(No Model.)

J. C. POTTER.

Machine for Preparing Wood Pulp.

No. 233,014. **Patented Oct. 5, 1880.**

Fig: 1.

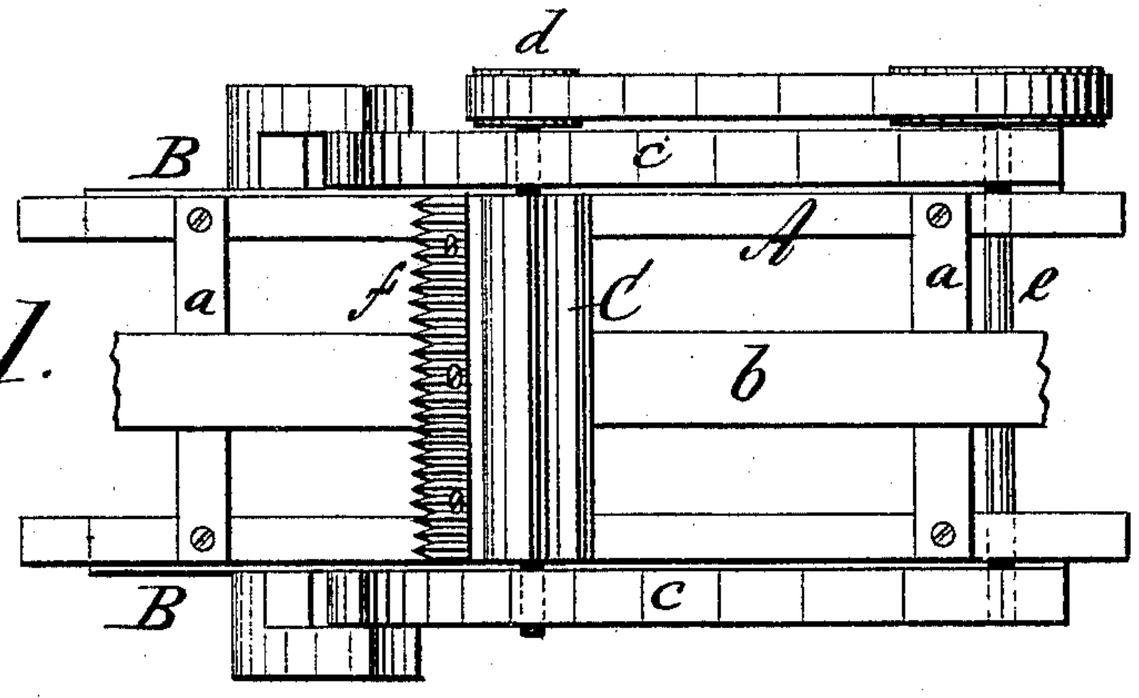


Fig: 2.

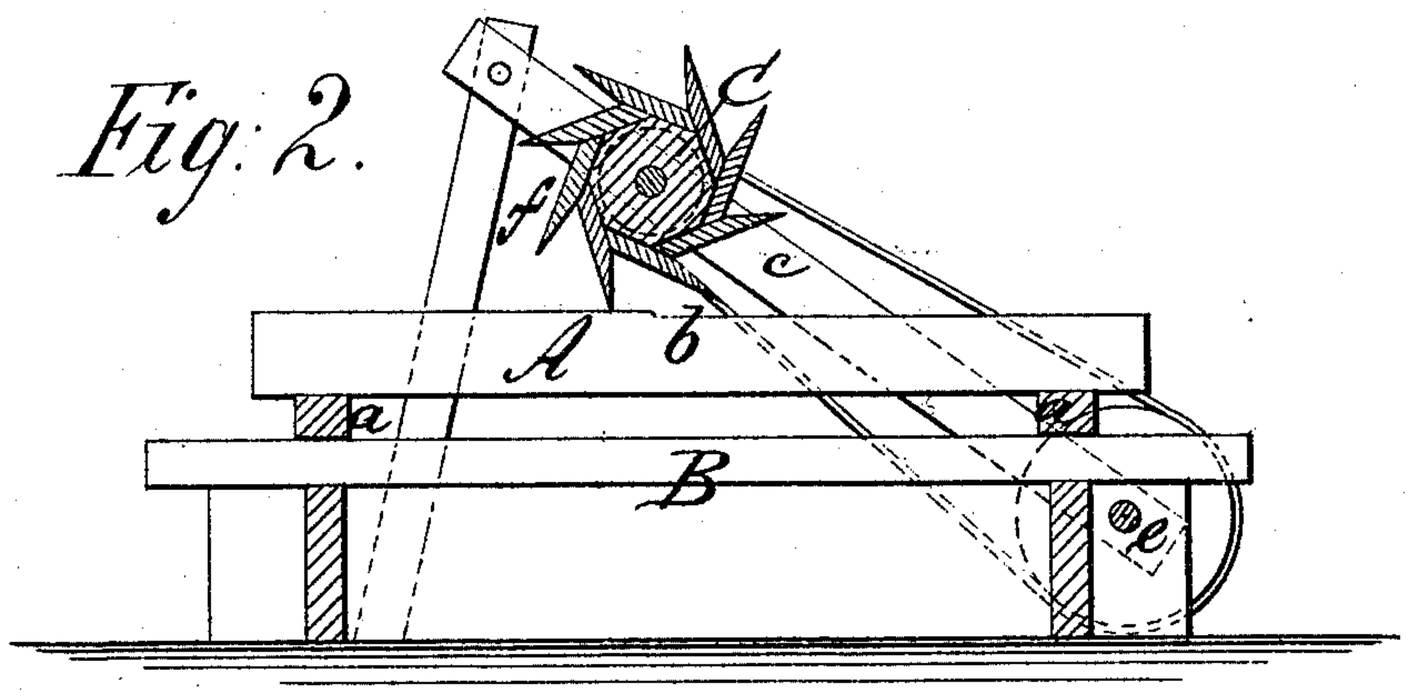
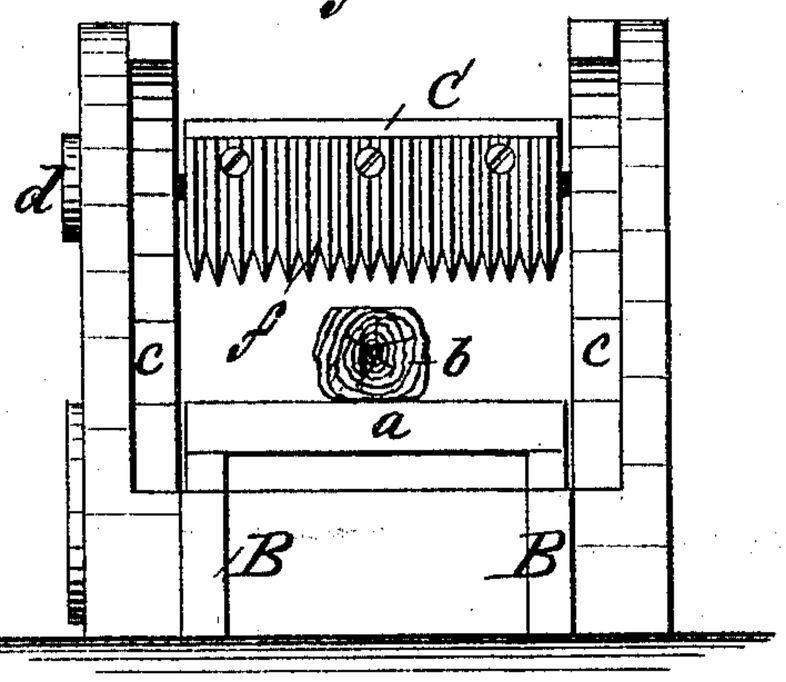


