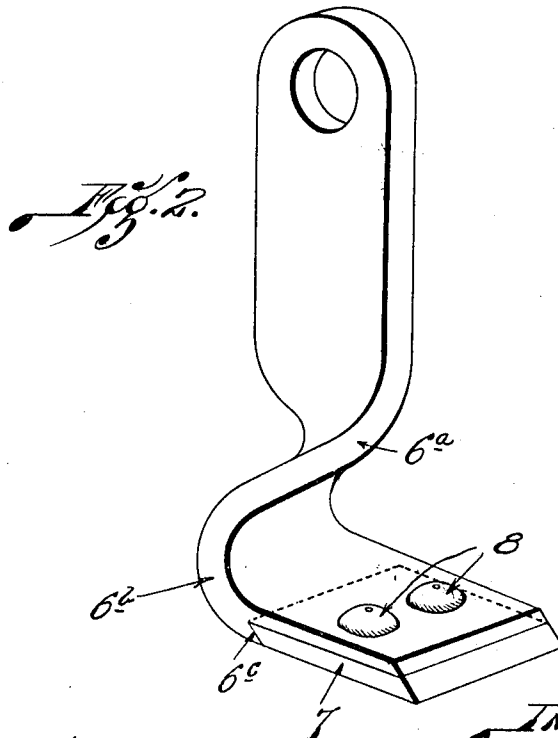
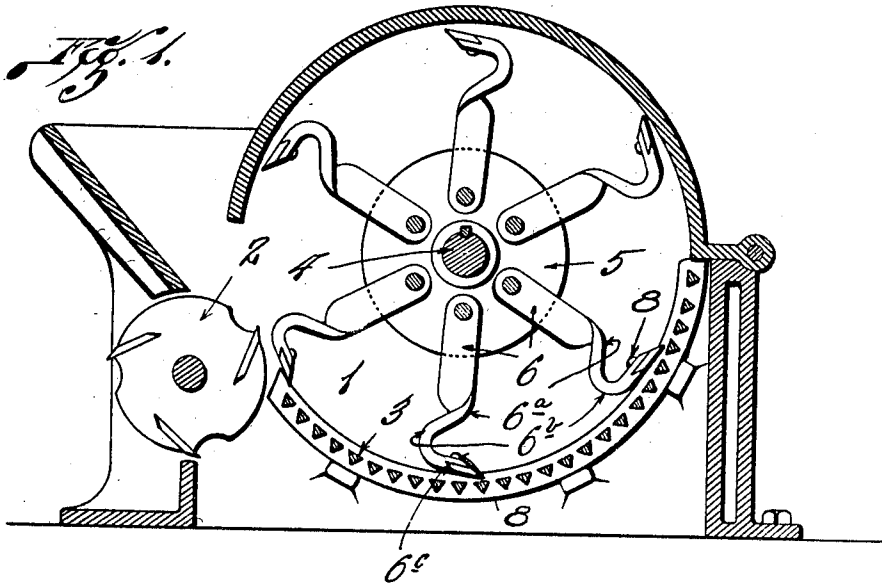


M. F. WILLIAMS.
SLICING HAMMER.
APPLICATION FILED AUG. 28, 1911.

1,020,381.

Patented Mar. 12, 1912.



WITNESSES.
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UNITED STATES PATENT OFFICE.

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

SLICING-HAMMER.

1,020,381.

Specification of Letters Patent.

Patented Mar. 12, 1912.

Application filed August 28, 1911. Serial No. 646,532.

To all whom it may concern:

Be it known that I, MILTON F. WILLIAMS, citizen of the United States, residing at St. Louis, Missouri, have invented a certain new and useful Improvement in Slicing-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 sectional view through a machine equipped with my improved slicing hammer. Fig. 2 is a detailed view of the hammer.

This invention relates to a new and useful improvement in slicing hammers for disintegrating machines, the object being to construct a hammer having a reversible slicing blade whose active cutting point will operate upon the material fed into the machine and whose non-active cutting point will be guarded or protected and prevented from becoming dulled by the contact of material therewith.

Another feature of my present invention is to give to the shank on which the cutting blade is mounted a quarter turn and to provide said shank at its outer end with a re-bent curved portion into which the slice of material will be initially received and whirled around so as to be further reduced by attrition, and then deflected to one side.

With these objects in view the invention consists in the construction, arrangement and combination of the several parts all as will hereinafter be described and afterward pointed out in the claims.

In the drawings 1 indicates the casing of the machine, 2 the breaker roll, and 3 the grinding cage, 4 is a shaft extending transversely the grinding chamber and on which are mounted supporting disks 5 for the slicing hammers.

The slicing hammer shown consists of a shank portion 6 the lower end of which is given a quarter turn at the point marked 6^a after which said shank is provided with a refolded bent portion 6^b forming a pocket at the heel portion of the hammer head. The hammer head proper is flat and provided with an overhanging lip or shoulder 6^c under which the non-active cutting edge 55 of blade 7 is introduced when said blade is

placed in working position. To secure the blade in place rivets 8 are employed, the openings for which are preferably in such position that the blade may be reversed.

The active cutting edge extends outwardly beyond the cutting bead which head is beveled so as to coincide with the beveled face of the active cutting blade, as shown. When the slicing hammers are swung outwardly by centrifugal force, as shown in Fig. 1, the cutting blade is tangentially disposed so that its active cutting point lies radially outward, the blade being thus inclined to its arc of movement.

In operation the material to be operated upon is cut or sliced by the blade and due to the beveled edge thereof is forced inwardly, eventually being received by the semi-circular pocket at the heel of the blade where it is whirled around and further disintegrated by attrition. The material after leaving the pocket is deflected laterally by the quarter turn in the shank and may then move outwardly by centrifugal force to pass through the openings in the grinding surface.

What I claim is:

1. A slicing hammer comprising a shank, one end of which is bent a quarter of a turn and refolded so that said end occupies a position substantially at right angles to the main body portion of said shank, and a blade fixed to the outside of the refolded portion with its cutting edge projecting in front of said refolded end portion.

2. A slicing hammer comprising a shank adapted to be pivotally connected to a rotary member at one end, the opposite end of which shank occupies a position substantially at right angles to the plane occupied by the body of the shank, said last mentioned end of the shank being provided in its outer side with a recess, and a blade fixed to the end of the shank and positioned within the recess with its non-cutting edge positioned adjacent to the shoulder at the end of the recess.

3. A slicing hammer comprising a shank, one end of which is bent a quarter turn and re-folded to form a pocket for receiving the sliced material and a blade fixed to the outer side of the re-folded portion of the shank with its cutting edge projecting in front of the re-folded portion of said shank.

4. A slicing hammer comprising a shank

- provided with a quarter turn and a refolded portion forming a pocket to receive the sliced material the front end of which refolded portion is beveled and a cutting
- 5 blade carried by the outer end of said hammer and having a beveled edge which combines with the beveled edge on the re-folded portion of the shank for forcing the material into said pocket.
- 10 5. The combination with a shank adapted to be pivotally connected to a rotating member at one end and provided with a pocket

at its opposite end, of a blade applied to the end of the shank below the pocket with the cutting edge of said blade projecting in front of the end of the shank below the pocket. 15

In testimony whereof I hereunto affix my signature in the presence of two witnesses, this 24th day of August, 1911.

MILTON F. WILLIAMS.

Witnesses:

M. P. SMITH,
JESSIE CLARK.