

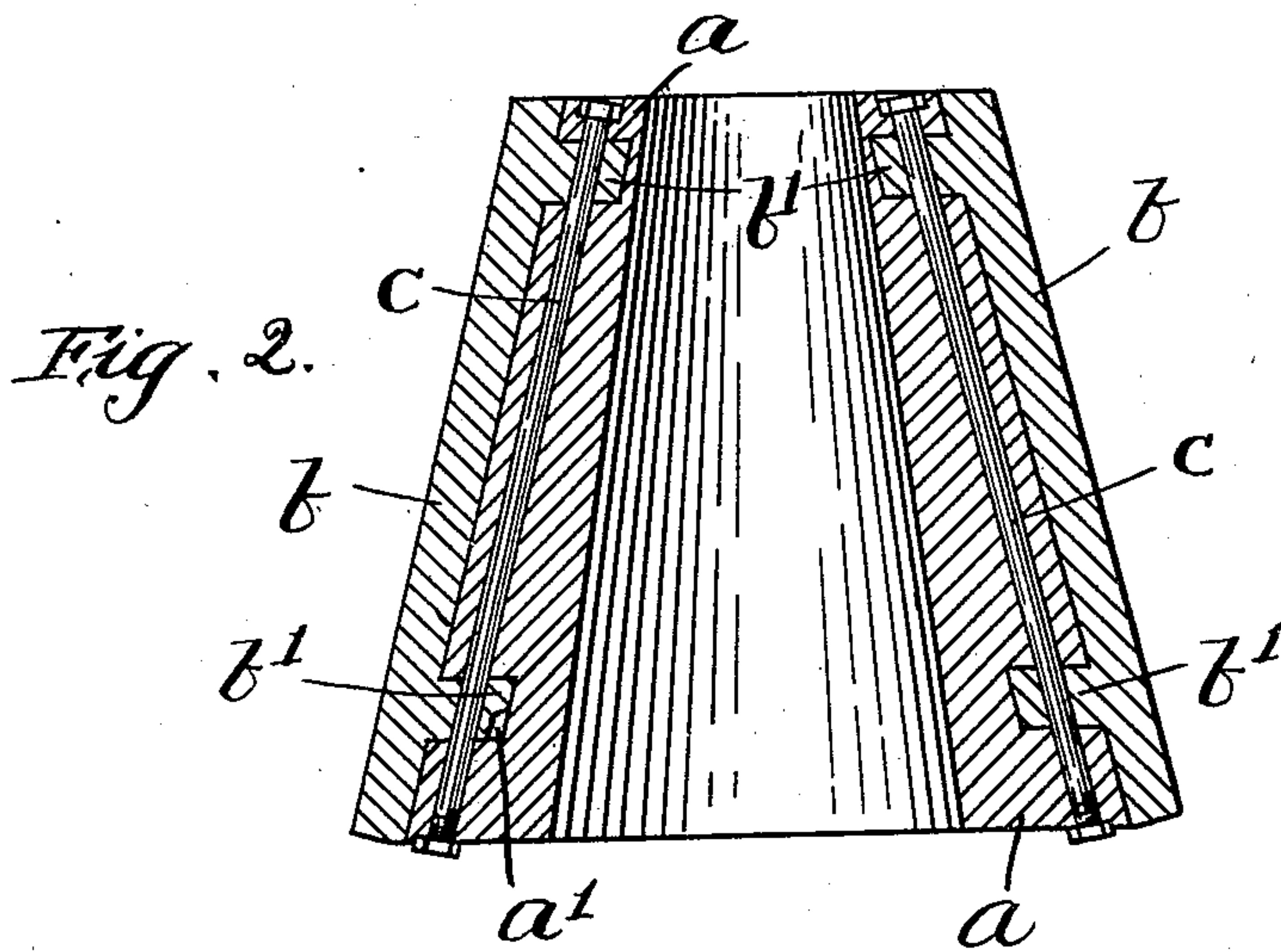