Fig: 3.



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JOHN C. POTTER, OF ORWELL, NEW YORK.

MACHINE FOR PREPARING WOOD PULP.

SPECIFICATION forming part of Letters Patent No. 233,014, dated October 5, 1880.

Application filed June 8, 1880. (No model.)

To all whom it may concern:

Be it known that I, JOHN CHARLES POTTER, of Orwell, in the county of Oswego and State of New York, have invented a new and useful Improvement in Machines for Preparing Wood Pulp, of which the following is a specification.

My improvements relate to machines for disintegrating wood for wood pulp.

The object of my invention is to construct a machine which will produce long fiber, perform the work rapidly, and having cutters that may be readily sharpened.

My invention consists in a revolving cutter fitted with cutters having serrated edges, and combined with a sliding carriage for carrying the log. The cutters act in the direction of the grain of the log to reduce the wood to pulp as the carriage reciprocates back and forth.

In the accompanying drawings, forming part of this specification, Figure 1 is a plan view of my improved machine. Fig. 2 is a vertical longitudinal section of the same, and Fig. 3 is an end view.

Similar letters of reference indicate corresponding parts.

A is a carriage similar to a saw-mill carriage, and provided with head-blocks *a a*, of any usual construction, for sustaining a log, as at *b*, firmly in place. The carriage A rests on suitable slideways B B, and will be connected with suitable mechanism (not shown) for moving the carriage intermittently or continuously, first in one direction the length of the log and then in a reverse direction. One or more logs may be placed on the carriage.

Above the carriage A, and crosswise of the same, a head, C, is fitted, the same having bearings in the side frames, *c c*. Upon the shaft of head A is a pulley, *d*, from which a belt passes to a pulley on a shaft, *e*, which is to be driven by power.

Upon the face of head C the cutters *f* are attached. The head is preferably made in octagon form, and cutters *f* attached upon each face, as shown. The cutters *f* are formed with V-shaped ribs upon their outer surfaces, and beveled at the back to form numerous cutting points or serrations, and in fixing the cutters to the head care will be taken to have the points of the various cutters come out of line with each other, so that they shall not all cut in the same path.

The cutters made in this form act rapidly and effectively to cut and tear out the fibers of the wood, and as they act lengthwise of the grain the pulp produced is of longer fiber than when cut by knives or grinders acting across or diagonally to the grain of the wood.

In operation, as the cutter-head revolves the carriage is moved the length of the log, and its surface thereby taken off by the cutters to a certain depth. The motion is then reversed for further reduction. Suitable adjusting devices, such as screws, will be applied to the carriage or head-blocks for raising the log the required extent at each extreme of movement, or the bearings of the revolving head may be adjustable for the same purpose.

The cutters, made in the form shown, may be readily sharpened on a grindstone, as only the back has to be ground to the bevel shown.

I am aware that it is not new to reduce wood for pulp by grinding or abrasion.

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

1. In machines for preparing wood pulp, the revolving head C, carrying tangential cutters *f*, combined with the reciprocating carriage A, for carrying the log, substantially as shown and described.

2. In machines for preparing wood pulp, the cutters *f*, formed with V-ribbed surfaces and serrated cutting-edges, and fixed upon a revolving cutter-head, as and for the purposes set forth.

JOHN CHAS. POTTER.

Witnesses:
ALLEN M. CAMPBELL,
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