

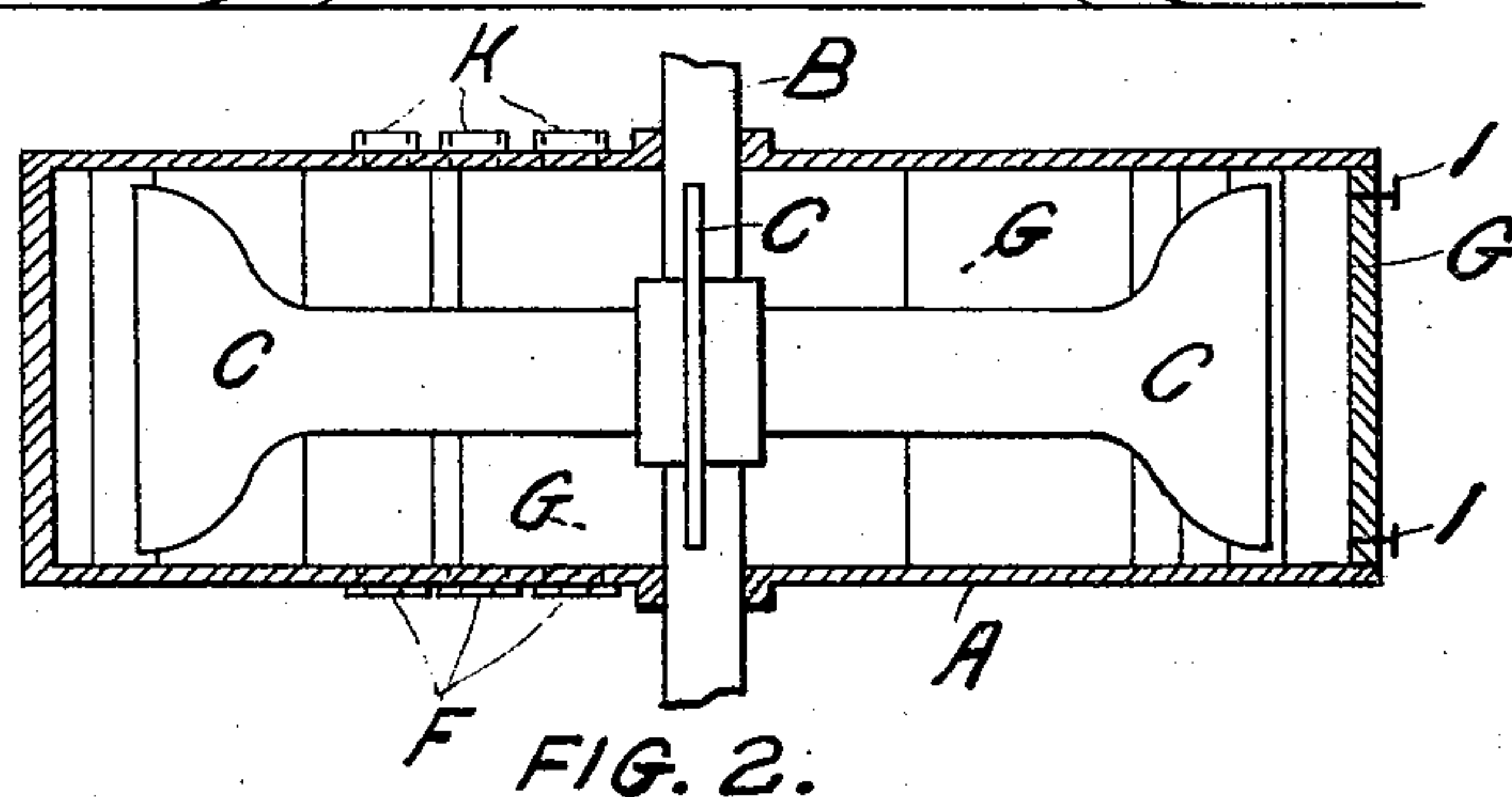
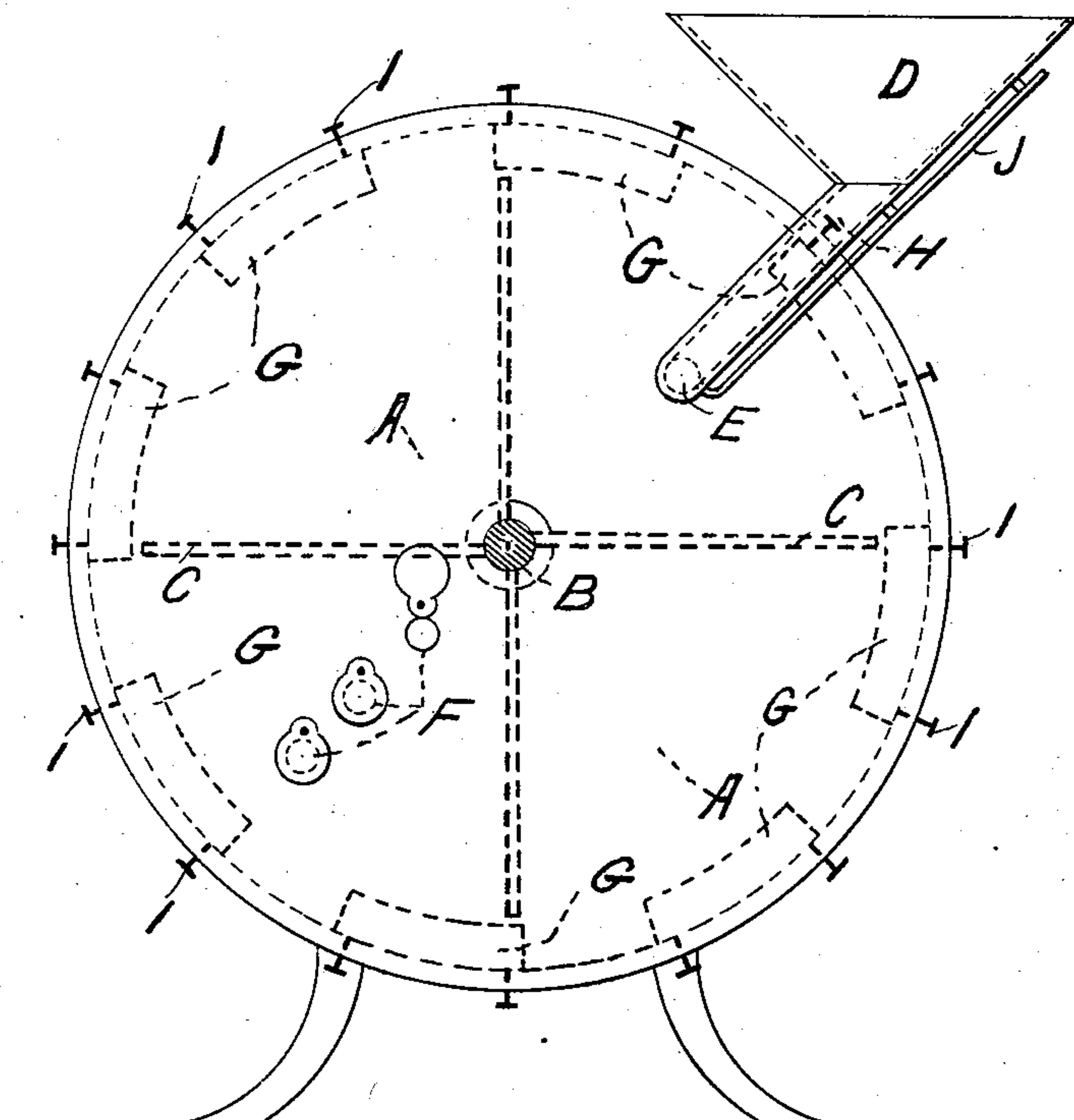
(Model.)