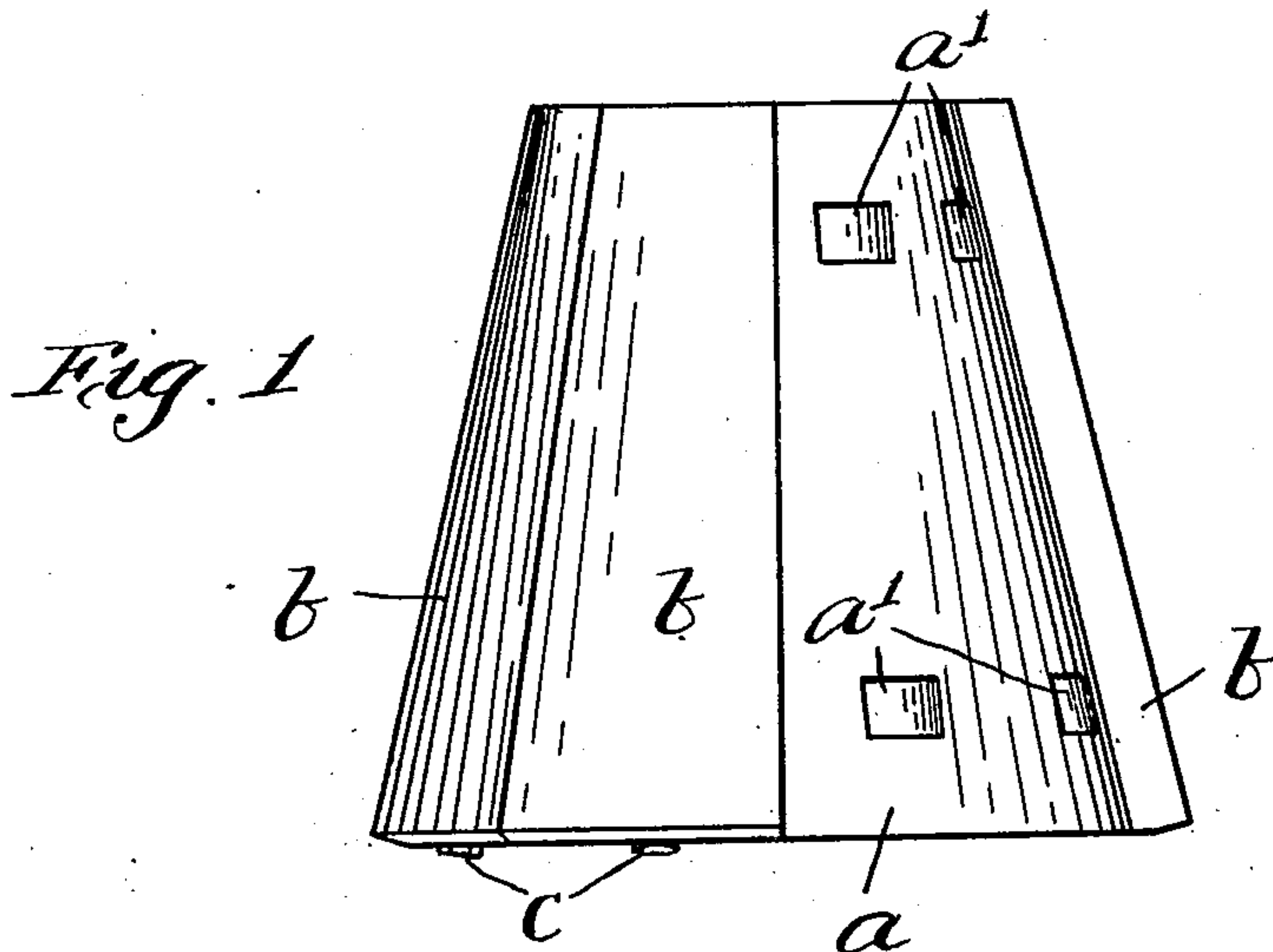
No. 692,886.

