

Hezekiah Dodge's Improved Machine for Disintegrating Wood.

No. 122,581.

Patented Jan. 9, 1872.

Fig. 1.

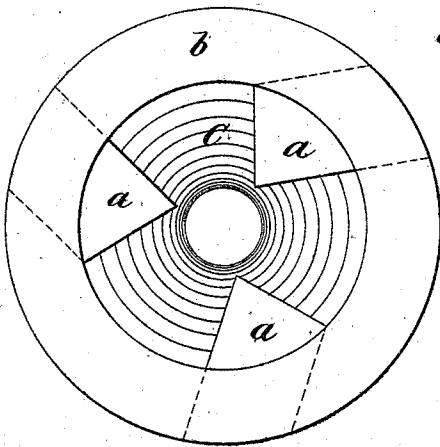


Fig. 2.

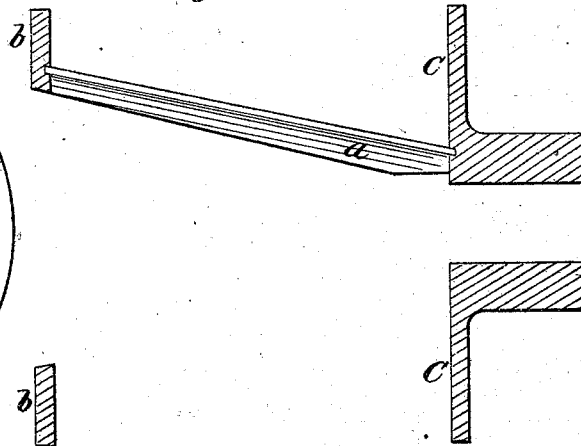


Fig. 3.

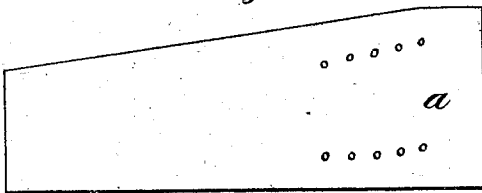
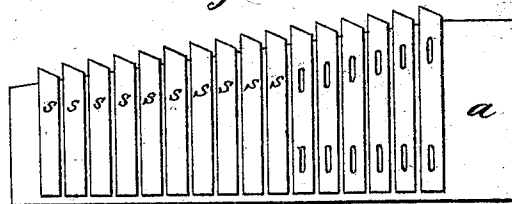


Fig. 4.



Witnesses.

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Hezekiah Dodge

UNITED STATES PATENT OFFICE.

HEZEKIAH DODGE, OF ALBANY, NEW YORK, ASSIGNOR TO NEW YORK
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IMPROVEMENT IN MACHINES FOR THE MANUFACTURE OF WOOD-PULP.

Specification forming part of Letters Patent No. 122,581, dated January 9, 1872; antedated December 23, 1871.

To all whom it may concern:

Be it known that I, HEZEKIAH DODGE, of Albany, in the county of Albany and State of New York, have invented certain new and useful Improvements in Machines for Shaving and Cutting Wood for the Manufacture of Paper-Pulp; and I do hereby declare the following to be a full, clear, and exact description of the same, reference being had to the accompanying drawing forming part of this specification, in which—

Figure 1 is an end elevation of the cutter-head. Fig. 2 is a longitudinal vertical section representing certain parts of the head. Fig. 3 is a plan of the plate to which the cutting-blades are attached; and Fig. 4 is a plan of the same with the blades.

Similar letters of reference indicate like parts.

This invention is an improvement upon the machine for which Letters Patent of the United States were granted to me January 25, 1870, No. 99,071; and the invention consists in a new construction of the plates that support the knives, and a novel arrangement of the knives, as hereinafter set forth.

In my former machine I employed a conical head with a system of blades arranged longitudinally of it in a radial plane, their edges projecting through the walls of the head into the interior thereof, striking the log almost perpendicularly to its surface at the point of contact, and thus scraping over it as the cutter rotated. In my present invention I construct the head of two parallel annular plates, *b c*, of equal diameter, but unequal bore, arranged at a suitable distance apart with their

centers in line, connected by two or more tapering flat plates, *a a*, which support the blades *s s*. The wide end of the plates *a* is attached to the ring *c*, (which has the smaller opening,) nearly in a radial plane through the center thereof; but the narrow end of the plates is carried obliquely to the ring *b* and fastened to it, not in a plane radial to the center, but in one which is nearly tangential to the bore. The result is, that the edges of the blades are not in a line with the axis of the cutter-head in any direction; but they strike the log nearly tangentially and cut it obliquely to a conical point, producing a clean flossy fiber, very much superior to that produced by the former machine.

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

1. The rings *b c*, in combination with the tapering plates *a a a*, arranged obliquely to the axis of the head, substantially as and for the purposes described.

2. The combination of the rings *b c*, plates *a a a*, and blades *s s s*, constructed and arranged substantially as and for the purposes specified.

3. A cutter-head in which the cutting-blades *s s s*, suitably supported, are arranged in a line oblique to the axis of the head, and with their cutting-edges so disposed as to cut the log to a taper, substantially as described, for the purposes set forth.

HEZEKIAH DODGE.

Witnesses:

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