

JAMES HOTHERSALL.

Improvement in Carpet Beaters.

No. 125,815.

Fig. 1.

Patented April 16, 1872.

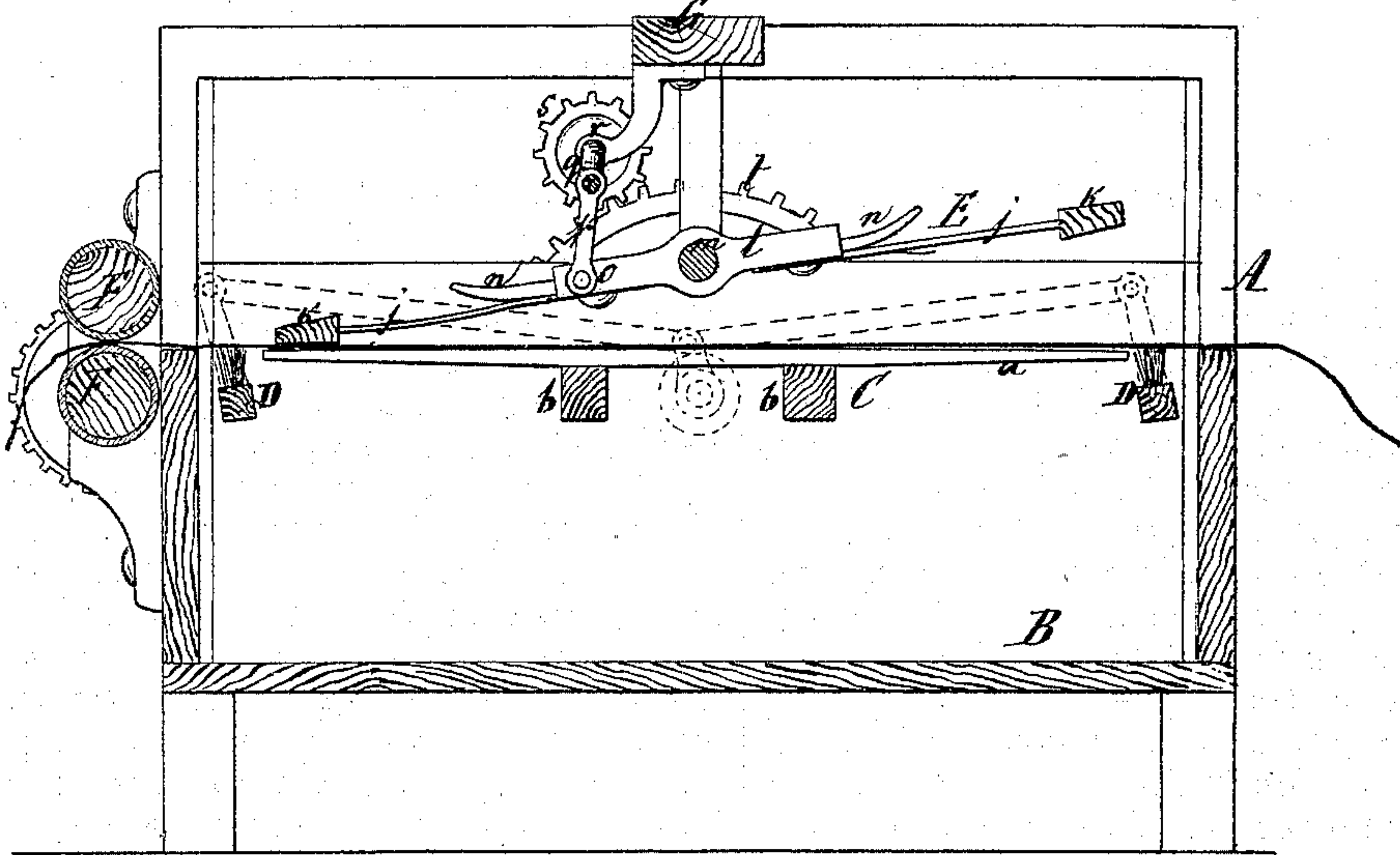
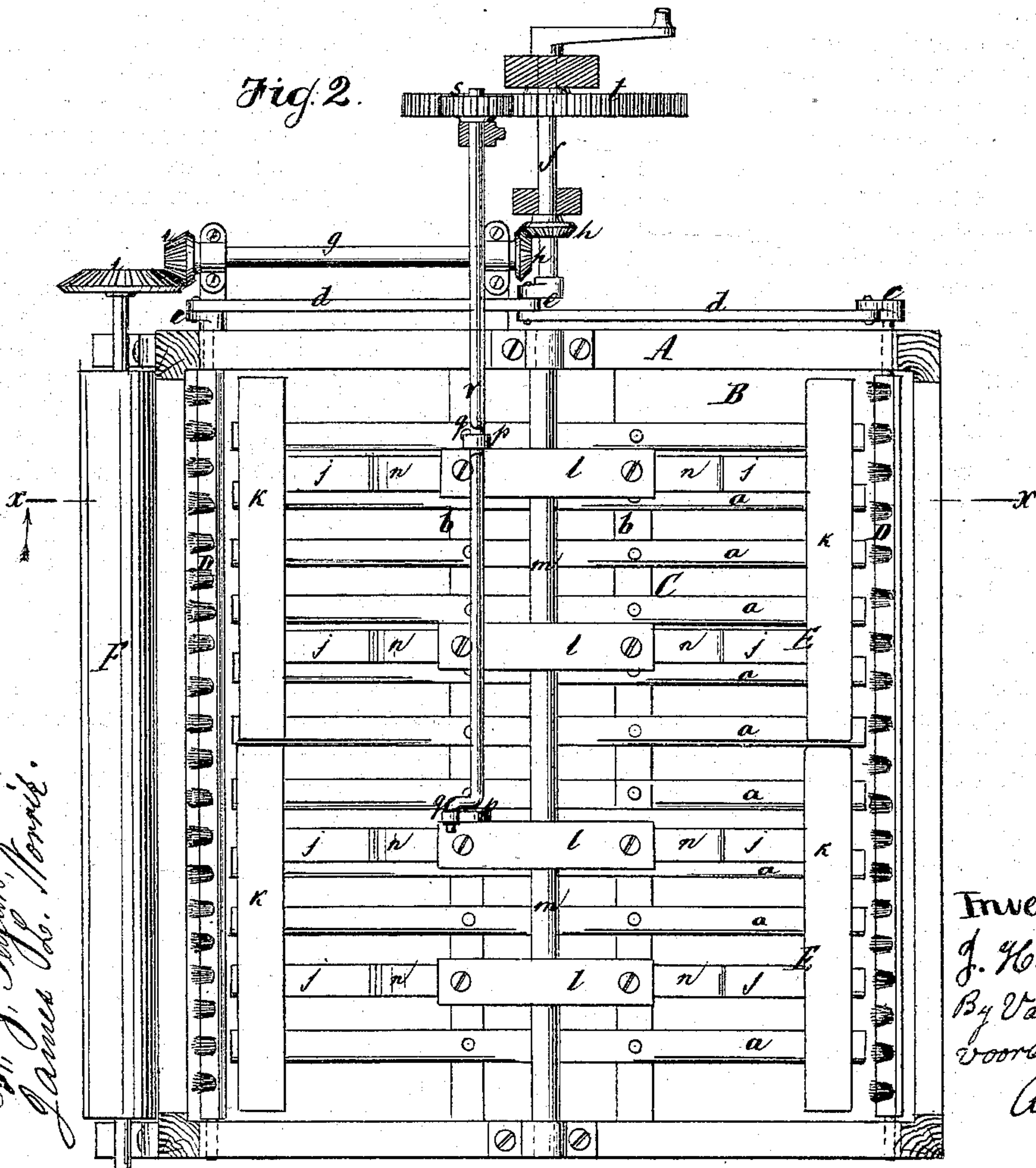


