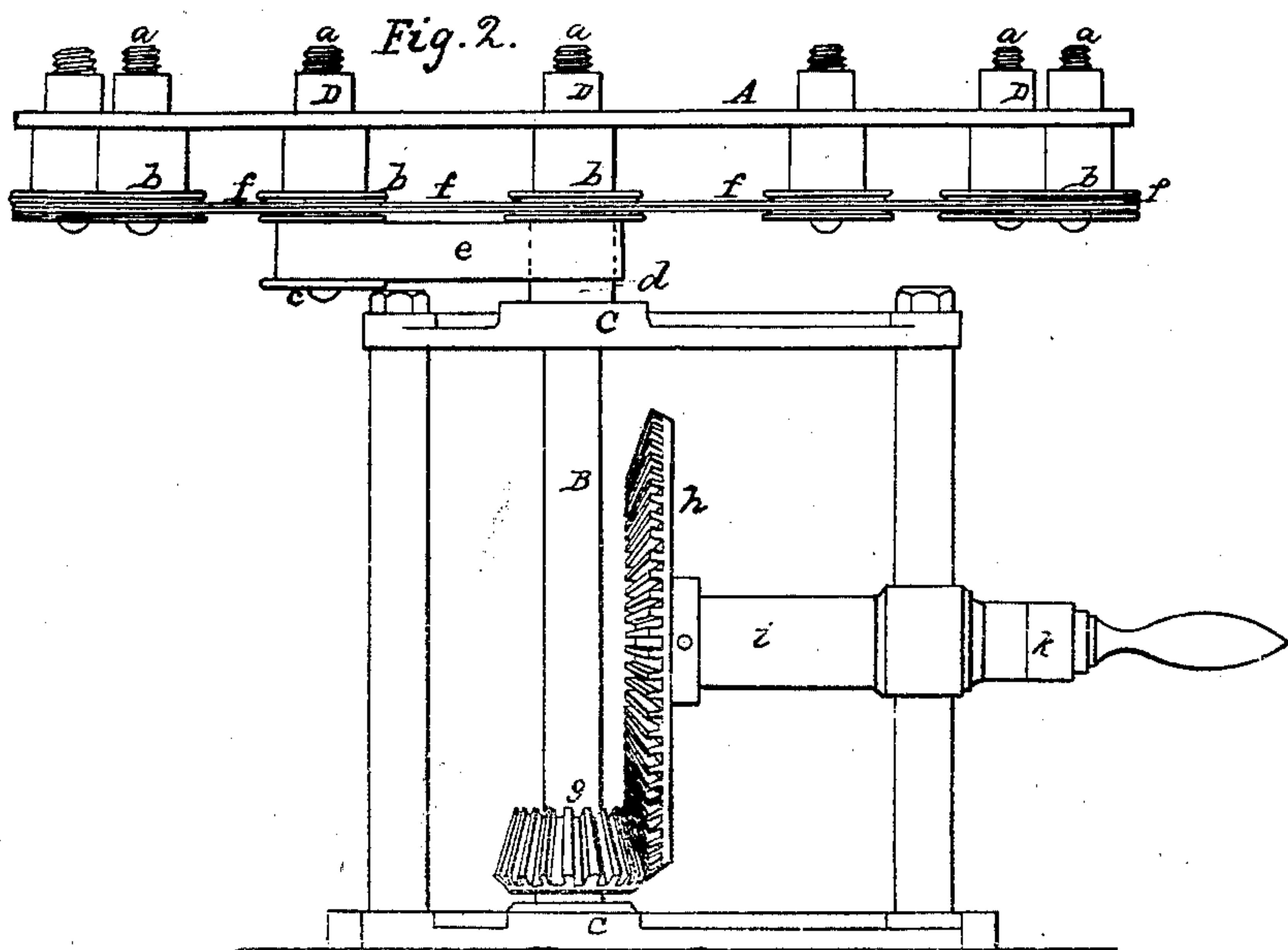
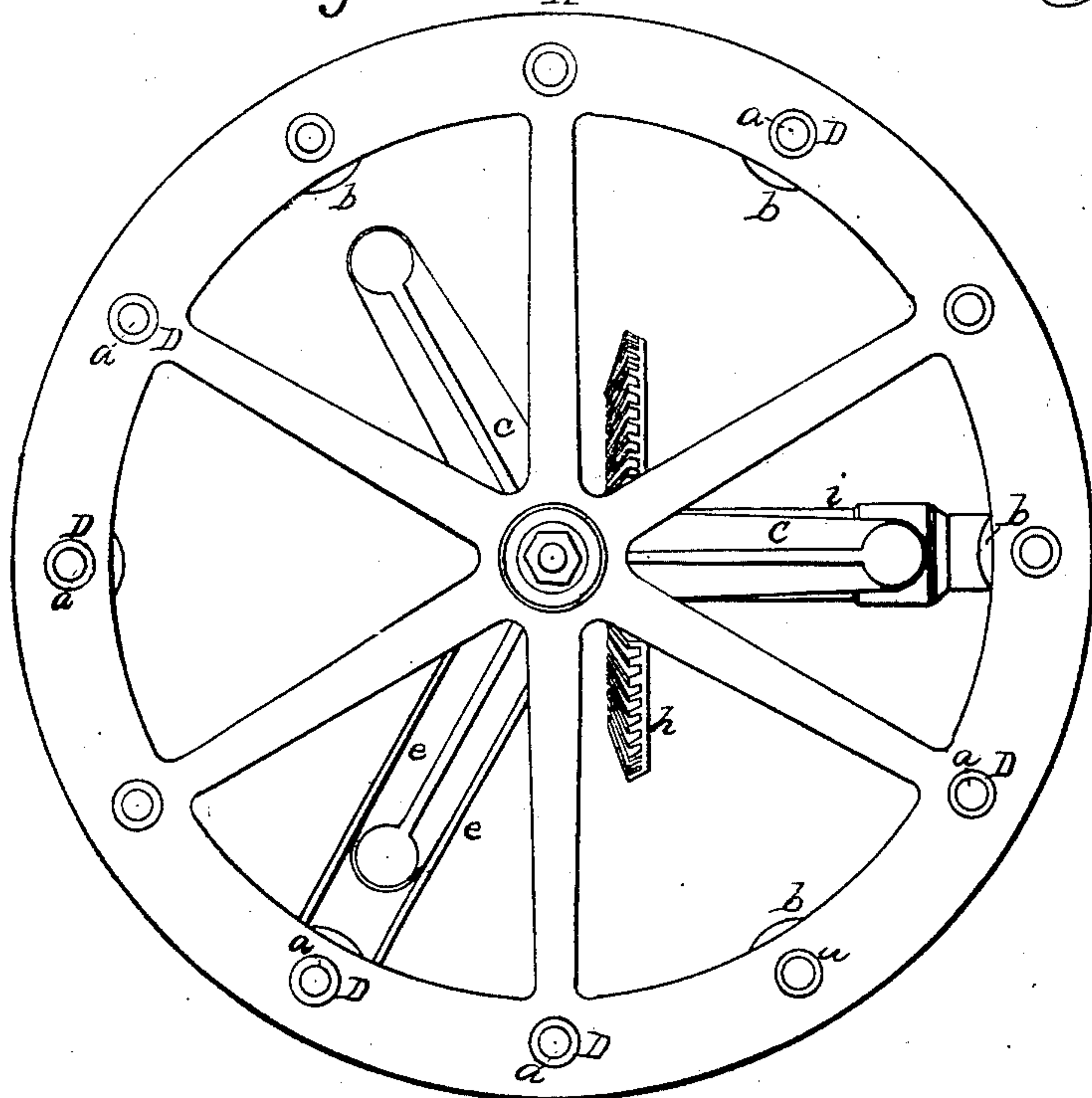


