

(No Model.)

C. W. McCORMICK.

PROCESS OF SETTING THIMBLES FOR HANGING GRINDSTONES.

No. 283,630.

Patented Aug. 21, 1883.

Fig. 1.

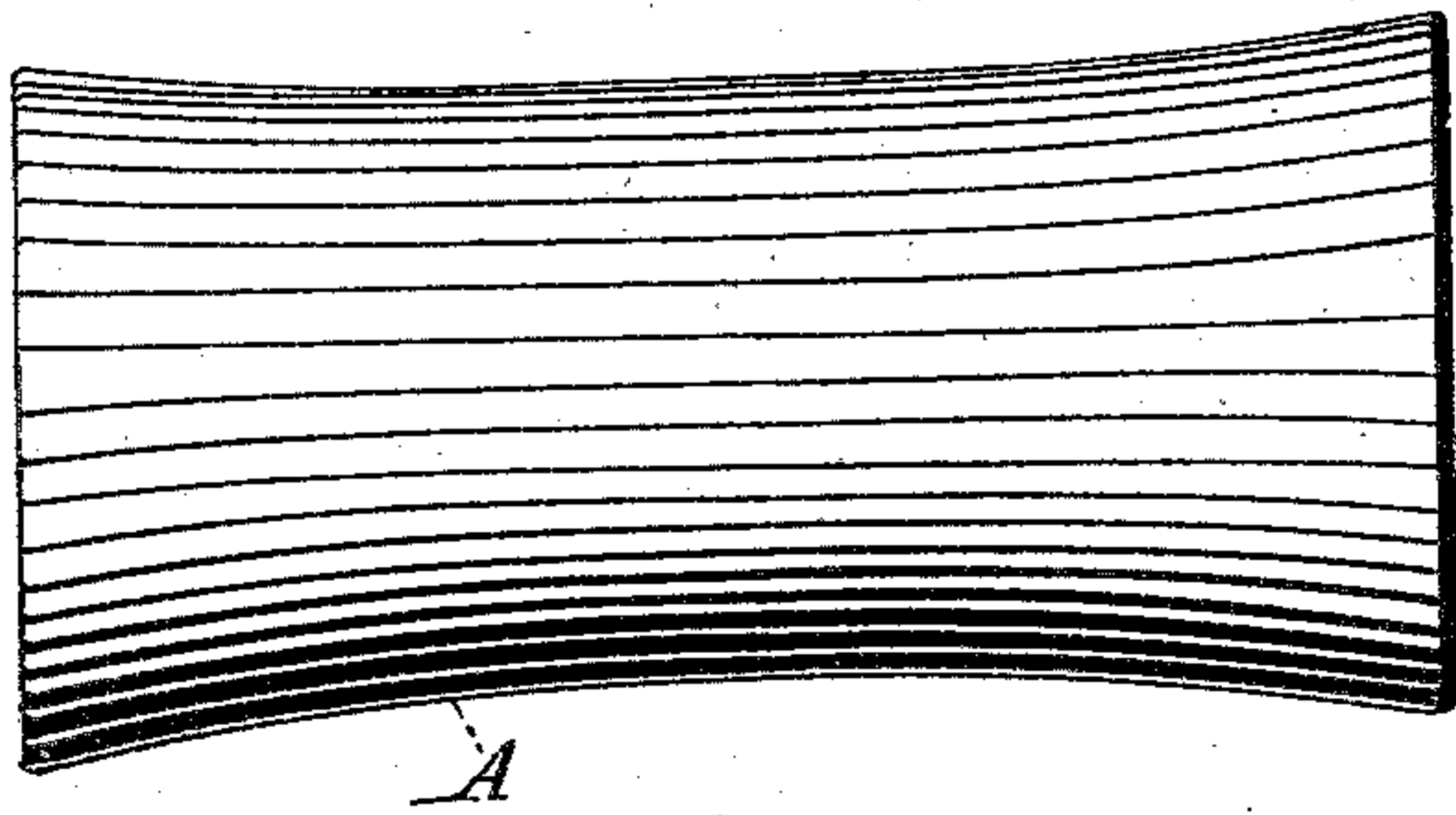


Fig. 2.

