

No. 612,667.

Patented Oct. 18, 1898.

A. KRAUSE.
BRICK CLEANING MACHINE.

(Application filed July 18, 1895.)

(No Model.)

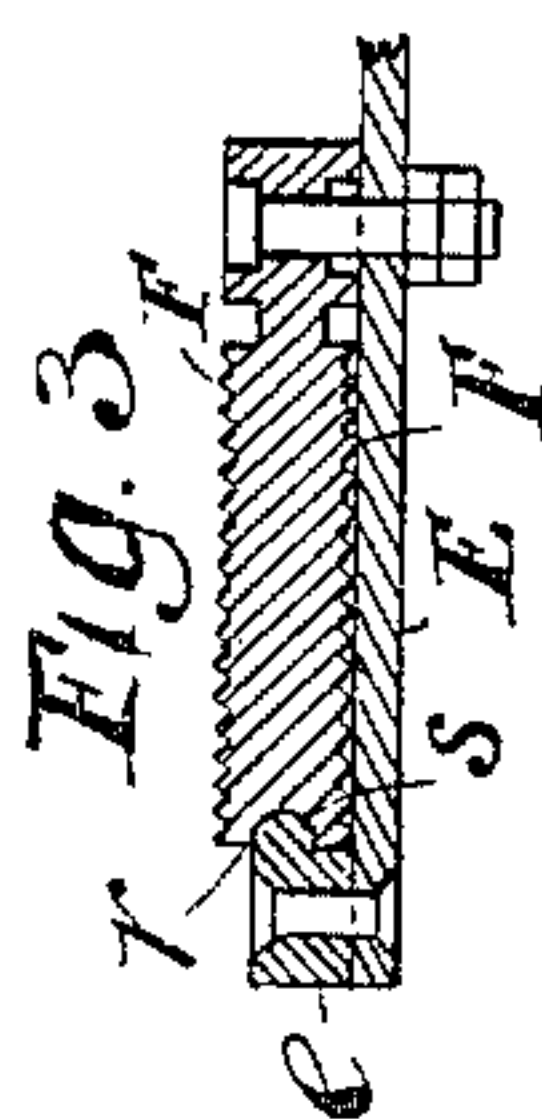
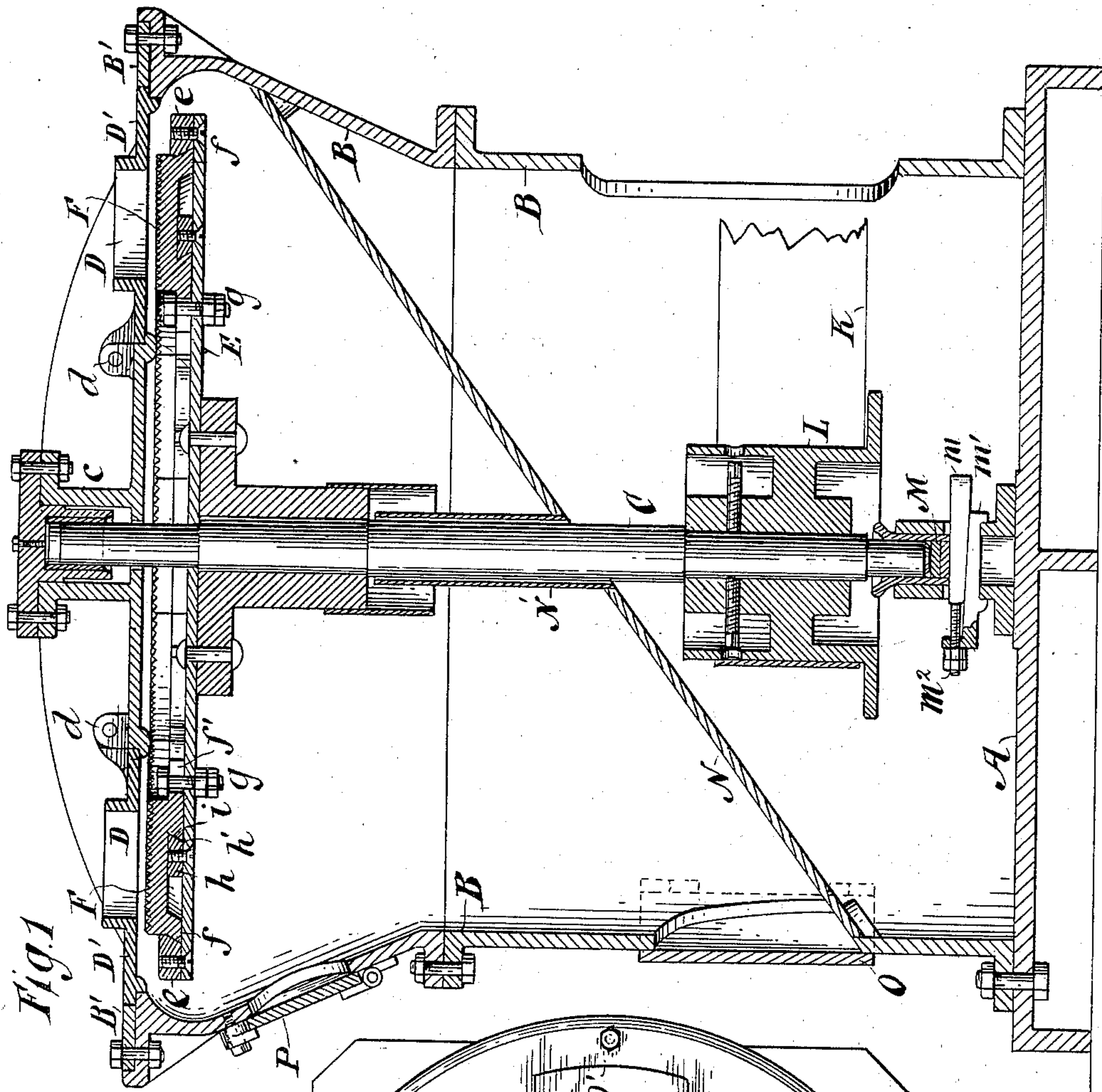
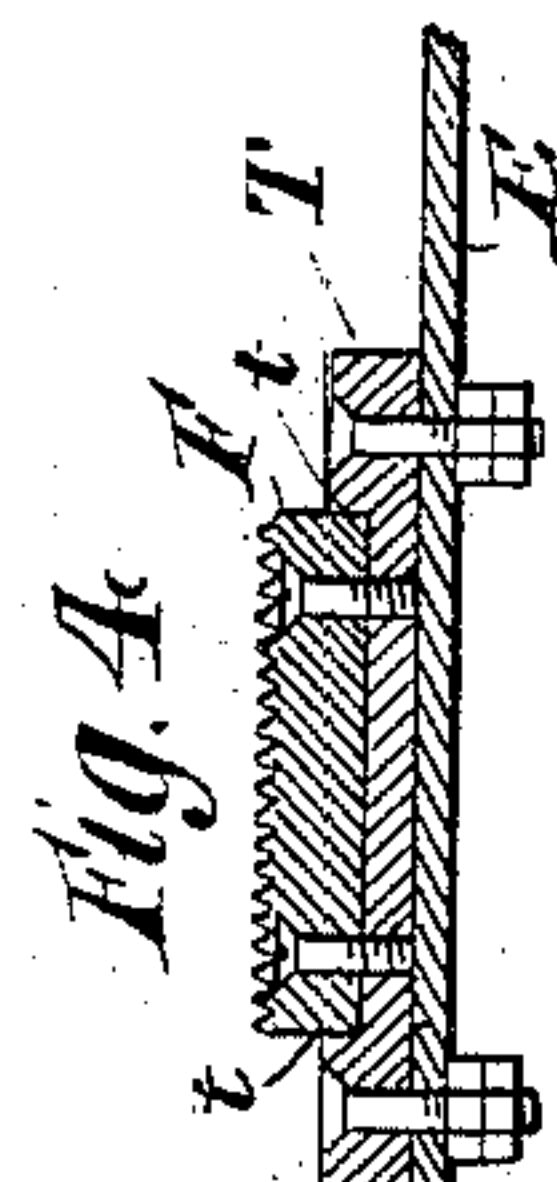
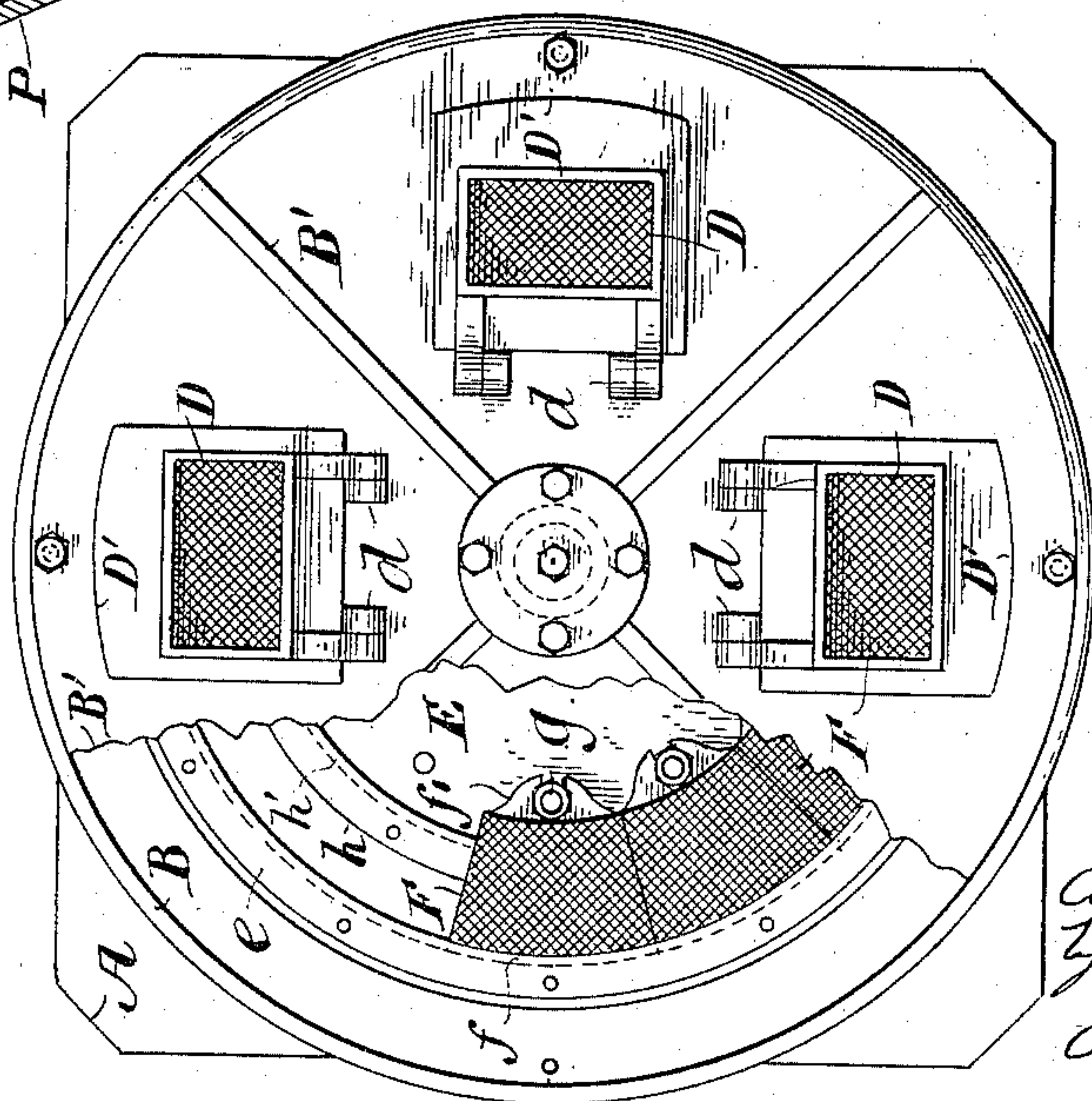


