

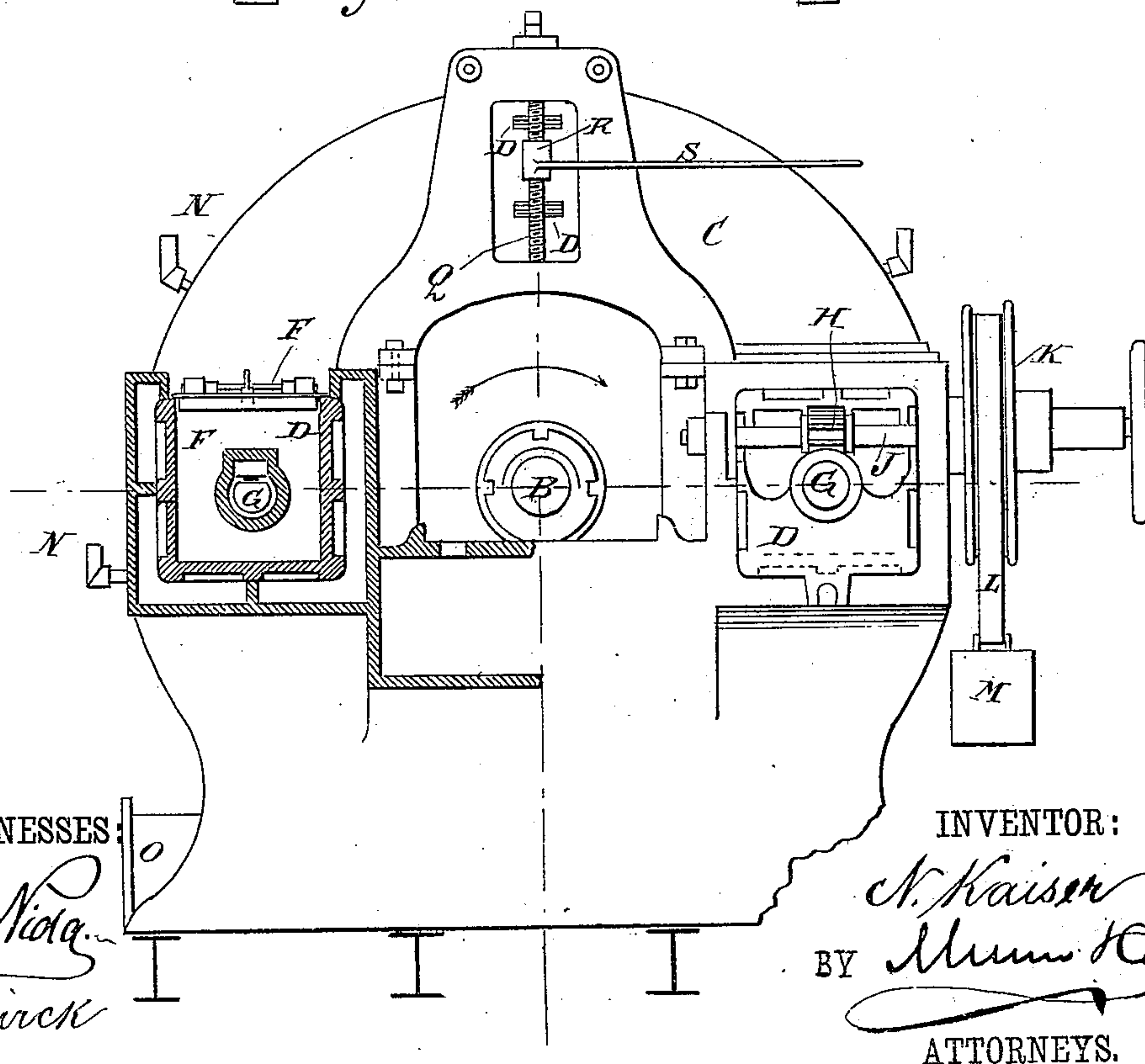
