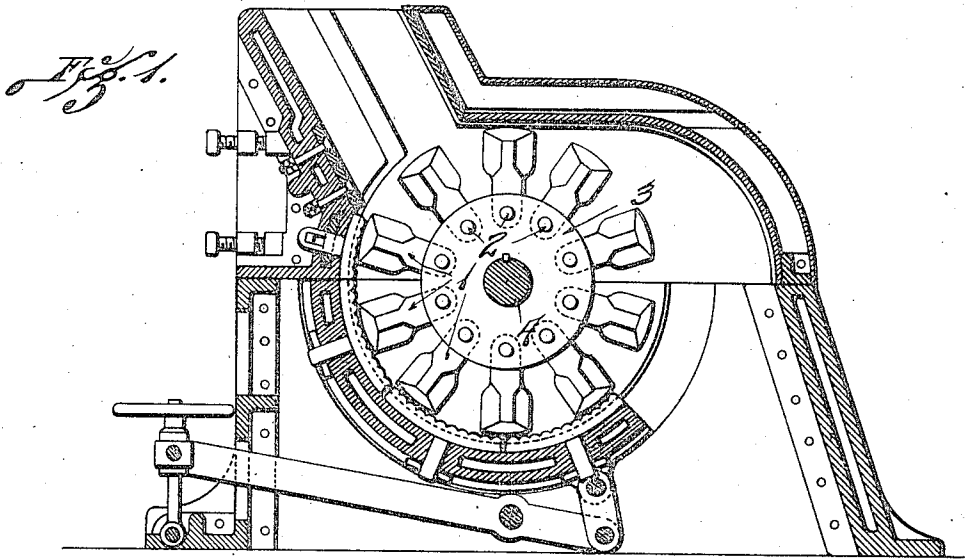


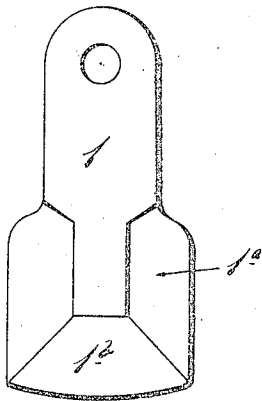
M. F. WILLIAMS.  
SPLITTING HAMMER.  
APPLICATION FILED AUG. 4, 1911.

1,031,896.

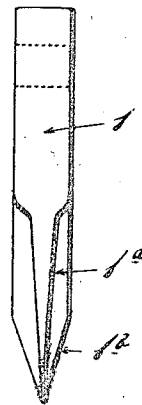
Patented July 9, 1912.



*Fig. 2.*



*Fig. 3.*



WITNESSES  
E. M. Harrington  
Mr. James.

INVENTOR.  
MILTON F. WILLIAMS.  
BY J. W. Cornwall atty.

# UNITED STATES PATENT OFFICE.

MILTON F. WILLIAMS, OF ST. LOUIS, MISSOURI, ASSIGNOR TO WILLIAMS PATENT CRUSHER & PULVERIZER COMPANY, OF ST. LOUIS, MISSOURI, A CORPORATION.

## SPLITTING-HAMMER.

1,031,896.

Specification of Letters Patent.

Patented July 9, 1912.

Application filed August 4, 1911. Serial No. 642,300.

*To all whom it may concern:*

Be it known that I, MILTON F. WILLIAMS, a citizen of the United States, residing at St. Louis, Missouri, have invented a certain new and useful Improvement in Splitting-Hammers, of which the following is a full, clear, and exact description, such as will enable others skilled in the art to which it appertains to make and use the same, reference being had to the accompanying drawings, forming part of this specification, in which—

Figure 1 is a view of the machine showing my improved hammer in position. Fig. 2 is a detailed side view of the hammer. Fig. 3 is a detailed edge view of the hammer.

My invention relates to a new and useful improvement in hammers for shredding machines, the object being to construct a hammer which will have a cutting or splitting edge at each side, whereby it can be reversed, and also a cutting edge at its outer extremity. The hammer in question is designed particularly for splitting or shredding wood and other fibrous materials and is provided with a shank portion 1 having an opening in its inner end through which passes a pivot bolt 2 passing through openings in hammer supports 3 mounted on a rotating shaft 4. This cylinder of hammers is mounted in a shredding machine and the material to be operated on is fed into the machine to the action of said hammers which hammers strike the material shredding or reducing the same. The outer end of the hammer is widened, as shown in Fig. 2, by drawing out the edges by reducing the material at the inclined faces 1<sup>a</sup>. These faces are formed on each edge of the hammer, and the widened edge thus pro-

duced tapers to a cutting point at the outer extremity of the hammer, as shown in Fig. 3. The outer edge or extremity of the hammer is drawn to a cutting edge 1<sup>c</sup> by forming the inclined beveled edges 1<sup>b</sup> and by drawing out the side edges of the hammer as before described, this outer cutting edge is made of greater length. It is this outer cutting edge which acts upon the material entering the machine to disintegrate or shred it and being held out by centrifugal force, the hammer delivers a cutting blow at high speed which will shred or reduce the material quickly and effectively.

What I claim is:

1. In a rotary mill, the combination of a revoluble shaft, and a splitting hammer mounted radially thereon, said splitting hammer comprising a shank having formed at the extremity thereof a cutting edge and having formed at the sides thereof wedge shaped cleaving edges, said cutting edge and said cleaving edges uniting at the extreme corners of said hammer to form a two edged entering point.

2. In combination with a revoluble shaft, a splitting hammer, mounted radially thereon, said hammer comprising a shank having formed thereon at one extremity a cutting edge, and also having formed thereon lateral cleaving edges, said hammer being provided at its other extremity with a means for attachment.

In testimony whereof I hereunto affix my signature in the presence of two witnesses, this 2nd day of August, 1911.

MILTON F. WILLIAMS.

Witnesses:

F. R. CORNWALL,  
LILY POST.