W. H. BARBER.

BARK-MILL.

No. 190,182. Patented May 1, 1877.

Fig. 1.

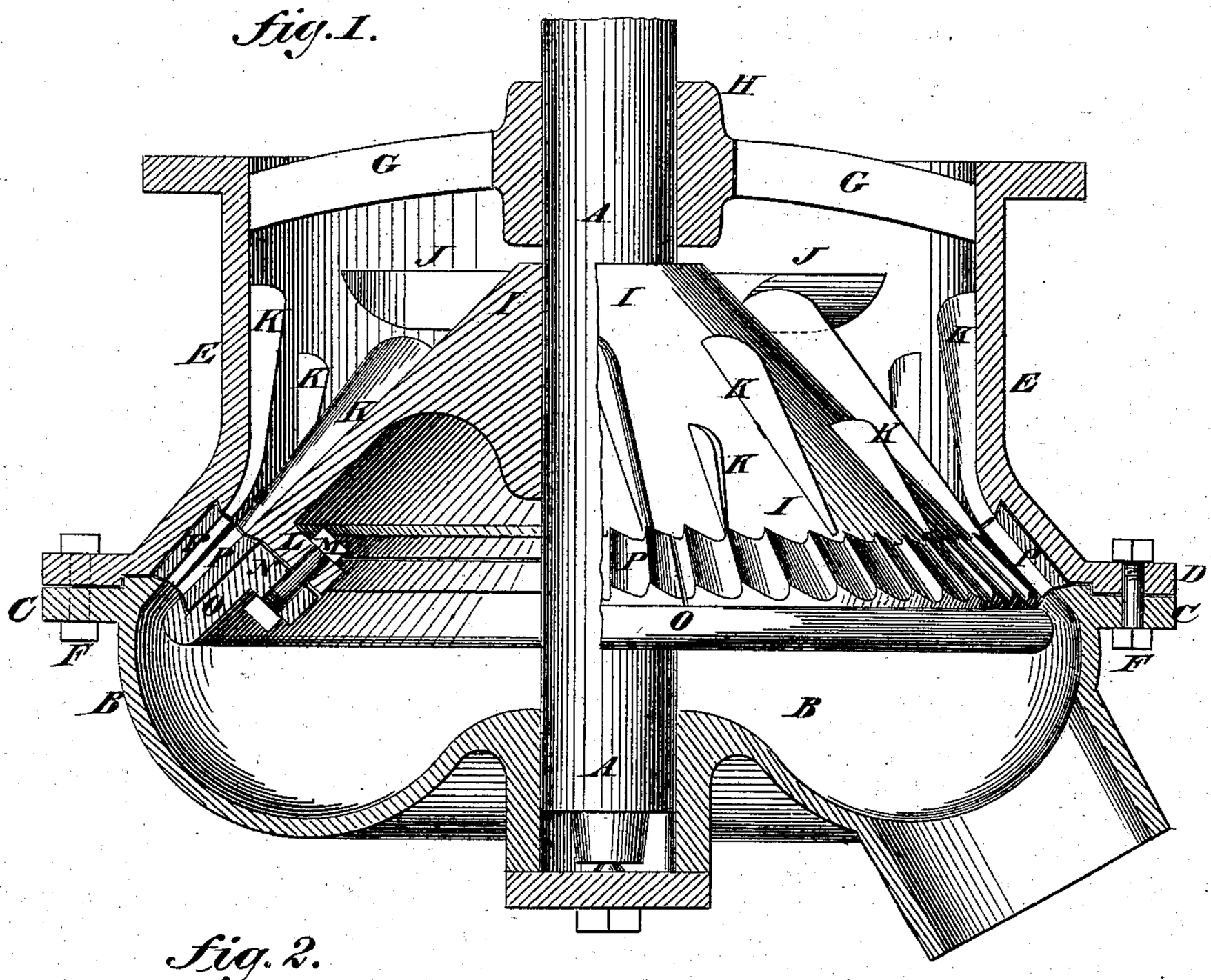
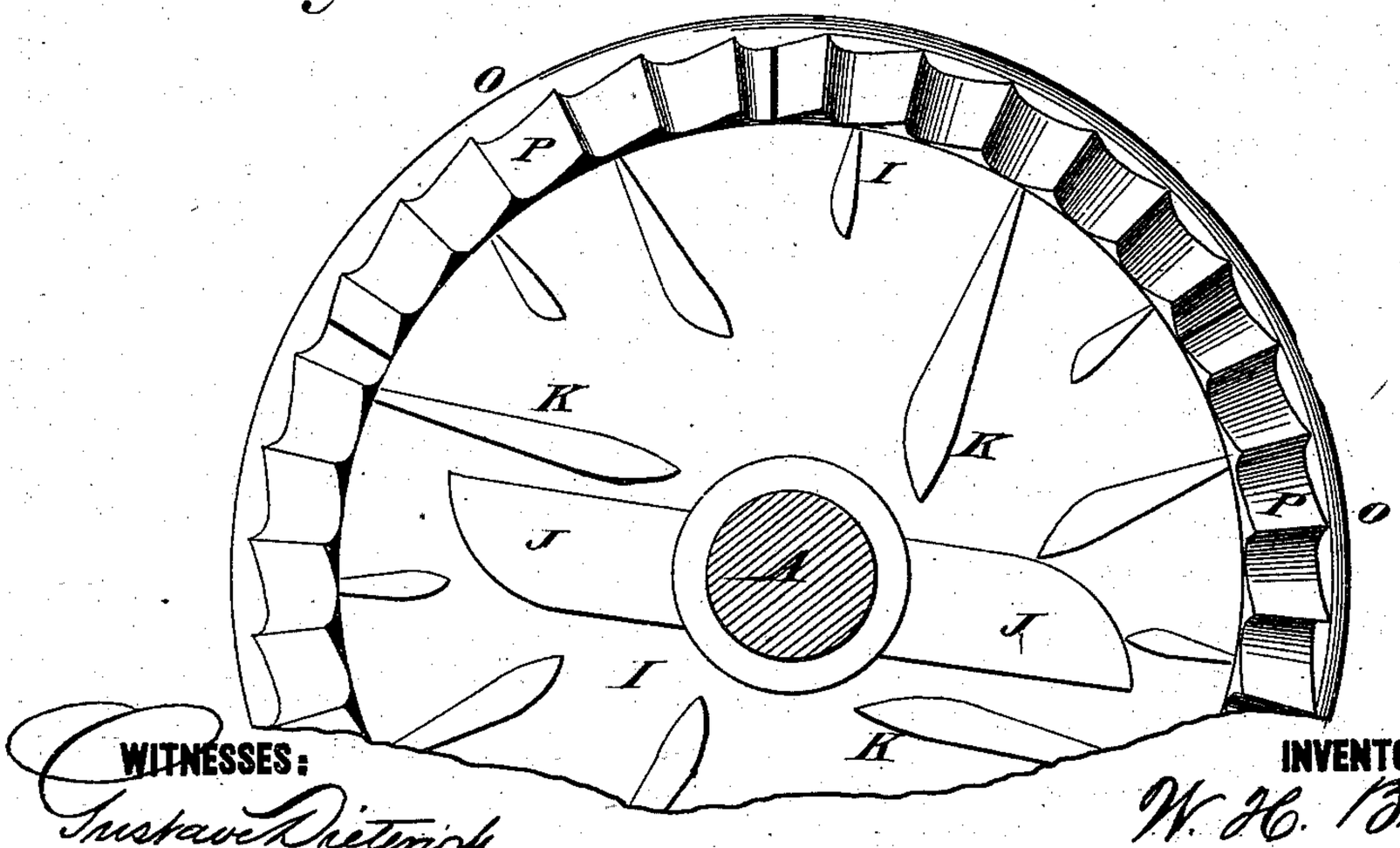