Fig. 2



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ARTHUR KRAUSE, OF JERSEY CITY, NEW JERSEY.

BRICK-CLEANING MACHINE.

SPECIFICATION forming part of Letters Patent No. 612,667, dated October 18, 1898.

Application filed July 18, 1895. Serial No. 556,373. (No model.)

To all whom it may concern:

Be it known that I, ARTHUR KRAUSE, a citizen of the United States, and a resident of Jersey City, in the county of Hudson and State of New Jersey, have invented certain new and useful Improvements in Brick-Cleaning Machines, of which the following is a specification.

This invention relates to improvements in machines for removing the mortar and other foreign material from bricks that have once been used and rendering the surface of the bricks clean and smooth and in condition to be used a second time.

In the accompanying drawings, illustrating my improvement, Figure 1 is a sectional elevation of the machine. Fig. 2 is a plan view of the top of the machine, and Figs. 3 and 4 are modifications of the grinding-disks.

In the particular construction shown in the drawings, A is a base-plate, on which is secured the circular casing B, having the top or cover B'. Resting on the base-plate in the center of the casing is a vertical shaft C, the upper end of which is centrally supported in bearing c on the top or cover B'. In this cover B' are a series of openings D, through which the bricks are inserted to be cleaned by the grinding-disk below. These openings are situated in doors D', hinged at d' and arranged to turn upward, through which access is had to the segmented grinding-disks for the purpose of removing the latter when worn and replacing new ones.