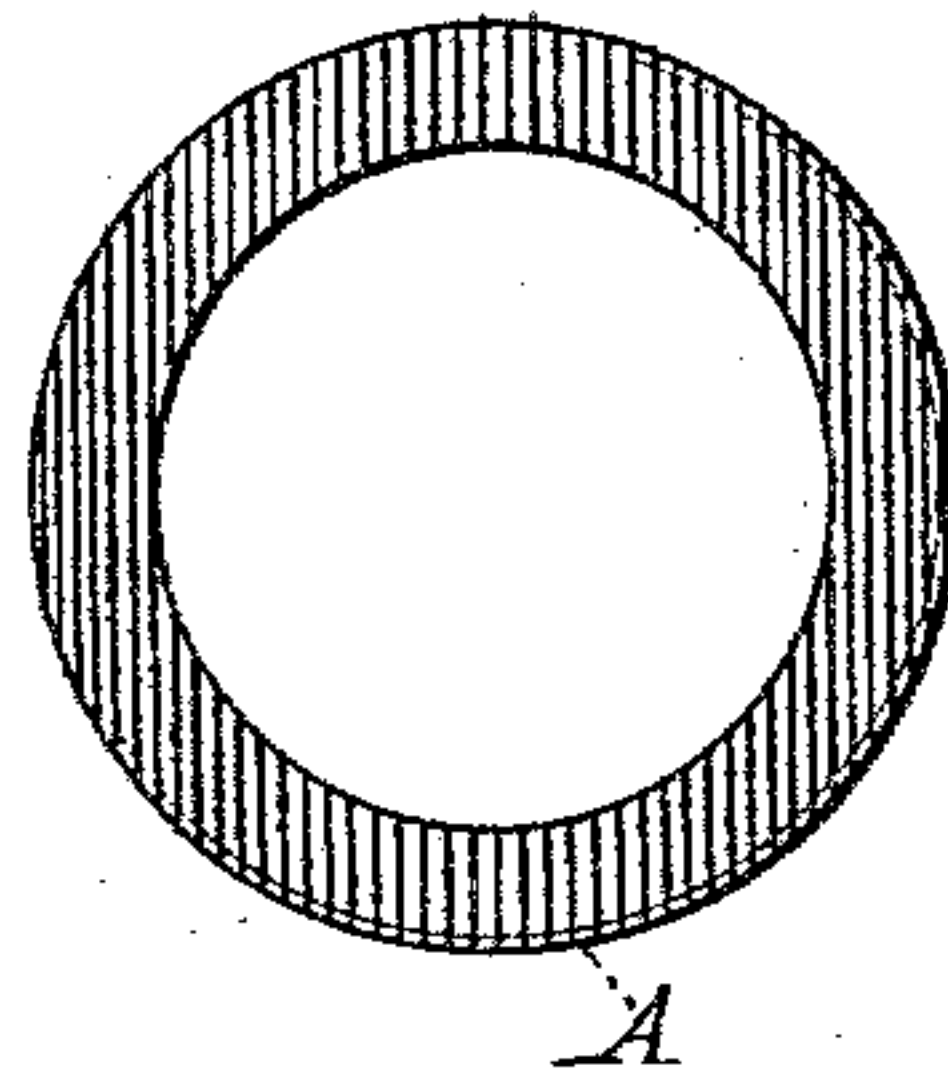


Fig. 3.