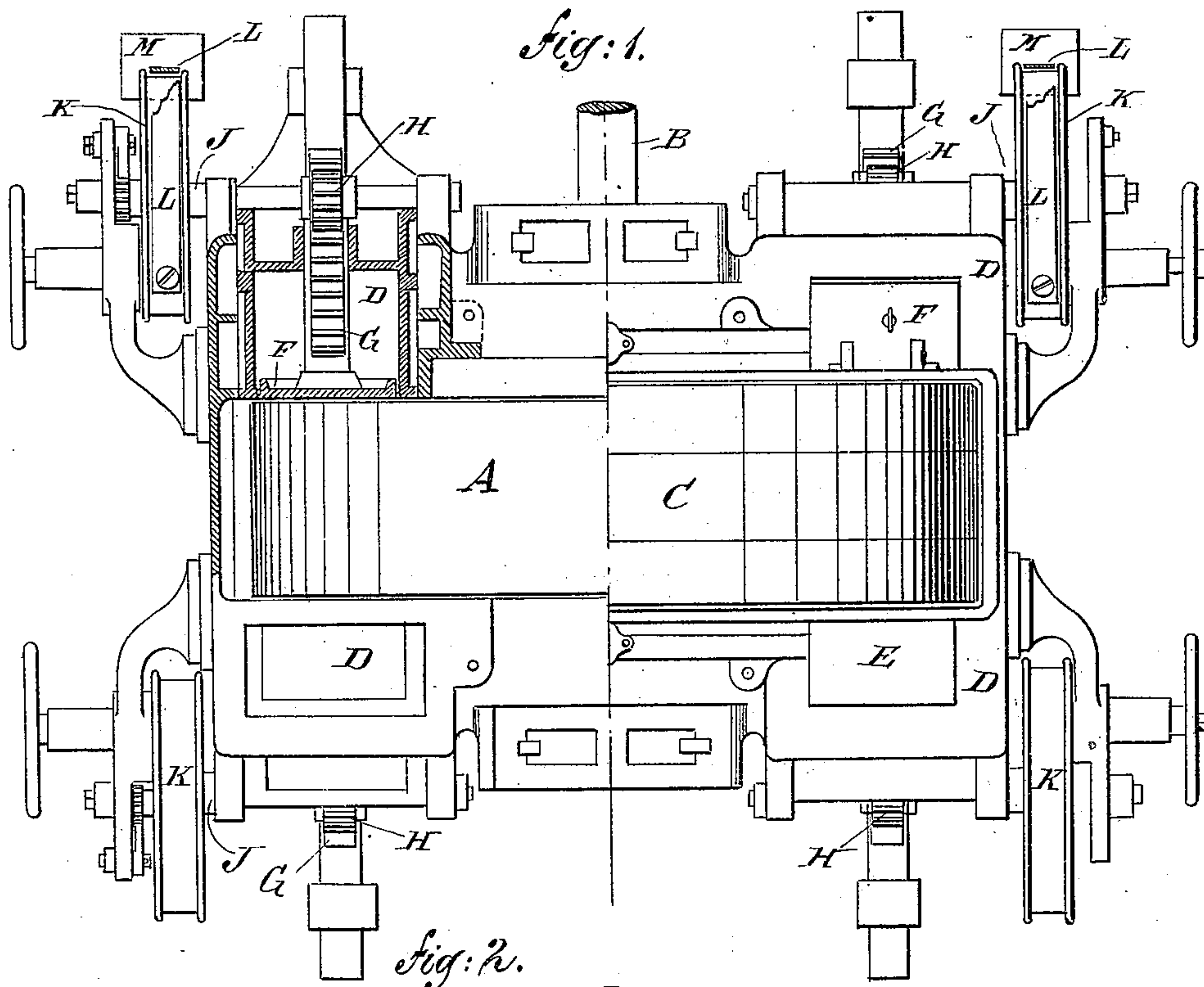
(No Model.)

