

No. 697,228.

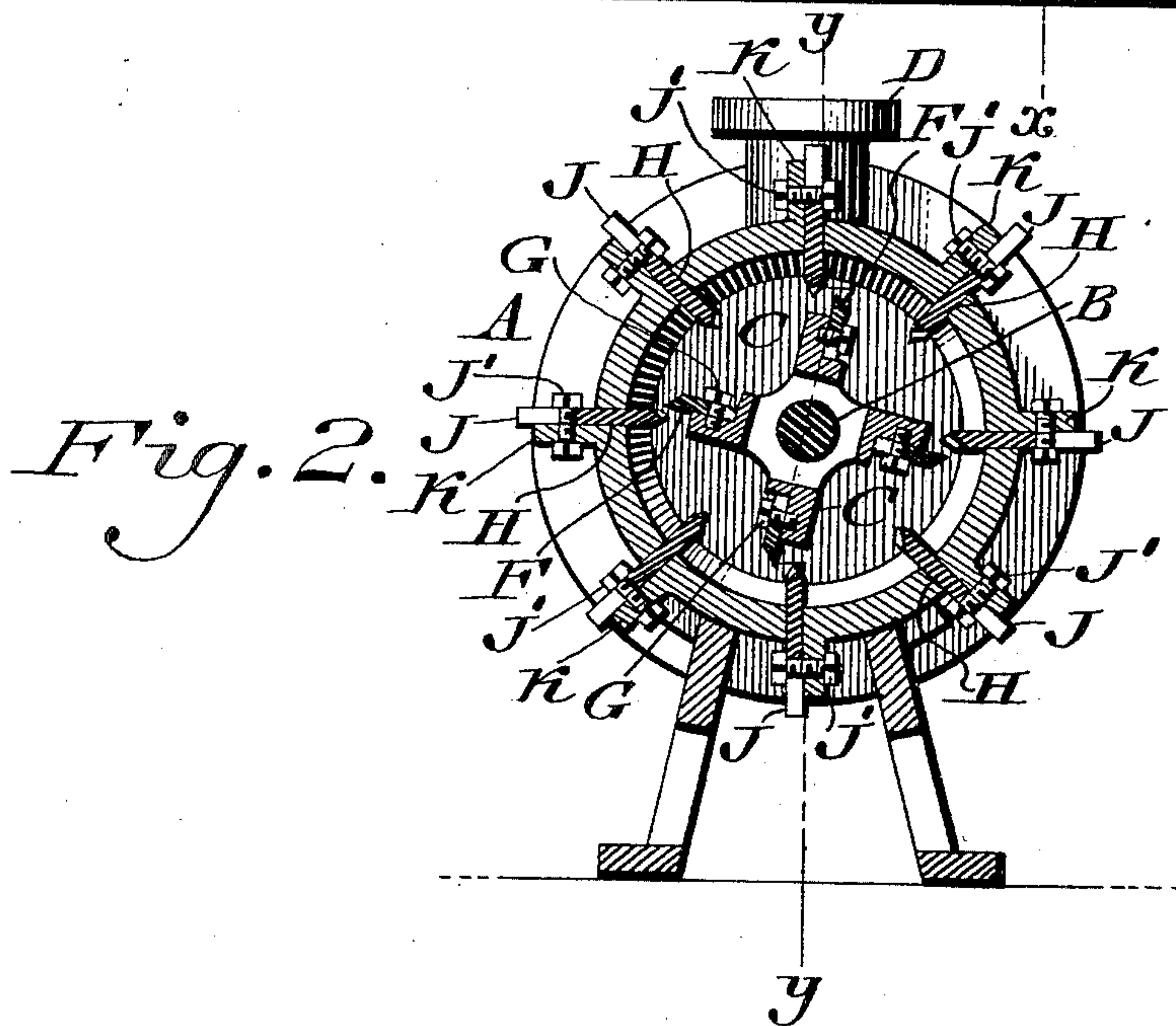