M. Esselen.

Brushing & Finishing Hats.

N^o 67740 Fig. 1.

Patented Aug. 13, 1867.



Witnesses.

George Andrews
Samuel A. Piper

Inventor.

Mitchel Esselen.

by his attorney,

H. H. Eddy.

United States Patent Office.

MITCHEL ESSELEN, OF ROXBURY, MASSACHUSETTS, ASSIGNOR TO J. D. GUYER AND COMPANY, OF SAME PLACE.

Letters Patent No. 67,740, dated August 13, 1867.

IMPROVEMENT IN MACHINES FOR RAISING AND DRYING THE NAPS OF HATS.

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

TO ALL PERSONS TO WHOM THESE PRESENTS SHALL COME:

Be it known that I, MITCHEL ESSELEN, of Roxbury, in the county of Norfolk, and State of Massachusetts, have invented a new and useful Machine for Raising and Drying the Naps of Hats; and I do hereby declare the same to be fully described in the following specification and represented in the accompanying drawings, of which—

Figure 1 is a top view, and

Figure 2 a side elevation of it.

In the said drawings, A denotes a circular head or wheel mounted horizontally and concentrically on the upper end of a vertical shaft, B, duly supported by a frame, C, in such manner as to be capable of revolving thereon. A series of vertical shafts or spindles, D D, &c., is arranged on the rim of the wheel, at equal distances asunder, and each is so applied to such rim as to be capable of being revolved thereon. Each of such spindles has a screw, *a*, formed on it at its upper part, and besides such screw, it has a grooved pulley, *b*, fixed on it at its lower end. One of such spindles also carries another pulley, *c*, about which, and a pulley, *d*, fixed on the shaft B, an endless belt, *e*, is placed. About each pulley *b*, and that pulley *b* next to it, an endless band, *f*, runs, the same being to communicate rotary motion from one of such pulleys to the other throughout the series. For the purpose of revolving the shaft B, it has a bevelled pinion, *g*, affixed on it, such pinion being made to engage with a bevelled gear, *h*, fixed on a horizontal shaft, *i*, the whole being as represented in the drawings. On revolving the shaft *i*, by means of a crank, *k*, or other suitable motor, the wheel A will not only be put in rapid revolution, but a slow rotary motion on or about its own axis will, at the same time, be given to each of the spindles D D.

Now, a block, E, (represented in fig. 2 by red lines,) having a hat upon it, being duly secured upon each of the spindles, and the machine being subsequently put in operation, that is, the wheel being put in revolution, the centrifugal force generated in the nap of each of the hats will cause such nap when moist to stand up or out from the hat. The rapid revolution of the hat through the air will cause the nap to be dried, and as, while revolving around in a circle whose axis is that of the shaft B, the hat will also be slowly revolved on the axis of its carrying-spindle, all parts of the nap will be thrown out and dried.

For hatters the above-described machine is one which effects a great saving of labor in comparison to what would be required to accomplish by manual labor, in the ordinary way practised, the same amount of work which the machine will perform in a given time.

I claim the machine constructed substantially in manner and for the purpose set forth, that is, as composed not merely of the series of screw-spindles D D and hat-blocks or holders E E, the wheel A, and mechanism for revolving the wheel and series of spindles and hat-blocks or holders about a common axis, but also of mechanism for revolving each spindle with its hat-block or holder, in the mean time, on the axis thereof.

M. ESSELEN.

Witnesses:

R. H. EDDY,

F. P. HALE, Jr.