Fig. 2.



WITNESSES:

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WILLIAM H. BARBER, OF ALLENTOWN, PENNSYLVANIA.

IMPROVEMENT IN BARK-MILLS.

Specification forming part of Letters Patent No. **190,182**, dated May 1, 1877; application filed January 29, 1877.

To all whom it may concern:

Be it known that I, WILLIAM HARRISON BARBER, of Allentown, in the county of Lehigh and State of Pennsylvania, have invented a new and useful Improvement in Bark-Mills, of which the following is a specification:

Figure 1 is a detail vertical section of my improved bark-mill. Fig. 2 is a detail top view of the running part of the mill.

Similar letters of reference indicate corresponding parts.

The object of this invention is to furnish an improved mill for grinding bark, bone, cement, &c., which shall be so constructed that there will be no bolt-holes or spaces for the collection of damp bark to clog the mill; that will be stronger than the ordinary mills; that will require less labor to make; that will require less labor and less skill to replace worn or broken parts; and that shall have fewer parts than the ordinary mill; and will be less liable to get out of order.

The invention consists in providing the grinding or toothed segments with dovetail tenons, fitting into corresponding slots of the casing and wheel, as will be hereinafter more fully set forth.

A is the driving-shaft, which revolves upon an adjustable pivot in a socket formed in the discharge-bowl B. Around the upper edge of the discharge-bowl B are formed lugs or a flange, C, upon which fit the lugs or flange D, formed around the lower edge of the upper part or case E of the mill, so that the said parts B E may be secured to each other by bolts F, passing through the said lugs or flanges C D.

The edges of the bowl B and case E should be rabbeted or halved to each other, so as to form a close joint even when the said parts are not drawn close together.

The upper end of the case E is supported by the arms G, the inner ends of which are connected with a collar, H, through which the shaft A passes.

To the shaft A, just below the collar H, is keyed the wheel or movable part I of the mill, which is made conical in its general form. To the upper part of the wheel I are attached radial cutters J, to break or cut the bark into pieces as it is thrown into the mill.

Upon the surfaces of the wheel I and case E are formed graduated flanges, cutters, or teeth K, to still further break up the bark as it passes down to the toothed grinding-segments.

Upon the inner side of the lower edge of the wheel I are formed lugs or a flange, L, to receive the bolts M, which also pass through the lugs or flange N, formed upon the inner side of the upper edge of the ring O, to fasten the said ring O against the lower edge of the said wheel I.

The inner surface of the lower edge of the case E and the outer surface of the upper part of the ring O have rabbets with inclined or dovetailed shoulders formed in them, which rabbets, in connection with the edges of the discharge-bowl B and ring O, form dovetailed grooves to receive and clamp the toothed grinding-segments P. This construction enables the segments P to be made without any bolt-holes through them, and with their ends fitted against each other, so that there will be no cavities and interstices into which wet bark may stick and form a nucleus of a collection that will finally clog the mill. This construction also enables the grinding-segments to be readily taken out when worn or broken and replaced with others.

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

The combination, in a bark-mill, of detachable grinding-segments P, having dovetail tenons, with an external casing and a revolving wheel, having dovetail grooves or seats to receive said segments, substantially as and for the purpose set forth.

WILLIAM H. BARBER.

Witnesses:

CHAS. F. BALLIET,

CYRUS ZIMMERMAN.