G. H. POND.
Process of Reducing Wood to Fine Fiber or Paper Pulp.

No. 243,616.

Patented June 28, 1881.

FIG. 1.



WITNESSES.

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UNITED STATES PATENT OFFICE.

GOLDSBURY H. POND, OF NEW YORK, N. Y.

PROCESS OF REDUCING WOOD TO FINE FIBER OR PAPER-PULP.

SPECIFICATION forming part of Letters Patent No. 243,616, dated June 28, 1881.

Application filed November 13, 1880. (Model.)

To all whom it may concern:

Be it known that I, GOLDSBURY H. POND, a citizen of the United States, residing at New York city, in the county of New York and State of New York, have invented certain new and useful Improvements in the Process of Reducing Wood to Fine Fiber or Paper-Pulp; and I do hereby declare the following to be a full, clear, and exact description of the invention, such as will enable others skilled in the art to which it appertains to make and use the same.

My invention consists in reducing wood sawdust to fine fiber by disintegrating it by means of rapidly-revolving arms in a closed cylinder without the use of water, and the arms not touching any part of the cylinder, as hereinafter described.

The object of my invention is to more perfectly preserve the fiber of the wood and to manufacture the same more rapidly than heretofore done.

To carry out my invention I construct a machine as shown by the illustration in the accompanying drawings, in which—

Figure 1 is a side elevation of said machine. Fig. 2 is a cross-section of the same.

A is a closed cylinder. B is a shaft running through the center of said cylinder. C are arms attached to the shaft B. D is the hopper into which the sawdust is to be placed. E is an opening in the side of the cylinder through which the sawdust passes from the hopper to the cylinder. F is an adjustable discharge-opening. G is an adjustable segment of the

cylinder to regulate the space between the inner surface of the periphery and the ends of the revolving arms for the purpose of adapting it to the different degrees of coarseness and hardness of the sawdust to be disintegrated. The discharge-opening F is made adjustable for the purpose of regulating the fineness of the fiber discharged. The nearer the opening is to the shaft or center of the machine the finer will be the fiber discharged.

The operation is as follows: The sawdust is placed in the hopper D, and the shaft B, carrying the arm C, is made to revolve with great rapidity, so that as the sawdust enters the cylinder it is rapidly forced around the same, and as the particles are reduced to the requisite fineness of fiber they are discharged through the adjustable opening F.

An air-passage, H, is supplied to the cylinder for the purpose of assisting the discharge of the fiber, the machine doing the work without grinding.

What I claim, and desire to patent, is—

The reducing of wood sawdust to fine fiber without water, for the manufacture of paper, by means of rapidly-revolving arms within a closed cylinder and without any grinding process, substantially as set forth.

In testimony whereof I affix my signature in presence of two witnesses.

GOLDSBURY H. POND.

Witnesses:

S. M. OSGOOD,
ALSON ROBERTS.