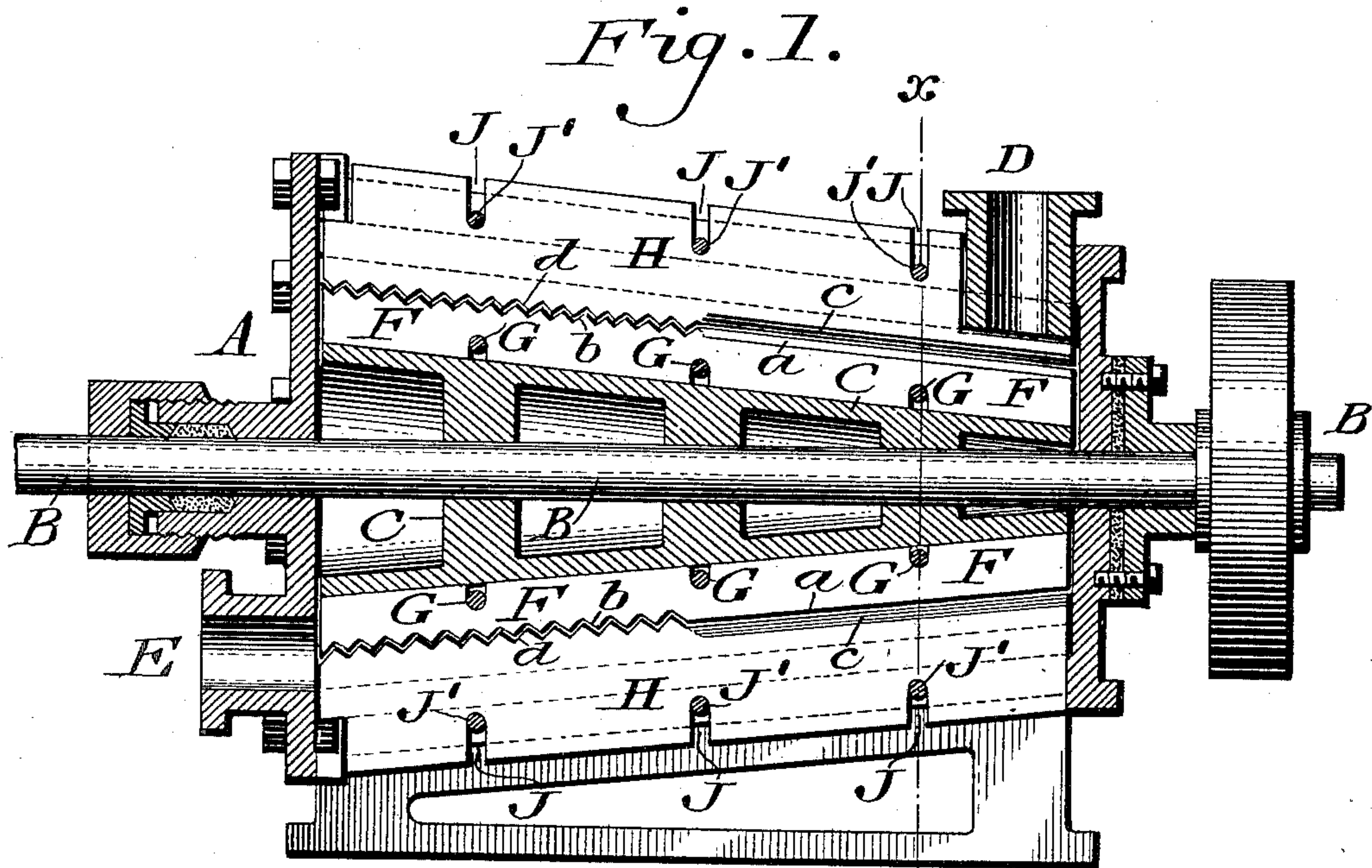
Patented Apr. 8, 1902.

