(No Model.)

J. W. HYATT.

DISINTEGRATING MACHINE.

No. 427,686. Patented May 13, 1890.

Fig. 1.

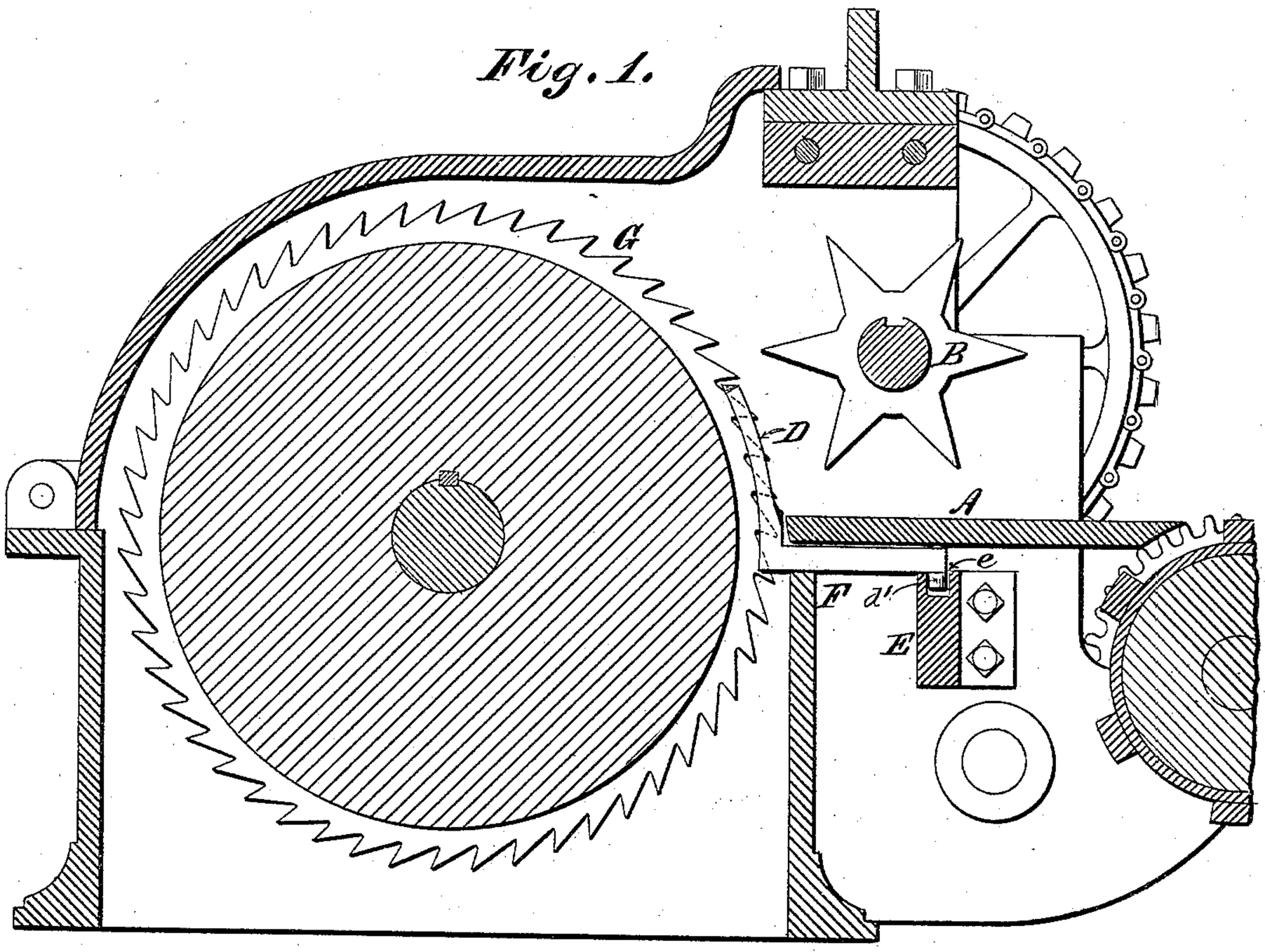


Fig. 2.

