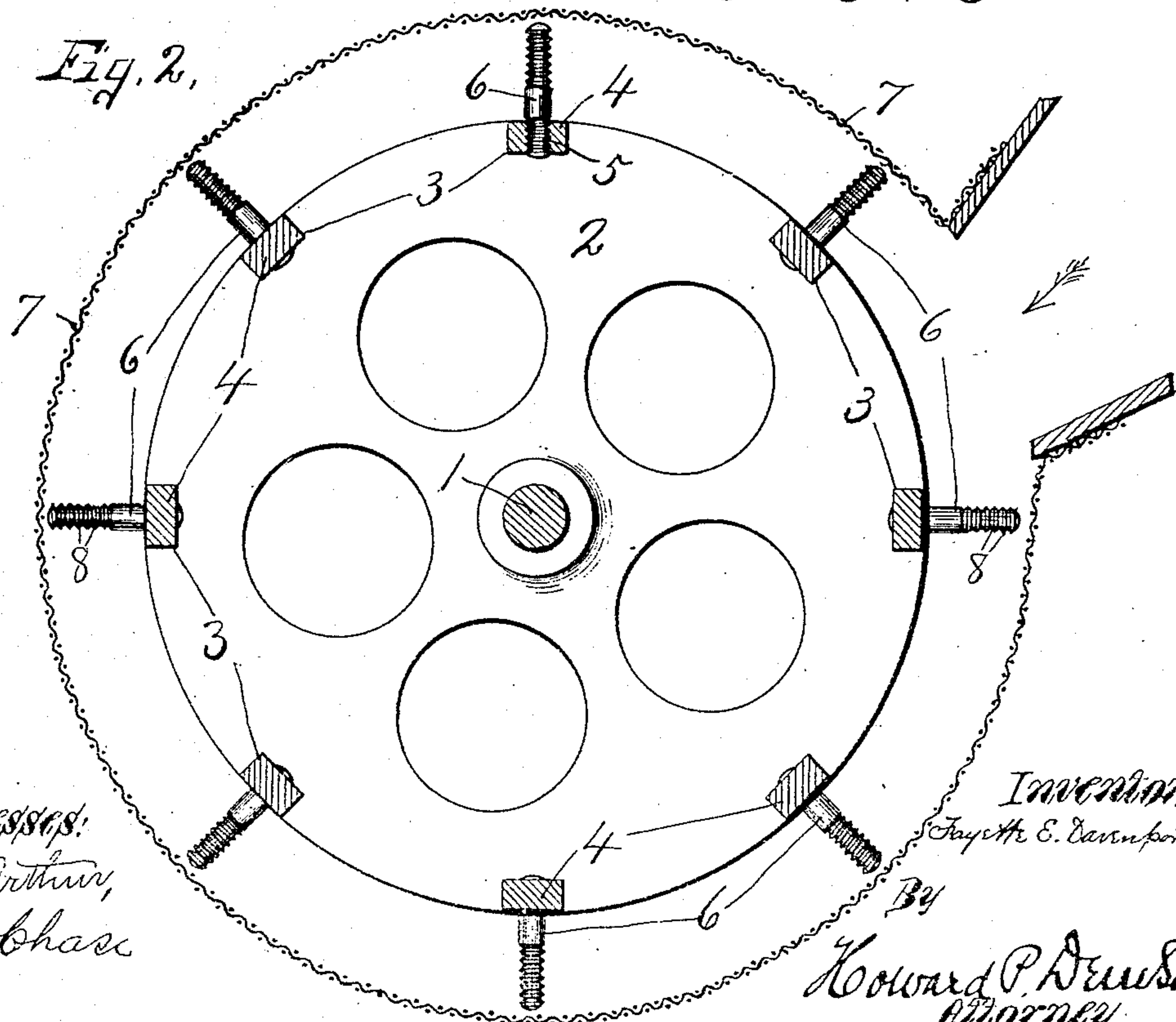
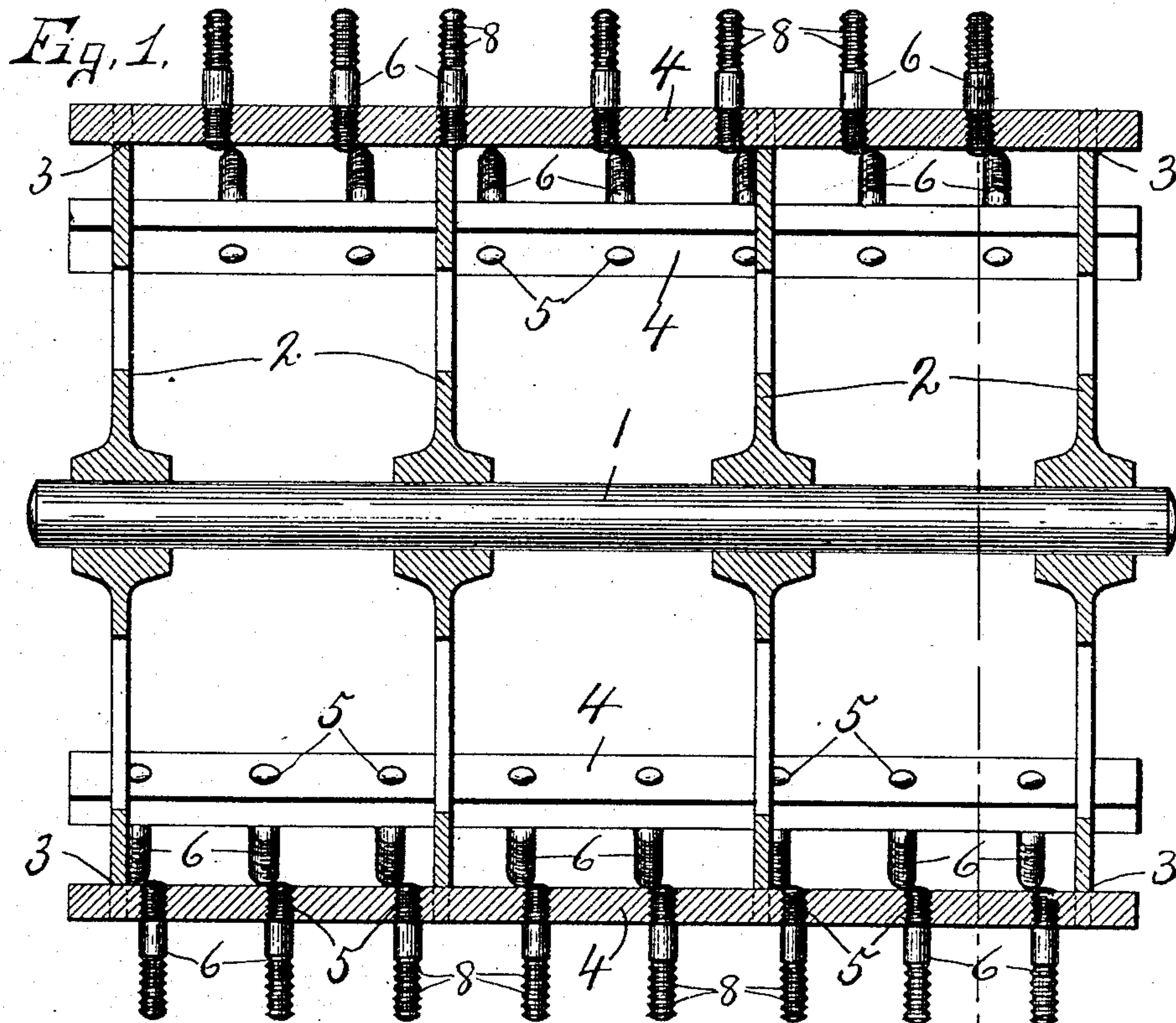