R. J. YOUNG.

MACHINE FOR SHREDDING AND GRINDING LEATHER.

(Application filed Nov. 25, 1901.)

(No Model.)



Witnesses
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UNITED STATES PATENT OFFICE.

ROBERT J. YOUNG, OF PHILADELPHIA, PENNSYLVANIA.

MACHINE FOR SHREDDING AND GRINDING LEATHER.

SPECIFICATION forming part of Letters Patent No. 697,228, dated April 8, 1902.

Application filed November 25, 1901. Serial No. 83,522. (No model.)

To all whom it may concern:

Be it known that I, ROBERT J. YOUNG, a citizen of the United States, residing in the city and county of Philadelphia, State of Pennsylvania, have invented a new and useful Improvement in Machines for Shredding, Grinding, or Otherwise Reducing Leather, of which the following is a specification.

My invention consists of a machine for shredding, grinding, comminuting, or otherwise reducing leather; the same embodying a concave and a beater of novel constructions, as will be hereinafter described and the novel features of the same pointed out in the claims.

Figure 1 represents a longitudinal vertical section on line *y y*, Fig. 2, of a machine for reducing leather embodying my invention. Fig. 2 represents a transverse section thereof on line *x x*, Fig. 1.

Similar letters of reference indicate corresponding parts in the figures.

Referring to the drawings, A designates a casing which is interiorly of conical form, forming a concave, and B a rotatable shaft which is mounted on the ends of said casing and has the spider C mounted thereon, said spider being formed of a body or hub and arms radially thereon. On the casing is the inlet or supply pipe D and the outlet or discharge pipe E. Projecting radially and outwardly from the arms of the spider C are the blades F, which are secured to the same by the screws or bolts G, said parts forming a beater. A portion of the edge of each blade is sharpened and right-lined, as at *a*, and another portion thereof serrated or toothed, as at *b*.

H designates blades which pass through openings in the wall of the casing A and having their inner portion project into the concave of said casing A. A portion of the edge of each blade is sharpened and right-lined, as at *c*, and another portion serrated or toothed, as at *d*, the edges *c* being opposed to edges *a* of the blades F and the edges *d* being opposed to the edges *b* thereof, the blades H serving as bed-knives for the blades F.

The backs of the blades H are formed with slots J, and through the same are passed the screws or bolts J', which are fitted to the shoulders K on the exterior of the casing A, by which provision said blades may be ad-

justed relatively to the edges of the blades F, said shoulders projecting outwardly from the casing adjacent to the openings in the latter. As the blades H pass through the wall of the casing A and rest against the shoulders K, they are accordingly braced and firmly sustained in position.

The operation is as follows: Power is applied to the runner, whereby the blades F rotate within the blades H of the concave. Pieces of leather, preferably scraps, are fed into the casing through the inlet D, where they are drawn in between the concave and beater and subjected to the edges *a* and *c* of the blades H and so sliced and variously cut into small pieces or shreds, which are carried between the serrated edges *b d* of said blades, where they are comminuted or ground or otherwise reduced, the mass then being discharged through the outlet E when it is in condition for use or may be converted into pulp, &c.

It is evident that other material than leather may be reduced, and so I do not limit the use of the same to said material.

Having thus described my invention, what I claim as new, and desire to secure by Letters Patent, is—

1. In a reducing-machine of the character stated, a beater formed of a body, a shaft carrying the same, and arms projecting radially from said body in combination with blades having radial slots in their inner ends which latter are seated on said arms, and bolts passing through said slots into said arms.

2. In a reducing-machine of the character stated, a casing having a concave therein and openings in its wall, in combination with shoulders projecting radially from the exterior of said casing adjacent to said openings, blades passing through said openings and having slots on their exterior ends, which latter are seated on said shoulders, and bolts passing through said slots into said shoulders.

3. A casing having a concave therein, blades passing freely through the wall of said casing and projecting into said concave, and bolts on the exterior of said casing for connecting said blades with said wall and adjusting them in inwardly and outwardly directions.

4. A casing having a concave therein, blades passing freely through the wall of said casing, said blades being provided with slots, radially-

extending shoulders on the exterior of said casing and screws passing through said slots into said shoulders.

5 5. A casing having a concave therein, stationary blades entering said concave, a rotary beater with blades thereon in said concave, the opposed edges of the sets of said blades being respectively of cutting and grinding natures and means for adjusting the
10 blades of the concave and beater in inwardly and outwardly directions.

15 6. In a machine of the character stated, a casing having openings therein, blades freely fitted in said openings and projecting outside of said casing, the exterior portions of said blades having slots therein, radial shoulders on the exterior of said casing, and bolts pass-

ing through said slots, in combination with a beater having arms and blades adjustably connected with said arms. 20

7. In a machine of the character stated, a beater provided with arms, blades with slots on said arms, and bolts passing through said slots into said arms, in combination with a casing having openings in the wall thereof, blades 25 in said openings projecting partly within and partly without said casing, shoulders on the exterior of said casing and means for adjustably connecting the blades of the casing with said shoulders.

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