

(No Model.)

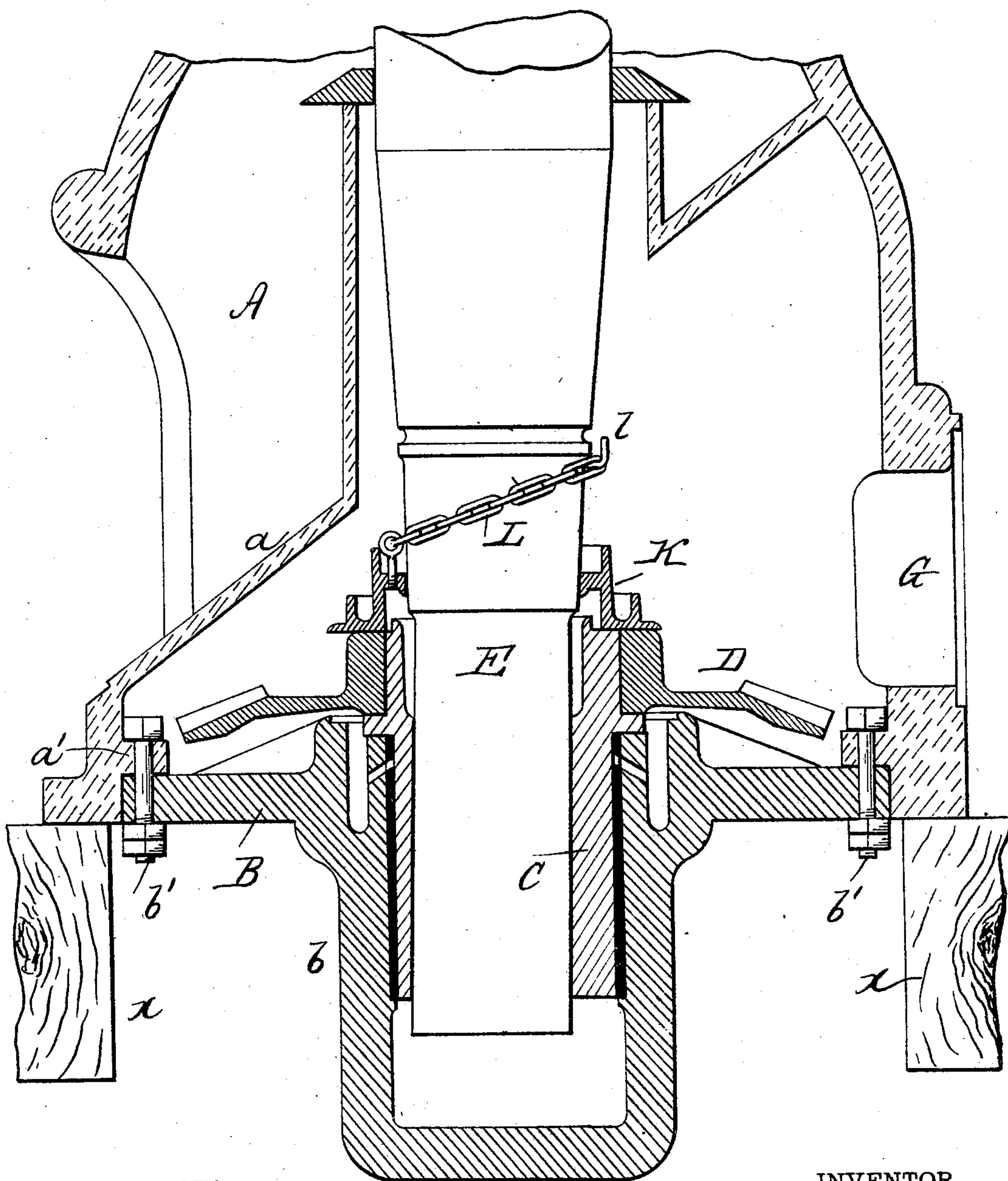
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R. McCULLY.
CRUSHING MACHINE.

No. 500,598.

Patented July 4, 1893.