Fig. 2.



Witnesses
W. J. Taylor, Morris.
James Co. Morris.

Inventor.
J. Hotheralls.
By Vauant -
voord & Hauff.
Atty.

UNITED STATES PATENT OFFICE.

JAMES HOTHERSALL, OF NEW YORK, N. Y.

IMPROVEMENT IN CARPET-BEATERS.

Specification forming part of Letters Patent No. 125,815, dated April 16, 1872.

To all whom it may concern:

Be it known that I, JAMES HOTHERSALL, of the city, county, and State of New York, have invented a new and Improved Carpet-Beater; and I do hereby declare the following to be a full, clear, and exact description thereof, which will enable those skilled in the art to make and use the same, reference being had to the accompanying drawing forming part of this specification, in which drawing—

Figure 1 represents a transverse vertical section of my invention in the line *x x*, Fig. 2, and looking in the direction of the arrow opposite to that line. Fig. 2 is a sectional plan or top view of the same.

Similar letters indicate corresponding parts.

This invention consists in the arrangement of one or more oscillating beaters composed of elastic arms and cross-bars, and operated from a crank-shaft which connects with a beater or beaters close to their fulcrum, in combination with a yielding bed over which the carpet is fed, and which is constructed of elastic slats fastened to a central cross-bar in such a manner that by imparting to the crank-shaft a revolving motion a series of rapid, short blows are inflicted on the carpet, while at the same time the slatted yielding platform prevents the carpet from sustaining any injury, and the spaces between the slats of the platform allow the dirt which is disengaged by the blows of the beaters to drop down. The elastic arms of the beaters are secured in sockets formed in the ends of boxes, which are firmly mounted on oscillating shafts, and from which also project curved abutting pieces which serve to keep the beaters in proper working order.

In the drawing, the letter A designates a frame, in the lower part of which is formed a box, B, to receive the dirt which is disengaged from the carpet by the action of the beaters and brushes. On this box is secured a platform, C, formed of a series of yielding slats, *a a*, which are fastened down upon beams *b b* extending from one end of the box to the other, and at a short distance apart, so that the ends of the slats extend beyond said beams in both directions, and thereby a certain degree of elasticity is imparted to the platform, and at the same time the open spaces between the slats allow the dirt to drop down into the box B.

Opposite each end of the yielding slats *a a*, and close to the same, I have placed a brush, D, and these brushes are mounted on rock-shafts which connect, by arms *c c* and rods *d d*, with a crank, *e*, on the driving-shaft *f*, (see Fig. 2,) so that by imparting to said driving-shaft a revolving motion an oscillating motion is imparted to the brushes C, and while the upper surface of the carpet is exposed to the action of the beaters E, its lower surface is exposed to the action of the oscillating brushes D. The carpet is drawn through the machine by the action of feed-rollers F F, which receive the required motion from the driving-shaft *f* by an intermediate shaft, *g*, which connects with the driving-shaft by bevel-wheels *h h*, and with the feed-rollers by bevel-wheels *i i*. The beaters E are composed of elastic arms *j j*, to the outer ends of which are secured cross-bars *k k*. The elastic arms *j j* are secured in the ends of boxes *l l*, which are firmly mounted on rock-shafts *m m*, and from these boxes also project curved abutting pieces *n n*, which prevent the elastic arms from bending suddenly at the ends of the boxes, and from getting broken. In the sides of the boxes *l l* are secured pins *o*, Fig. 1, which connect by means of rods *p p* with cranks *q q* in a shaft, *r*, that has its bearings in hangers secured to a beam, G, extending over the top of the frame A. On said shaft is mounted a pinion, *s*, which gears in a large cog-wheel, *t*, mounted on the driving-shaft, so that, if the driving-shaft is turned, the motion imparted to the crank-shaft *r* is multiplied, and the beaters are caused to oscillate with considerable rapidity. By connecting the cranks of the shaft *r* with the beaters close to the fulcrums, the blows produced by the beaters are short and sharp.

In the drawing, I have shown two beaters arranged side by side, and the cranks *q q*, which impart motion to these beaters, are set at an angle of ninety degrees (more or less) toward each other, so that the beaters do not act simultaneously; but it is obvious that my machine may be provided with one or more beaters, according to the width of the carpets to be cleaned.

By this machine carpets of any size can be cleaned with great rapidity, and, on account of the yielding nature of the slatted platform

and of the beaters, the carpets sustain no injury.

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

The beaters E, constructed of elastic arms *j*, cross-bars *k*, boxes *l*, abutting pieces *n*, and rock-shafts *m*, as described, in combination with a platform, C, composed of yielding slats

a, and with feed-rollers F, all arranged and operating substantially in the manner herein shown and described.

JAMES HOTHERSALL.

Witnesses:

W. HAUFF,

E. F. KASTENHUBER.