On the upper end of the shaft C and immediately below the cover B' is secured the disk E, on the outer edge of which is the grinding or cleaning surface F. As the grinding-surface is apt to become clogged up and worn smooth with use, it is preferably composed of a series of detachable sections or segments of chilled metal or other hard material having a rasping or grating surface, which can be removed and replaced on the disk through the top or cover B'. It is very desirable that these segmental grating-surfaces shall be readily and quickly replaced; and to this end I provide large doors D' in the top cover, through which the worn segments may be removed and new ones inserted, and employ a holding device by which the segments may be quickly and at the same time effectively se-

cured to the disk E. As shown in the drawings, the openings in the cover through which the bricks are inserted to be cleaned are in the doors D', so that the latter are directly over the sections, allowing ready access to the latter. On the outer edge of the disk E is a beveled rim or peripheral holding-piece e, permanently secured to the disk by countersunk screws, as shown, or by rivets. The inner edge of this rim is beveled or inclined inward, as shown in the drawings, and the front or outer edge of the segment F is inclined outward, as at f, so as to fit under the inclined edge of the rim e. In the under side of the segment is a recess whose inner edge i is beveled and fits under and against the beveled edge h' of the band or ring h, attached to the top of the disk E. As the disk E revolves the force of its revolution tends to throw the segmental section F outward, and it follows that by reason of the inclined surfaces f and i of the section bearing against and under the inclined edges of the rim e and band h the section is held firmly on the disk. The force of the revolution of the disk thus binds and holds the section down on the latter, and the greater the revolution of the disk the more secure the section is held.

To hold the section on the disk so that it will revolve with and not slide on the latter as the disk revolves, I employ a pin or bolt g. The drawings show the bolt g as resting between lugs on the end of the section and as passing through a hole in the disk and as fastened to the latter by a nut. Where the under band or ring h is employed in connection with the rim e, the bolt g may be omitted. The centrifugal force which as the disk is revolved tends to throw the sections outward forces the inclined edges f and i of the sections under the edges, respectively, of the rim e and ring h, and thus holds the sections down on the disk without the use of the bolt or other fastening at the rear end of the section.

In attaching the segments in position on the disk the door D, giving access to it, is thrown back. The segment is then placed directly on the disk and pushed outward until its inclined edges fit snugly under the corresponding edges of the rim and band on the disk and then allowed to rest on the disk, with the pin g in the hole in the latter. The

segment is now securely attached to the disk and held down on the same as the disk revolves and is thus attached without the necessity of using a wrench or bolt of any kind.

5 The length of the segment is such as to allow sufficient clearance in the radial joints so that the segments may be inserted with perfect freedom and without jamming.

10 The shaft C is driven by a belt K, passing over a pulley L on the shaft. The lower end of the shaft is supported in bearings resting on an adjustable step M, composed of the two inclined pieces *m m'*. As these inclined pieces are moved on one another by the screw
15 *m²* the shaft and the disk E are raised or lowered, and thus adjusted to the right distance below the cover B'.

Extending diagonally across the interior of the casing above the pulley is a partition
20 N, connected to which is a sleeve N', surrounding the shaft C. The mortar or other material removed from the bricks is received by this partition and collects at the lower end of the same, whence it is removed through an
25 opening in the side of the casing closed by the door O.

In the operation of cleaning the brick the brick is inserted through the opening D in the cover and held against the grinding-surface on the revolving disk below until the
30 mortar or other foreign material is scraped or ground off and the sides of the bricks rendered smooth and clean. At P in the casing is a hand-hole through which the hand is inserted in repairing the disk E.

35 Figs. 3 and 4 show modifications of the segmental grinding-sections F. In Fig. 3 the section is shown as provided with two grinding-surfaces, and when a new surface is
40 needed it is only necessary to reverse the section and bring the new surface uppermost. In this construction in place of the inclined edge *f* there is a recess *r*, into which fits a corresponding projection *s* on the peripheral

holding-piece *r*. In the modification shown
45 in Fig. 4 a circular plate T is permanently attached to the disk E and has on its upper surface a recess or shallow trough *t*, within which the segmental grinding-disk is fastened by screws or similar means of attach-
50 ment.

I claim—

1. In a brick-cleaning machine, in combination, an annular holding-ring having an inclined inner surface, a circular supporting-
55 disk, a sectional grinding-surface provided with a wedge-shaped projection bearing against the inclined inner surface of the annular ring, a protecting-cover provided with an opening through which the separate sec-
60 tions of the sectional grinding-surface may be inserted or removed and a hinged door provided with a suitable opening through which the material to be cleaned is held in proper position, substantially as described. 65

2. In a brick-cleaning machine, in combination, an annular holding-ring having an inclined inner surface, a circular supporting-
70 disk, a sectional grinding-surface provided with a wedge-shaped projection bearing against the inclined inner surface of the annular ring, a protecting-cover provided with an opening through which the separate sec-
75 tions of the sectional grinding-surface may be inserted or removed, a hinged door provided with a suitable opening through which the material to be cleaned is held in proper position and a holding-down bolt passing through the circular supporting-disk and be-
80 tween corresponding lugs on the grinding-section, substantially as described.

Signed at Jersey City, in the county of Hudson and State of New Jersey, this 8th day of July, A. D. 1895.

ARTHUR KRAUSE.

Witnesses:

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