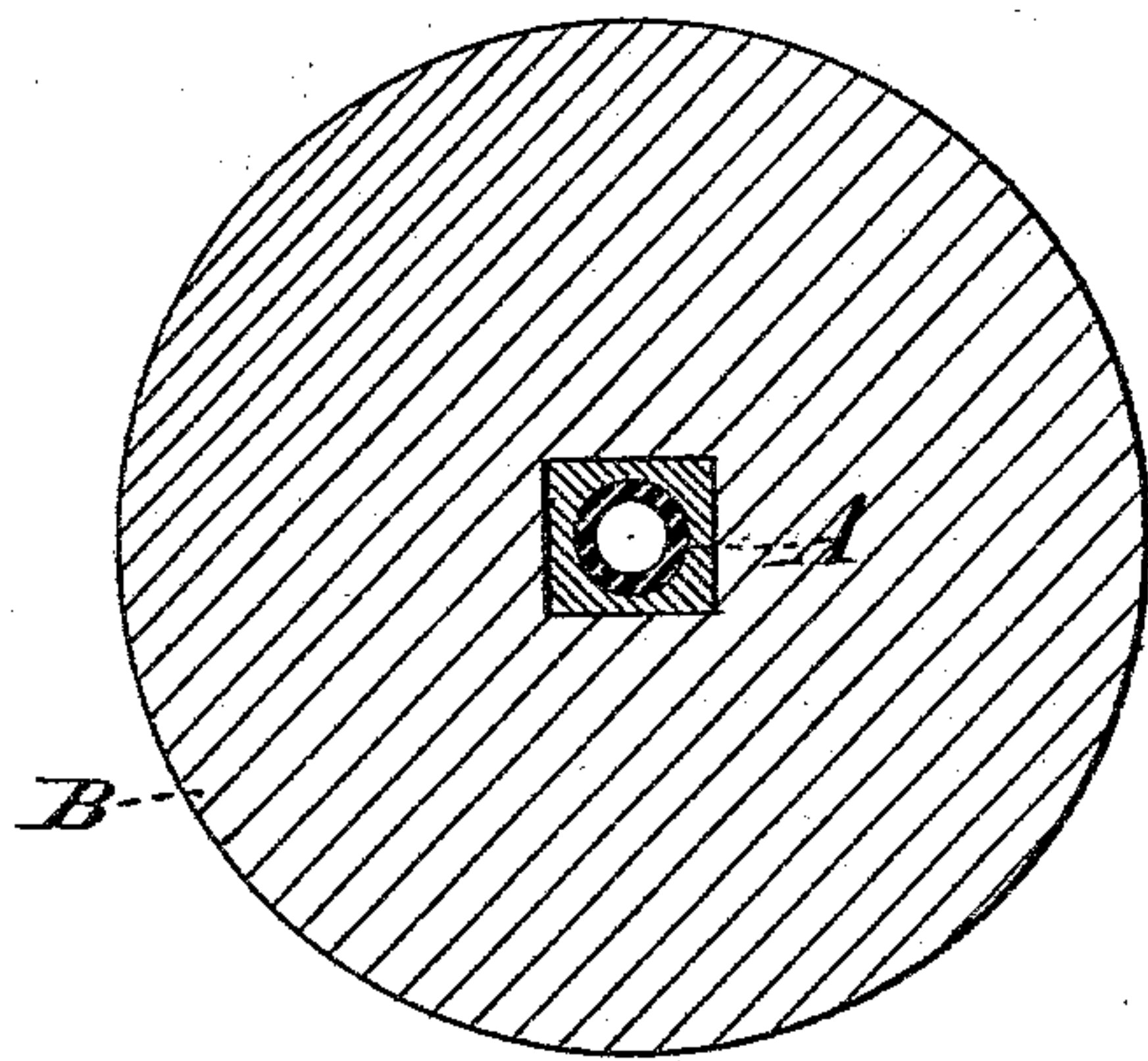