Fig. 1



WITNESSES:

M. D. Pastorfield
Chas. E. Reed

INVENTOR

Robert McCully
By J. Van Stavern
attorney

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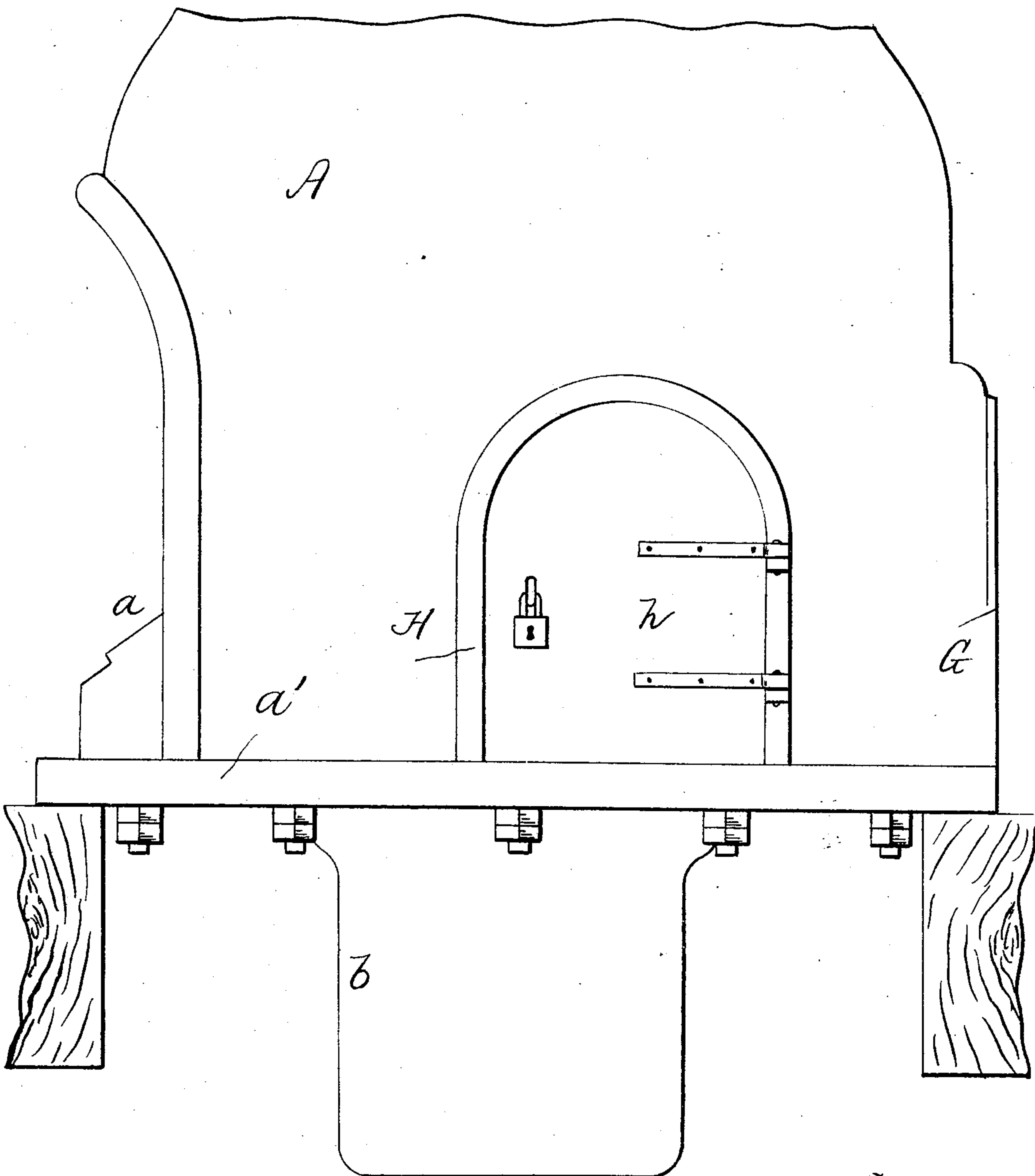
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Fig. 2



Witnesses
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UNITED STATES PATENT OFFICE.

ROBERT McCULLY, OF PHILADELPHIA, PENNSYLVANIA.

CRUSHING-MACHINE.

