clothes-wringers and analogous mechanism, to allow the shafts to approach and recede within proper limits, without losing the connection of the gears with each other.

In operating my invention, the brim of the hat is introduced between the horizontal wheels M and N, and the upper wheel M is depressed, to cause the wheels to properly act. In this condition, the upper wheel tends to move the brim in one direction, and the lower wheel tends to move it in the opposite direction. The result is, a rapid and effective dressing of the surface, without any decided tendency to move the hat in either direction.

In order to feed the hat around properly, and present all parts of the brim to this treatment, the stand B and its connections are employed. The feed-rollers C and D are made to act, the one on the upper, and the other on the under surface of the brim, and, by their slow rotation, they traverse the hat slowly around, it being guided by the attendant in a manner which is readily acquired by practice. In introducing the hat, it is necessary to raise both the upper pouncing-wheel M and the upper feed-wheel C. After the brim of the hat is properly introduced between the wheels M and N, and also between the wheels C and D, the up-

per wheels are depressed on the lower by the screws represented. It is well to operate the screw G before the screw L.

The pouncing-wheels are each constructed as follows:

There is a screw-thread on the end of each of the shafts *m* and *n*, which is adapted to fit in a female screw in the main body of the pouncing-wheel. This main body is denoted by *P*. Its edges are bevelled, as represented at *p'*, and it is encompassed by a correspondingly-bevelled ring *R*. This ring is of such depth that its rear edge extends a considerable distance back of the rear face of the part *P*. This projecting rim is grooved on its interior, as indicated by *r*.

A series of strong buttons, *V V V*, fitted to turn on the pins *v*, on the back of the piece *P*. The ends of these buttons catch in the groove *r*, and lock the parts firmly together, confining the sand-paper,

emery-paper, or analogous material, in the manner indicated in figs. 3, 4, and 5.

The sand-paper is marked *W*. It is notched or scalloped at its edges, to adapt it to better apply on the bevelled edge of the part *P*.

Having now fully described my invention,

What I claim as new, and desire to secure by Letters Patent, is as follows:

I claim the wheels *M* and *N* revolved in opposite directions, and acting in positions opposite each other, as shown, in combination with the feed-rolls *C D*, all arranged for joint operation as and for the purpose herein set forth.

In testimony whereof, I have hereunto set my hand, in the presence of two subscribing witnesses.

Witnesses: JOHN C. RICHARDSON.

W. C. DEY,

C. C. LIVINGS.