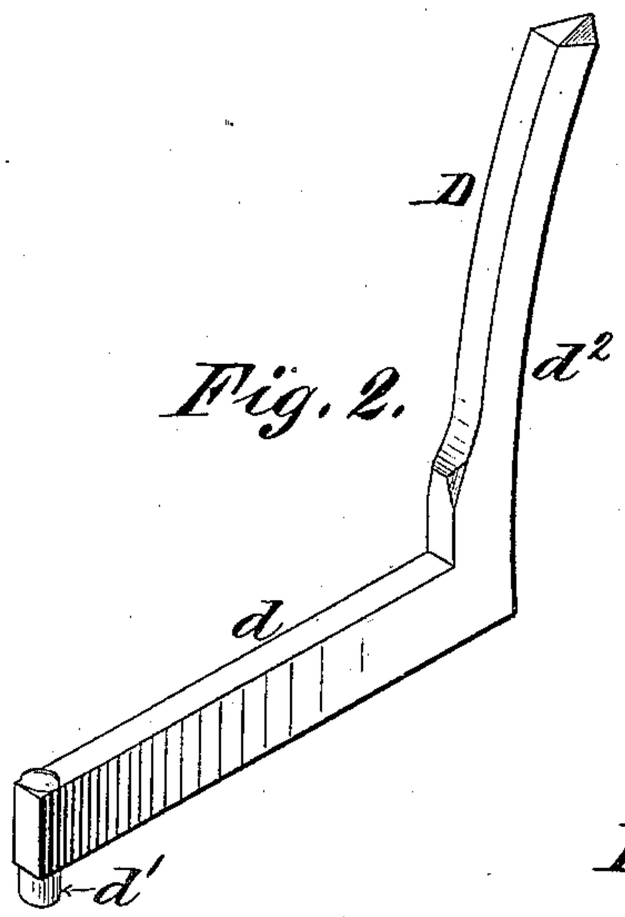
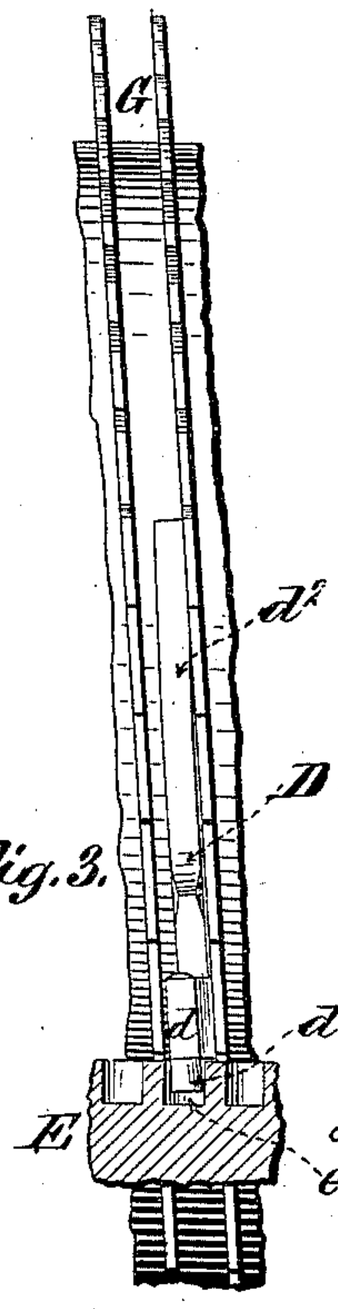


Fig. 4

Fig. 3.



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UNITED STATES PATENT OFFICE.

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DISINTEGRATING-MACHINE.

SPECIFICATION forming part of Letters Patent No. 427,686, dated May 13, 1890.

Application filed February 12, 1890. Serial No. 340,185. (No model.)

To all whom it may concern:

Be it known that I, JOHN W. HYATT, of Newark, New Jersey, have invented a new and useful Improvement in Disintegrating-Machines, of which the following is a specification.