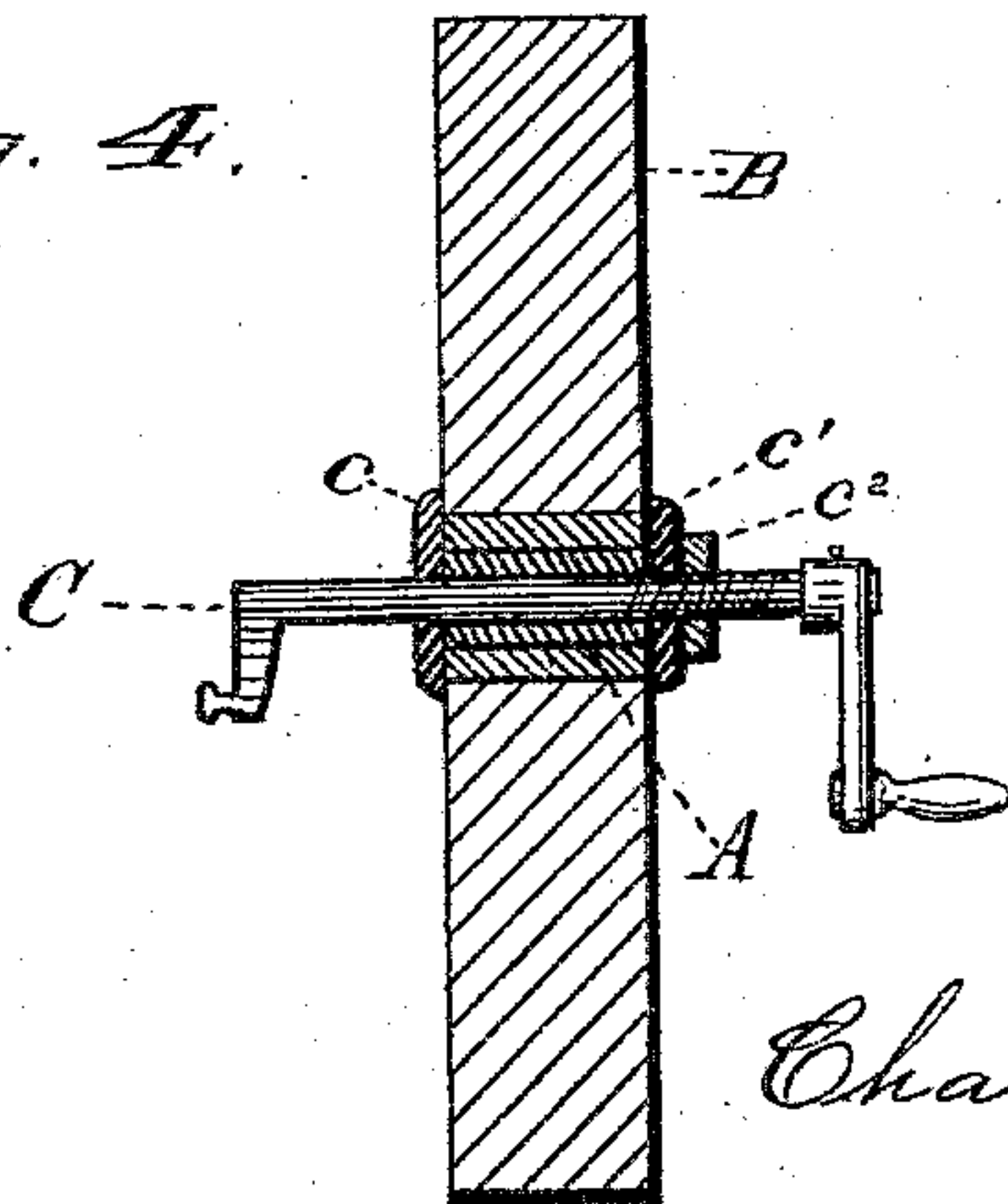


