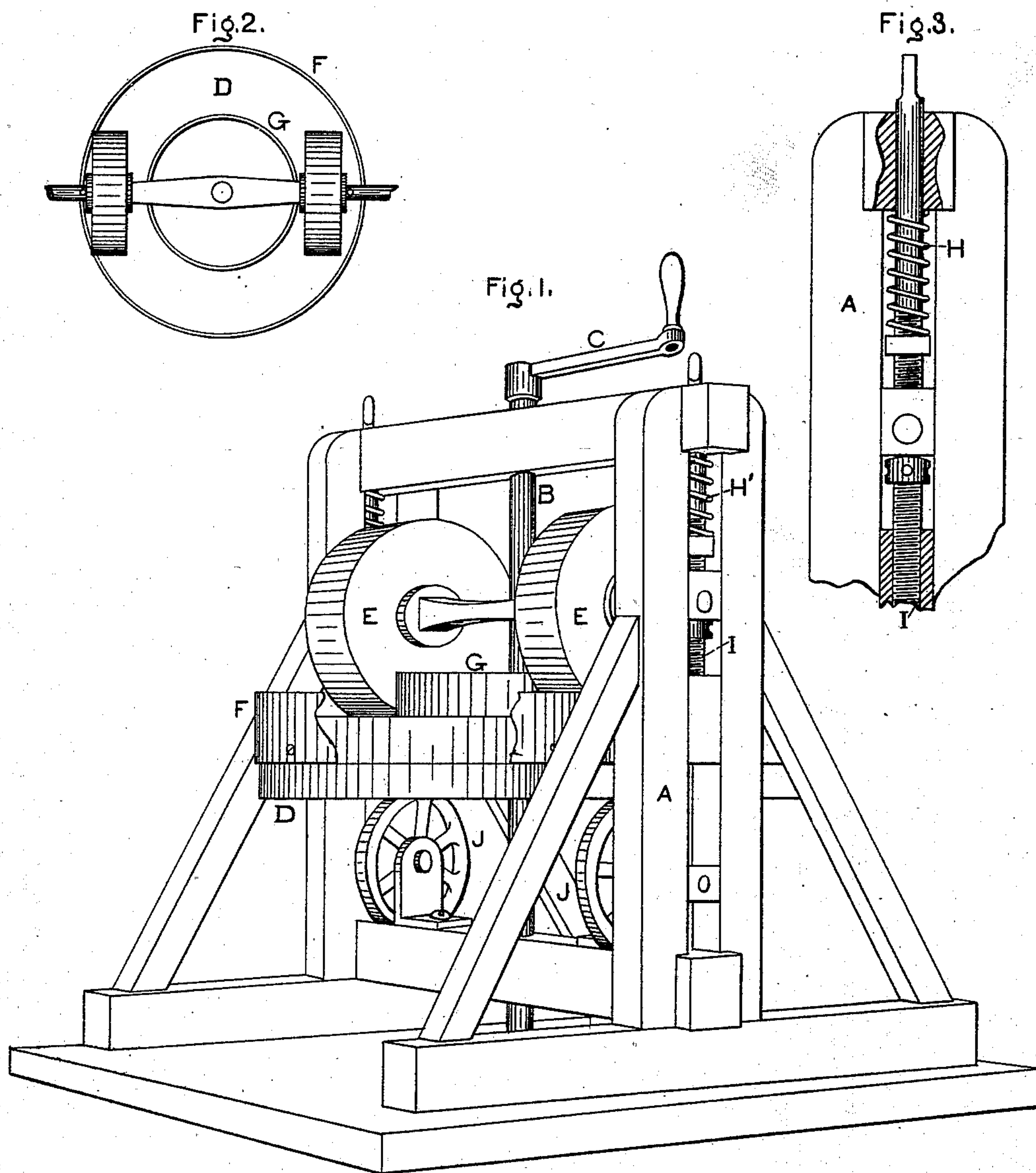


J. H. MITCHELL.
Triturating Mill.

No. 223,651.

Patented Jan. 20, 1880.



Witnesses:

No. P. Grant,
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Inventor:

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UNITED STATES PATENT OFFICE.

J. HENRY MITCHELL, OF PHILADELPHIA, PENNSYLVANIA.

TRITURATING-MILL.

SPECIFICATION forming part of Letters Patent No. 223,651, dated January 20, 1880.

Application filed May 14, 1879.

To all whom it may concern :

Be it known that I, J. HENRY MITCHELL, of the city and county of Philadelphia, and State of Pennsylvania, have invented new and useful Improvements in Triturating-Mills, which improvements are fully set forth in the following specification, reference being had to the accompanying drawings.

The object of my invention is to produce greater grinding qualities than have hitherto been produced by the same kind of mill, and to increase the facility of removing and supplying material to the mill; also to economize room, as shown in the perspective view, Figure 1 of the accompanying drawings.

The machine is illustrated somewhat in detail in the plan view, Fig. 2, and in the elevation, Fig. 3.

Frame A is so constructed as to accommodate the different parts in their relative positions.

In operating the machine the power is applied, as shown, to the vertical shaft B, where the crank C is attached; or it may be driven at the side with gearing, by placing the material upon the table D and revolving it in either direction, causing the material to be crushed by passing under the stones or iron rollers E E.

It will be readily seen that the material on the revolving table D is used in transmitting the power from the table D to stones or iron rolls E E, which necessarily facilitates the grinding and crushing qualities of the mill over the old way of applying the power to them direct.

The stones or iron rolls E E are arranged to travel on different parts of the table D, so as to cover all the material between the guards F G, as shown in Figs. 1 and 2.

If the stones or iron rolls E E are not

heavy enough to crush the material, additional pressure can be obtained by increasing the tension of the springs H H, which force rods H' H' against the tops of the bearings of said grinding-rolls E E.

The stones or iron rolls E E are prevented from wearing away the table D and themselves by stop I, Figs. 1 and 3, which can be shortened or lengthened to the desired point by screwing up or down, as desired, to make the rollers E E come in contact with the table D.

The material is kept in position to pass under the stones by the construction of the guards F G on revolving table D. (Shown in Figs. 1 and 2.) The table D is assisted in revolving freely by the friction-wheels J J. They also support the table D where it is most needed, under the stones or rollers E E.

After the material has been ground to the desired fineness it is removed from the mill by placing a scoop upon the revolving table D, between the guards F G of the grinding-bed. As the table revolves the motion facilitates collecting the material into the scoop, and after the crushed material has been removed the mill is again filled. It will thus be seen that it is not necessary to stop the mill in filling or removing the material.

I claim as my invention—

In combination with grinding-rolls E E and table D, the screw-threaded vertically-adjustable stops I and the rods H', forced down by the adjustable pressure of springs H, said stops I and rods H' being arranged to clamp or hold between them the bearings of said grinding-rolls, substantially as set forth.

J. HENRY MITCHELL.

Witnesses:

JOHN H. DALE,
J. P. ANDERSON.