N. KAISER.

MACHINE FOR GRINDING WOOD FOR PAPER PULP.

No. 246,516.

Patented Aug. 30, 1881.



WITNESSES:

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NICOLAUS KAISER, OF GRELLINGEN, SWITZERLAND, ASSIGNOR TO GESELLSCHAFT FÜR HOLZSTOFFBEREITUNG, OF SAME PLACE.

MACHINE FOR GRINDING WOOD FOR PAPER-PULP.

SPECIFICATION forming part of Letters Patent No. 246,516, dated August 30, 1881.

Application filed April 14, 1881. (No model.)

To all whom it may concern:

Be it known that I, NICOLAUS KAISER, of Grellingen, Switzerland, have invented new and useful Improvements in Wood-Pulp Machines, of which the following is a specification.

The object of my invention is to facilitate the manufacture of wood pulp.

The invention consists in a grinding-stone mounted on a suitable shaft and surrounded by a casing, with a series of boxes on the sides for containing the blocks of wood, which are pressed against the sides of the stone by a rack and pinion actuated by a weight, or by springs or hydraulic pressure, whereby the block of wood is converted into a wood pulp.

The invention further consists in an adjustable sharpening device attached to the side of the casing for the purpose of continually dressing the sides of the grinding-stone.

In the accompanying drawings, Figure 1 is a plan view of my improved wood-pulp machine, showing part of the casing removed and one of the wood-receiving boxes in section. Fig. 2 is a side elevation of the same, showing one of the wood-receiving boxes in section.

Similar letters of reference indicate corresponding parts.

The grinding-stone A is rigidly mounted on a horizontal shaft, B, which is journaled in a casing, C, surrounding the stone A. The shaft B is provided with a belt-pulley for rotating it, or with other suitable devices for the same purpose. A series of boxes, D, for receiving the blocks of wood to be converted into a pulp, are attached to both sides of the casing C, and are provided with removable lids E. A follower, F, is contained in each of these boxes D, and attached to a rack, G, with which a pinion, H, engages, mounted on a shaft, J, on which a pulley, K, is mounted. A strap or band, L, is attached to and wound around these pulleys, and a weight, M, is attached to the lower end of this strap or band in such a manner that it will have the tendency to unwind the strap or band from the pulley K, and thus rotate the pulley and the pinion H, thereby forcing the follower F, which rests

against the block of wood, against the side of the stone.

The blocks of wood can be pressed against the stone by springs or by hydraulic pressure, if desired.

Water is admitted into the casing C by the pipes N N for washing the fibers from the stone. The wood pulp passes out of the casing C through the opening O.

Two or more steel sharpeners, P, resting against the sides of the stone, are attached to screw Q, provided with a head, R, which can be rotated by means of a rod, S, whereby the sharpeners P can be raised and lowered so as to dress the entire side of the stone as the same rotates. This screw Q is mounted on the casing C.

If the blocks of wood are to be pressed against the sides of the stone at an angle from below, the necessary pressure can be derived from the weight of the stone itself. If the blocks of wood are to be pressed against the side of the stone at an angle from above, the weight of the wood itself will furnish sufficient pressure. At the same time wood blocks can also be converted into fibers by the rim of the stone.

The blocks of wood are to be placed in the boxes D in such a manner that their fibers will be parallel with the stone. With this arrangement the wood can be reduced to fibers just as rapidly as if the stone would cut across the grain, and at the same time long fibers are obtained, which is of great importance. If the rim of the stone is not to be used for grinding wood, iron bands can be placed around the same, and the stone can be revolved with a much greater velocity without any danger of an explosion. As the wood can be pressed against both sides of the stone, a much greater production is obtained, and as the pressure on both sides is equal, the shaft need carry the weight of the stone only, thus permitting the machine to be operated with less power, and the journals will last much longer.

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

1. In a wood-pulp machine, the combination,
with the vertically - revolving grinding - stone
A, the boxes D, and the followers F, of the
racks G, the pinion H, the shaft J, the pulley
5 K, the strap L, and weight M, substantially as
described, whereby a constant and even press-
ure upon the block is maintained and the box
easily refilled, as set forth.

2. The combination, with the grinding-stone
10 A, of the sharpeners P, screws Q, and heads

R, substantially as described, whereby the
faces of the stone, when worn smooth, may be
roughened, as set forth.

In testimony whereof I have signed my name
to this specification in the presence of two sub- 15
scribing witnesses.

N. KAISER.

Witnesses:

H. HOCKENJOS,
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