SPECIFICATION forming part of Letters Patent No. 500,598, dated July 4, 1893.

Application filed April 25, 1892. Serial No. 430,627. (No model.)

To all whom it may concern:

Be it known that I, ROBERT McCULLY, a citizen of the United States, residing at Philadelphia, in the county of Philadelphia and State of Pennsylvania, have invented certain new and useful Improvements in Crushing-Machines; and I do hereby declare the following to be a full, clear, and exact description of the invention, such as will enable others skilled in the art to which it appertains to make and use the same.

My invention has relation to gyratory crushing machines of the form having a lower cylindrical section having a bottom plate in which is located the working eccentric and gear wheel for the gyratory shaft; and it has for its object a construction of such cylindrical section and of the bottom plate that the latter is removable from the cylindrical section whenever desired for repairs or replacement of parts of the actuating mechanism for the shaft, thereby avoiding the dismantling of the entire machine for such purposes as has heretofore been customary.

My invention accordingly consists in the combination, construction, and arrangement of the parts as hereinafter more particularly described in the specifications and pointed out in the claims.

Reference is had to the accompanying drawings, wherein—

Figure 1, is a sectional elevation of the lower cylindrical section for a gyratory crushing machine embodying my improvements; and Fig. 2 is an elevation of the same, showing door or opening therein for access to the interior of the cylindrical section.

A represents the cylindrical sections of a gyratory crushing machine, which may be integral with the entire machine or separate therefrom and bolted to the usual other sections as desired. It is provided with the usual outlet chutes *a* as desired and a bottom plate B with bearing *b* for the eccentric C carrying driving wheel D for gyrating the shaft E in the usual or desired way. The bottom plate B instead of being integral with the cylindrical section, A, is made separate therefrom and bolted to it so as to be removable at any time for repairs to the actuating mechanism for the shaft E without necessitating

dismantling the entire crusher. Any suitable manner of securing the bottom plate B to the section A may be used. In the drawings I have shown the lower inner side of the section A above its bottom provided with an annular flange *a'* to which the bottom plate B is bolted as indicated at *b'*. As the bottom plate B is located within the supporting or foundation timbers *x* for the cylinder A or the machine, by unscrewing the bolts *b'* the bottom plate B can be lowered and removed and free access had to the actuating mechanism for the shaft in plate B and cylindrical section A without in any wise dismantling any other part of the machine or mill, which effects a great saving in time and economy in cost of repairs or replacement of said actuating parts. In the cylindrical section A is a counter-shaft opening G and in addition thereto is a man-hole H with or without door or cover *h* for oiling therethrough or for inspection purposes.

K represents a loose cap located upon the top or hub *c* of the eccentric C and driving wheel D which cap may be of any suitable construction or as shown in the drawings. This cap has secured to it a chain or other loose connection L, the other end of which is connected to a hook or pin *l* on the shaft E as shown so as to follow the latter in its movements without using a spline or feather connection between said cap and shaft; such chain or equivalent connection being more effective and economical and not liable to get out of order, or wear unduly and it prevents the cap or collar from revolving with the gear and eccentric as is the case in crushes of the type indicated as heretofore constructed.

What I claim is—

1. A gyratory crushing machine having the actuating devices for the shaft located or supported upon the bottom plate and the latter removable from the machine without dismantling the same, substantially as set forth.

2. A gyratory crushing machine having a lower section A with inwardly projecting bottom flange, and removable bottom B secured to said flange, substantially as set forth.

3. In a gyratory crushing machine the lower section or frame A having chute, counter-shaft and man-hole side openings, an inwardly projecting bottom flange, and a removable bot-

tom B secured to said flange, substantially as set forth.

4. A lower section for a gyratory machine having an open bottom and an inwardly projecting flange, a removable bottom plate bolt-
5 ed to said flange substantially as set forth.

5. In combination with a gyratory crusher shaft, working eccentric and driving wheel, a

cap K having a chain or equivalent connection with said shaft substantially as set forth. 10

In testimony whereof I affix my signature in presence of two witnesses.

ROBERT McCULLY.

Witnesses:

J. DANIEL EBY.

S. J. VAN STAVOREN.