Patented Feb. 11, 1902.

V. W. MASON, JR.
GRINDING OR CRUSHING HEAD.

(Application filed Apr. 29, 1901.)

(No Model.)



Witnesses:
H. B. Davis.
John W. Deereus.

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Att'y

UNITED STATES PATENT OFFICE.

VOLNEY W. MASON, JR., OF NEW YORK, N. Y.

GRINDING OR CRUSHING HEAD.

SPECIFICATION forming part of Letters Patent No. 692,886, dated February 11, 1902.

Application filed April 29, 1901. Serial No. 57,889. (No model.)

To all whom it may concern:

Be it known that I, VOLNEY W. MASON, JR., of the city, county, and State of New York, have invented an Improvement in Grinding or Crushing Heads, of which the following description, in connection with the accompanying drawings, is a specification, like letters on the drawings representing like parts.

This invention has for its object to improve the construction of grinding or crushing heads especially adapted for gyratory crushers, although also adapted for other uses, to the end that the same may be constructed, essentially, of manganese steel and the wearing portion renewable whenever desired.

In another application filed by me, Serial No. 57,606, a grinding or crushing head is shown comprising a core and a number of external segments mounted thereon and secured thereto and disposed to snugly abut against each other, said core being composed of any ordinary steel or iron and said segments being composed of manganese steel, and in said application certain means are shown for securing the several segments to the core.

In accordance with this invention a core is provided which may be made of any ordinary steel or iron and, if desired, may be tapering from end to end, and a number of external segments are provided adapted to be placed upon said core and secured thereto, and as a means for securing said segments to the core, which constitutes the essential feature of this invention, sockets are provided in the core and ears or projections are provided on the segments which are adapted to enter said sockets when the segments are placed on the core, and bolts pass longitudinally through the wall of the core which traverse said sockets and pass through the ears or projections contained therein. For many uses such a grinding or crushing head will subserve the purposes desired.

Figure 1 shows in side elevation a grinding or crushing head embodying this invention, some of the segments being removed to expose the core. Fig. 2 is a vertical section of the grinding or crushing head, showing particularly the means for securing the several segments to the core.

The grinding or crushing head herein shown

for the sake of illustrating the invention is made conical or tapering from end to end; but my invention is not limited to such form of head.

The core *a* is made conical and also hollow to be placed upon a spindle. The core *a* is formed or provided with a number of sockets *a'* of any suitable shape, size, and depth, they being arranged in two parallel rows around the core at or near the opposite ends thereof. The segments *b*, of which there may be any desired number, are made tapering from end to end—i. e., when used in connection with a conical core—and they are formed or provided upon their inner sides with ears or projections *b'*, which are properly disposed to enter the sockets *a'* in the core. The ears or projections *b* have bolt-holes through them. The segments are placed in position on the core *a* with the ears or projections *b'* projecting into the sockets, and long bolts *c* pass down through bolt-holes provided in the wall of the core and traverse the sockets *a'* and pass through the ears or projections *b'*. The segments are thereby secured to the core.

By making the several segments of manganese steel I find in practice that the tendency due to the ductility or flow of the metal is for the abutting sides to crowd together or against each other and overlap, more or less, resulting from stress or impact or duty performed by them, and such action acts to lock them together and to more firmly and permanently secure them to the core.

I claim—

A grinding or crushing head, comprising a core having sockets, segments adapted to be placed thereon having ears or projections which enter said sockets, and bolts passing longitudinally through the core which traverse said sockets and pass through said ears or projections and thereby secure the segments to the core, substantially as described.

In testimony whereof I have signed my name to this specification in the presence of two subscribing witnesses.

VOLNEY W. MASON, JR.

Witnesses:

B. J. NOYES,
JOHN W. DECROW.