Fig. 4.



WITNESSES

Ch. Engel
Geo. W. King

Charles W. McCormick

INVENTOR

By Leggett & Leggett

ATTORNEYS

UNITED STATES PATENT OFFICE.

CHARLES W. McCORMICK, OF CLEVELAND, OHIO.

PROCESS OF SETTING THIMBLES FOR HANGING GRINDSTONES.

SPECIFICATION forming part of Letters Patent No. 283,630, dated August 21, 1883.

Application filed May 14, 1883. (No model.)

To all whom it may concern:

Be it known that I, CHARLES W. McCORMICK, of Cleveland, in the county of Cuyahoga and State of Ohio, have invented certain new and useful Improvements in Processes for Setting Thimbles for Hanging Grindstones; 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 pertains to make and use the same.

My invention relates to an improvement in a process for setting thimbles for hanging grindstones, as will be hereinafter described, and pointed out in the claim.

Grindstones, when they are manufactured, usually have a square hole or eye cut in the center in which to secure a spindle or crank-shaft. Formerly square billets of wood were driven into these eyes, and a place on either side of the stone was rounded off for bearings, thus forming a rude shaft upon which to revolve the stone. Such rude devices have long since given place to iron spindles or crank-shafts, provided usually with flanges tightened with a nut for holding the stone, and with turned bearings provided with anti-friction rollers. The users of grindstones generally have much trouble and annoyance in placing and holding the shaft in a central position, so that the stone will revolve "true," and do good work. Another step was taken toward perfecting the grindstone. Ingenious devices were invented by which a crank-shaft could easily be adjusted in a central position in the stone, and there held while cement was run in the eye about the shaft to hold it firmly in its place. This remedied the old difficulty, but caused a new one. The shafts, when once set in this manner, were not removable, and were found to be a serious obstacle in shipping grindstones, so much so that only about one-third of an ordinary car-load could be shipped in a car without great danger of serious breakage.

To remedy all of the difficulties that I have enumerated, I have invented a thimble that may be placed upon the shaft, and with the shaft brought to a central position, and secured by cement as aforesaid, the plaster or cement holding the thimble, and having the shaft in condition to be withdrawn and again

replaced without changing its central position or impairing the "run" of the stone.

In the drawings, Figure 1 is a side view, and Fig. 2 an end view, of a thimble such as is necessary in carrying out my invention. Fig. 3 is a side elevation of a grindstone with a thimble set and the shaft removed. Fig. 4 is an elevation in cross-section of a grindstone, showing the thimble, shaft, and flanges in position.

A represents a thimble that in length is equal to the thickness of the grindstone, and with a bore that will fit the crank-shaft or spindle, which is made preferably round, but may be in other shapes, if so desired. This thimble, on the outside, may be of any desired shape, as may be thought best to secure a firm support from the cement.

B is the grindstone, and C the crank-shaft, provided with the flanges *c* and *c'*, the former of which is rigid upon the shaft and the latter removable and secured by the nut *c''*.

The process of setting these thimbles is as follows: The stone is laid in a horizontal position, and the shaft, with the crank, nut, and loose flange removed, is provided with a thimble of proper length, and placed in the eye of the stone, with the flange *c* pressing against the stone on the bottom side, and is brought to a central position relative to the periphery of the stone, and thus held while the eye is filled with cement and the top flange placed in position and screwed down to compress the cement. As soon as this hardens, the thimble will remain firm, and the shaft may be withdrawn. The stones may now be placed in as small compass as before the thimbles were set, while the shaft, when again placed in the thimble with the flanges embracing the stone and properly secured by the nut, will be found to be in such central position as to insure a true-running stone.

What I claim is—

The process herein described of setting a thimble in a grindstone in such a manner that the crank-shaft or spindle may be removed from the stone, and when replaced will be in a central position relative to the periphery of the stone, consisting of the following steps: first, placing the stone in a horizontal posi-

tion; second, placing the shaft provided with
a suitable thimble properly in the eye of the
stone, with the fixed flange pressing against
the bottom of the stone and brought to a cen-
5 tral position relative to the periphery of the
stone; third, filling the cavity in the eye about
the thimble with cement, then placing the top
flange and screwing it down to compress the
cement, and leaving the parts in this position

while the cement hardens, substantially as de- 10
scribed, and for the purpose set forth.

In testimony whereof I sign this specifica-
tion, in the presence of two witnesses, this 27th
day of April, 1883.

CHARLES W. McCORMICK.

Witnesses:

CHAS. H. DORER,
GEO. W. KING.