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No. 791,328.

PATENTED MAY 30, 1905.

F. E. DAVENPORT.
DISINTEGRATING ROLLER.
APPLICATION FILED DEC. 10, 1903.



Witnesses:
J. E. Arthur,
W. E. Chase

Inventor:
Fayette E. Davenport.
By
Howard P. Deussen
Attorney

UNITED STATES PATENT OFFICE.

FAYETTE E. DAVENPORT, OF FAYETTEVILLE, NEW YORK.

DISINTEGRATING-ROLLER.

SPECIFICATION forming part of Letters Patent No. 791,328, dated May 30, 1905.

Application filed December 10, 1903. Serial No. 184,604.

To all whom it may concern:

Be it known that I, FAYETTE E. DAVENPORT, of Fayetteville, in the county of Onondaga, in the State of New York, have invented new and
5 useful Improvements in Disintegrating-Rollers, of which the following, taken in connection with the accompanying drawings, is a full, clear, and exact description.

This invention relates to an improved disintegrating-roll, and is especially useful in the preparation of animal-food, the object being to disintegrate or break up coarse fibrous material—such as hay, cornstalks, and similar
5 nourishing material—into a reasonably fine mass, so that it may be readily mixed with ground cereals to be fed to horses, cattle, and other animals.

In the drawings, Figures 1 and 2 are respectively longitudinal and transverse sectional views of my improved roller, showing in Fig. 2 a screen-shell as partially encircling the roller.

Similar reference characters indicate corresponding parts in both the views.

This roll is adapted to be mounted in suitable bearings and rotated at a high rate of speed by any available driving mechanism (not shown) and consists, essentially, of a shaft 1, upon which is secured at regular intervals a series of circular plates or spiders 2, having recesses 3 in their peripheries for receiving a series of lengthwise-parallel bars 4. These bars are spaced equidistant from each other and are preferably formed of metal and are provided with a series of threaded apertures 5, into which are screwed threaded hard-steel studs 6. These studs project outwardly and radially from the transverse center of the bars, and their outer ends are formed with sharp circular cutting edges, such as annular V-shape ribs 8, which form the hard-steel cutters to disintegrate the material, the studs of each bar being staggered or out of circumferential alinement with those of the other bars,

so that they travel in circular planes side by side and close to each other for positively cutting or breaking up all of the material into a comparatively fine or pulverized condition.

A fixed wire-screen shell 7 encircles the roller in close proximity to the outer ends of the studs 6 and serves to hold the coarse material in the path of the cutters until it is sufficiently disintegrated to pass through the screen, which latter operation is usually facilitated by a suitable suction device inclosing the screen, but not shown, as this suction device forms no part of my present invention.

It will now be seen that this roller may be placed in any machine in which a rotary cutter is used for reducing hay, clover, and other similar fodder to a fine condition and that when in use the material is kept in the path of the revolving cutters and against the screen partially by the centrifugal force of the roller and by the gravity of the material and that as soon as it is sufficiently fine it passes out through the meshes in the screen, where it is collected for use or for further treatment or mixture with other foodstuff.

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

In a disintegrating-roller, a series of parallel bars arranged circumferentially and spaced equidistant, and a series of studs threaded into said bars with their outer ends formed with deep-cut annular V-shape cutting edges, said studs in each bar being in longitudinal alinement and the studs in each bar being staggered with respect to the studs in the other bars.

In witness whereof I have hereunto set my hand this 4th day of December, 1903.

FAYETTE E. DAVENPORT.

Witnesses:

H. E. CHASE,

HOWARD P. DENISON.