

A. T. CLASON.
HAT ROUNDING MACHINE.

Patented June 28, 1892.



INVENTOR
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UNITED STATES PATENT OFFICE.

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HAT-ROUNDING MACHINE.

SPECIFICATION forming part of Letters Patent No. 477,991, dated June 28, 1892.

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To all whom it may concern:

Be it known that I, ABRAHAM T. CLASON, a citizen of the United States, residing at Danbury, in the county of Fairfield, State of Connecticut, have invented certain new and useful Improvements in Hat-Rounding Machines, of which the following is a specification, reference being had to the accompanying drawings and to the letters of reference marked thereon.

The object of my invention is to cut a hat-body to a predetermined size and round off its edge after the process of pinning out and before the hat-body is blocked or curled.

My invention consists of the devices and combinations of devices hereinafter fully set forth in the claims.

In the drawings, Figure 1 is an elevation of a machine embodying my invention. Figs. 2, 3, and 4 are detached details on an enlarged scale. Fig. 5 is a modification.

Similar letters of reference indicate similar parts in the respective figures.

A represents the main supporting-frame of the machine, and B a vertical shaft suitably journaled therein, to be driven in any approved manner. The mechanism illustrated to perform this function forms no part of this invention and need not, therefore, be particularly described. The shaft B carries at its upper end the cone C, which may be of wood, metal, or any other suitable material. This cone is provided with a series of circumferential grooves *c c*, into either of which the edge of the cutting-disk D is adapted to enter.

E represents a bent arm pivoted at *e* to the brackets *e'*, which are firmly secured to the main frame. The upper portion *E'* of this arm is provided with bearings *F F* to support the rod *G*, on which revolves the conical pressing-roller *G'*, adapted to bear against the cone C or a hat-body thereon. The bearings *F F* are adjustable toward or away from the cone C by means of the nuts *f f*, and the rod *G* is held in position in its bearings by the collars *g g* and set-screws *g' g'*. The upper end of the conical roller *G'* is enlarged, as shown at *G²*, and curves over the top of the cone C, thereby preventing the hat-body while being operated upon from riding up the cone C. The lower portion of the conical roller *G'* is composed of a series of removable

sections *g² g²*, preferably corresponding in thickness to the spaces between the grooves *c c* on the cone C. A collar *g³* on the rod *G* bears against the upper end of the conical roller *G'*, another collar *g⁴* supporting the lower end thereof. The collar *g³* may be integral with the rod *G* or held thereon by means of a set-screw, as preferred; but the collar *g⁴* must be capable of adjustment on the rod *G* and secured thereon by means of a set-screw *g⁵* or other equivalent device.

The cutting-disk D is secured to the upper face of a chuck H in any suitable manner, preferably by means of screws *d d*, which permit of its easy detachment, and the chuck H is mounted on a vertical pin I so as to be capable of revolution thereon, but incapable of vertical movement.

In Figs. 2 and 3 I have shown different ways of connecting the stem and chuck together, and the special means employed for this purpose may be varied so long as the cutting-disk is enabled to revolve uniformly in a certain plane. The pin I passes through a horizontal bar J and is secured therein by means of a set-screw *i*. The bar J at one end fits into a sleeve K and is adjustable longitudinally therein, it being held in any desired position by means of a set-screw *j*. The sleeve K forms the horizontal member of an angle-bar, the other member *K'* being slotted vertically, as shown at *k*. Through this slot one or more threaded bolts *l* pass, the said bolts being firmly secured in the arm *E'*, and nuts *l'*, adapted to be screwed on said bolts and bear against the member *K'* of the angle-bar, will securely hold the latter in position, and also permit of its vertical adjustment. From the foregoing it will be apparent that the cutter-disk D may be vertically adjusted by means of the screws and nuts *l l'*, and also adjusted laterally toward or away from the cone C by means of the bar J, sliding in the sleeve K.

In Figs. 1, 2, and 3 I have shown a cutting-disk having a plain cutting-edge, this form being preferred for some classes of goods. With other classes of goods I find, however, that a cutter-disk provided with a series of cutting-teeth, preferably lancet-shaped, as shown in Fig. 5, in which *d² d²* represent the teeth, can be used to better advantage. These

teeth are sharp-pointed and have a cutting-edge on both sides, and also at the angles between the teeth, so that they cut by transfixing the material. They also have a shearing
5 cut by reason of the revolution of the disk in the groove *c*.

In order to operate the arm *E'* (which normally has a tendency to lean toward the cone *C*) to move it and the conical roller away
10 from the cone, I pivot a lever *M* to brackets *m*, secured to the main frame, and pivotally connect one end of the lever to the arm *E'*. Pressure applied to the free end of the lever *M* will cause the arm *E'* to swing away from
15 the cone *C*, carrying with it the conical roller *G'* and cutter-disk *D*, thus enabling the operator to place the hat-bodies upon or remove them from the cone. The cutter *D* should be arranged to work as closely to the lower end
20 of the conical roller *G'* as possible, it being desirable that the goods shall be held firmly during the operation of cutting. By removing one or more of the sections *g*² from the conical roller *G'* and adjusting the cutting-
25 disk *D* to enter the circumferential groove *c* immediately below it hats of different sizes may be cut, the grooves *c* being, of course, graduated for the various sizes. The conical roller *G'* and the cutter-disk *D* are revolved
30 by frictional contact with the hat-body on the cone *C* when the latter is revolved by means of the shaft *B*.

I do not limit myself to the exact devices illustrated and described for attaching the
35 various parts together or securing their ad-

justment, as other well-known mechanical means may without departing from my invention be employed to accomplish the same results; but,

Having described my invention, I claim— 40

1. The combination, with a revoluble cone adapted to receive a hat-body and a conical presser-roller supported to bear on the hat-body, of a cutting device supported to cut the
45 edge of the hat-body on the cone and suitable means to give the cutting device lateral and vertical adjustment relative to the cone, substantially as described.

2. The combination, with a revoluble cone adapted to receive a hat-body and provided
50 with a series of circumferential grooves, of a conical presser-roller supported to bear on the hat-body and a cutting device adjustable to either of the grooves on said cone, substantially as described. 55

3. The combination, with a revoluble cone adapted to receive a hat-body and provided
with a series of circumferential grooves, of a conical presser-roller supported to bear on the hat-body and having a series of removable
60 sections and a cutting device adjustable to either of the grooves on said cone, substantially as described.

In testimony whereof I have hereunto set my hand and seal.

ABRAHAM T. CLASON. [L. s.]

Witnesses:

JAMES S. TAYLOR,
MORRIS MEYERS.