

J. G. MOORE.

Improvement in Machines for Grinding Wood for Paper Pulp.

No. 133,243.

Patented Nov. 19, 1872.

Fig. 1

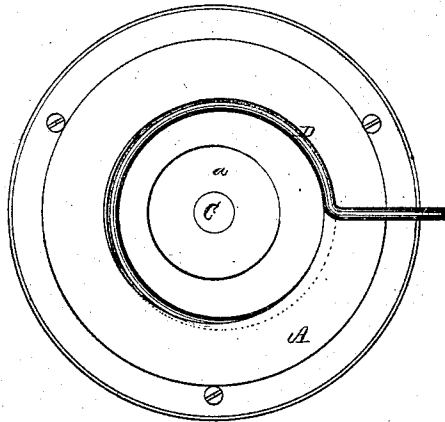


Fig. 2

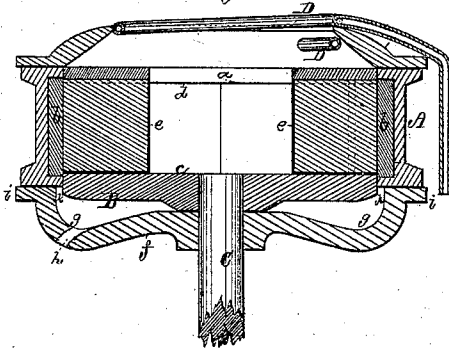
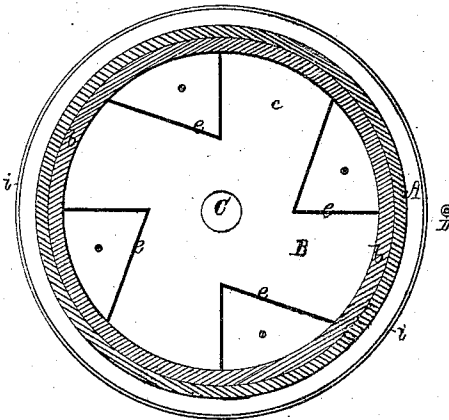


Fig. 3



Witnesses.

*S. W. Piper*

*L. W. Moore*

James G. Moore.

*by his attorney*

*R. H. Sedy*

# UNITED STATES PATENT OFFICE.

JAMES G. MOORE, OF LISBON, NEW HAMPSHIRE.

## IMPROVEMENT IN MACHINES FOR GRINDING WOOD FOR PAPER-PULP.

Specification forming part of Letters Patent No. 133,243, dated November 19, 1872.

*To all whom it may concern:*

Be it known that I, JAMES G. MOORE, of Lisbon, of the county of Grafton and State of New Hampshire, have invented a new and useful Machine for Grinding Wood for Paper-Pulp, which machine may also be used for grinding various other substances; and do hereby declare the same to be fully described in the following specification and represented in the accompanying drawing, of which—

Figure 1 is a top view, Fig. 2 a transverse section, and Fig. 3 a horizontal section, of it.

It consists, first, of a cylindrical grinding-case, A, having an opening, *a*, in its top, and also having its inner surface or periphery *b* an abrasive surface, or lined or covered with an abrasive material—such as a cement or composition, of which emery or other proper grinding material is a component part. Arranged within the said case concentrically is a rotary carrier, B, composed of a circular disk, *c*, a flat annulus, *d*, and a series of buckets, *e*, arranged as represented, the disk being mounted upon the upper end of a vertical shaft, C, concentric with the disk, and extended through the circular-troughed bottom *f* of the case A. The said bottom, where beneath the periphery of the said disk, is formed or provided with an annular trough, *g*, having an escape-opening, *h*, leading from it, as shown. Between the disk of the carrier and the encompassing-flange *i* of the case is a narrow passage, *k*, for the escape of the pulp into the trough. A pipe or

conduit, D, for supply of water to the case, enters its mouth, and is coiled thereon and within the case as shown.

The billets of wood to be reduced are to be thrown into the mouth of the case and into that of the carrier, which, when put in rapid revolution, will force the billets into the spaces between the buckets and hard against the stationary peripheral grinder of the case, centrifugal force aiding greatly in the operation. By being so forced against the grinder, the wood will be rasped or quickly reduced to pulp, the water employed serving to aid in removing the grindings, and in their discharge into and out of the annular trough, from whence the whole will flow in the state of pulp.

In this centrifugal machine, it will be seen that the grinding-surface is stationary and the material to be reduced is revolved, and while being revolved is pressed by centrifugal force hard up to the grinder.

What I claim as my invention is—

The rotary carrier B, substantially as described, in combination with the stationary grinding-case A, provided with the abrasive peripheral surface or such and the receiving and discharging trough, all being arranged in manner and to operate essentially as and for the purpose specified.

JAMES G. MOORE.

Witnesses:

R. H. EDDY,  
J. R. SNOW.