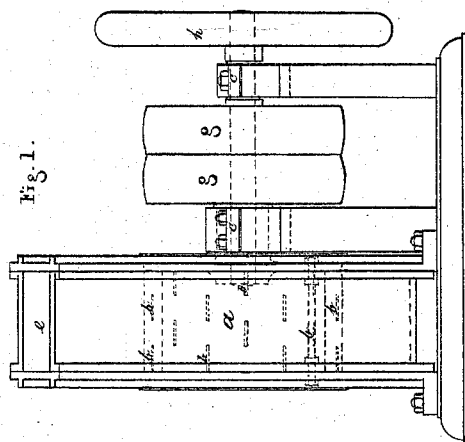
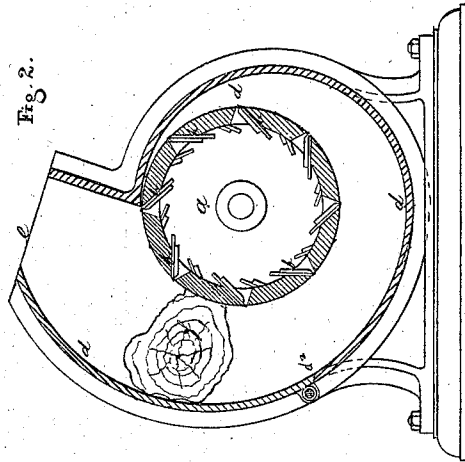


C. de NEGRI.

Improvement in Machinery for Reducing Wood to Fiber for Paper Pulp.

No. 131,944.

Patented Oct. 8, 1872.



Witnesses :

H. H. Shrockmorton.

John G. Clark.

Constantino de Negri Inventor:
Charles S. Whitman Attorney

UNITED STATES PATENT OFFICE.

CONSTANTINE DE NEGRI, OF "HORNSEY IRON WORKS," HORNSEY ROAD,
GREAT BRITAIN.

IMPROVEMENT IN MACHINERY FOR REDUCING WOOD TO FIBER FOR PAPER-PULP.

Specification forming part of Letters Patent No. 131,944, dated October 8, 1872.

To all whom it may concern:

Be it known that I, CONSTANTINE DE NEGRI, of "Hornsey Iron Works," Hornsey Road, in the county of Middlesex and Kingdom of Great Britain, have invented "Improvements in Machinery for operating upon wood to cut or produce shavings from it or to reduce it to fiber to be used in the manufacture of paper-pulp," of which the following is a specification:

The improvements forming the present invention consist in a machine for the reduction of wood to the form of fiber or shavings, and the following is a description of the machine, and the manner in which it is to be used according to this invention—that is to say: The machine consists of a hollow cylinder, open at one end, and furnished with holes, slots, or the like, for receiving and fixing in them knives or cutters, leaving clearance or space for passage of the shavings or cuttings removed, which cylinder is made to revolve round an axis in bearings, so that a piece of wood held against its external surface would be cut to the desired thickness. The fiber or shavings passing through the said clearance or space to the inside of the cylinder would be delivered out of the open end in any desired manner. One or more curved plates, hereinafter termed "back plates," are fixed round this cylinder, at an angle to its surface and parallel to its axis of rotation without touching it, so that a piece of wood being dropped between the opening formed by the upper part of a curved plate and the surface of the cylinder would be held against the surface of the cylinder, and, being cut by the knives or cutters, would, as it diminished in size, sink or be carried further into the angle formed by the back plate and the surface of the cylinder until it is entirely reduced to fiber or shavings; and in order to explain my invention more completely I will now proceed to describe the sheet of drawing hereunto annexed.

Description of the Drawing.

Figure 1 is a front elevation, and Fig. 2 a

side sectional elevation, of a machine according to my invention, similar letters of reference being employed in both views to denote corresponding parts.

a is a hollow cylinder revolving in bearings *c*, and open on the left side in Fig. 1, and in front in Fig. 2, furnished with slots at *b* for receiving and fixing therein knives or cutters, sufficient space or clearance being left to allow the shavings or cuttings to pass into the inside of the hollow cylinder, and be thence conducted away, as desired. *d d'* is what I call a "back plate" or "back plates," of large size, so curved and so disposed round the cylinder at an angle to its surface and parallel to its axis of rotation as to create, between the back plate or back plates and the cylinder, a winding tapering passage for the wood to be operated upon, and to form a back or resistance for the wood against the action of the cutters. This back plate or back plates are shown in the accompanying drawing jointed at *d'*, to allow of easy access to the knives or cutters so as to adjust them when necessary. *e* is a hopper formed by the upper part of the curved plate, and its continuation suitably formed for that purpose into which the wood to be cut up is introduced. *f* represents a piece of wood being operated upon. *g* are loose and tight riggers for driving the machine by; and *h* is a fly-wheel.

Having now described the nature of my invention and the manner in which the same is to be performed, I claim—

The spirally-curved back plate, the hollow cylinder open upon one side, and provided with knives or cutters, and apertures to allow the shavings to pass inward, all combined and operating together as and for the purposes described.

CONSTANTINE DE NEGRI.

Witnesses:

EDW. STEVENS,
67 Strand, London.

J. B. WYNN,
24 Royal Exchange.