This improvement relates to the class of disintegrating-machines in which the shredding operation is performed by a system of so-called "drunken saws," consisting of a series of rotating circular saws mounted upon a common shaft in planes which are parallel with each other, but which diagonally intersect the shaft upon which the saws are mounted. In a patent, No. 423,870, granted to me March 18, 1890, there is shown and described a disintegrating-machine of this character, in which the stripping operation is performed by horizontal arms which are vertically pivoted at one end to a part of the frame of the machine immediately beneath the feed-table and at their opposite ends project into the spaces between the drunken saws, respectively.

The present invention consists in the combination, with the system of drunken saws, of a corresponding system of curved strippers projecting upward a suitable distance above the level of the feed-table and loosely occupying portions of the spaces between the saws and having the capacity of bodily to-and-fro movement in a horizontal plane, and also the capacity of rocking upon horizontal axes, respectively, whereby the curved strippers are enabled to accommodate themselves to the wabbling movements of the drunken saws with which they are interplaced.

The accompanying drawings, illustrating the improvement, are as follows:

Figure 1 is a transverse vertical section of a disintegrating-machine in which drunken saws are employed, showing one of the saws and one of the improved strippers in elevation. Fig. 2 is an isometrical perspective of one of the strippers detached from the machine. Fig. 3 is an elevation of one of the strippers, showing a portion of the frame of the machine in which it is loosely pivoted, and showing its curved arm extending upward between two adjacent saws. Fig. 4 is an elevation similar to Fig. 3, but showing the curved arm of the stripper in a different angular position, which it has been made to assume by the rotation of the drunken saws between which it is placed.

In the machine represented in the drawings the material to be disintegrated is fed across the feed-table A by the rotating feeder B against the rotating drunken saws C.

The stripping operation is performed by curved strippers D, loosely occupying the spaces between the drunken saws, respectively. One of these strippers is shown in isometrical perspective in Fig. 2, and consists of a horizontal arm *d*, provided at one end with a vertical pivot *d'* and at its opposite end with the upwardly-curved arm d^2, which, as will be seen on reference to Fig. 1, extends so far into the spaces between the saws that its convex side is slightly within the radius of the circle passing through the apices of the teeth of the saws. The stripper is supported in position by the seating of its pivot *d'* in the cavity *e* formed in the horizontal member E of the frame of the machine, and by the resting of its forward portion upon the top of the horizontal member F of the frame of the machine. It will be seen that the cavity *e* is of somewhat greater diameter than the diameter of the pivot *d'*, and that there is a sufficient space between the under side of the feed-table and the bearings upon which the stripper rests to allow its horizontal arm *d* to sway freely to and fro upon its pivot *d'*, and also to have a rocking motion upon its longitudinal axis. This construction affords an example of a simple way of carrying out the invention, which consists in giving to the curved arm d^2 of the stripper the described capacity of movement by which it is enabled to accommodate itself to the wabbling movements of the pair of drunken saws between which it is placed. By this construction any short pieces of the material operated upon which may collect and pile up between the feeder and the saws are prevented from getting into the spaces between the saws and are detained in positions in which they are continuously subjected to the abrading action of the saws until they are completely disintegrated.

The arms *d* of the strippers are herein de-

scribed as "horizontal," merely for present convenience. It will of course be seen that it is only necessary that the plane in which they vibrate shall be coincident or nearly coincident with the axis of the saw-shaft, and hence that the invention would be equally present if the machine should be tilted or the parts otherwise so arranged as to make the arms *d* occupy and vibrate in an inclined plane.

What is claimed as the invention is—

1. The combination, in a disintegrating-machine, of a system of rotating drunken saws and a corresponding system of swaying and rocking curved strippers loosely supported between the saws, respectively, as and for the purposes set forth.

2. In a disintegrating-machine, the combination of a system of rotating drunken saws, a feed-table, and a feeder for feeding the material to be disintegrated across the said table toward the said saws, with a corresponding system of interplaced swaying and rocking curved strippers, respectively contained within the spaces between the said saws and rising a prescribed distance above the said feed-table, as and for the purposes described.

3. A stripper for a disintegrating-machine employing a system of rotating saws, the said stripper composed of the horizontal arm *d* at one end adapted for loose pivotal connection with the frame of the machine, and the curved arm d^2, connected to or formed in one piece with the free end of the said horizontal arm *d*, the radius of its curve being slightly less than the radius of the circle passing through the apices of the teeth of the said saws.

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