No. 716,171. Patented Dec. 16, 1902.

E. C. BASSETT.

STONE DRESSING OR POLISHING TOOL.

(No Model.) (Application filed May 10, 1901.)

Fig. 2.

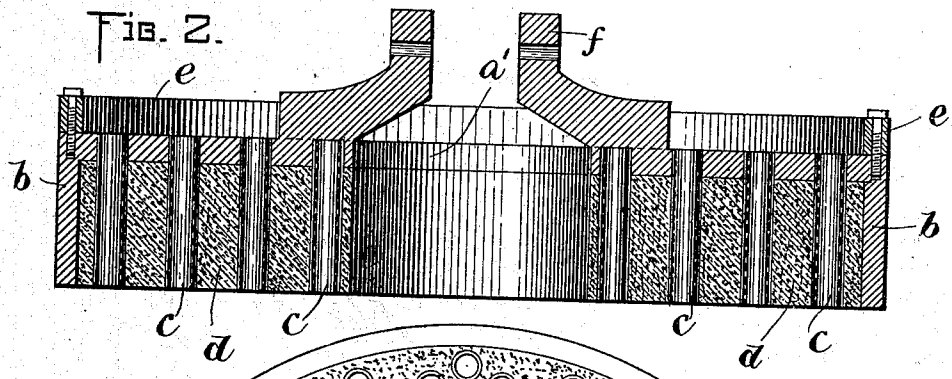


Fig. 1.

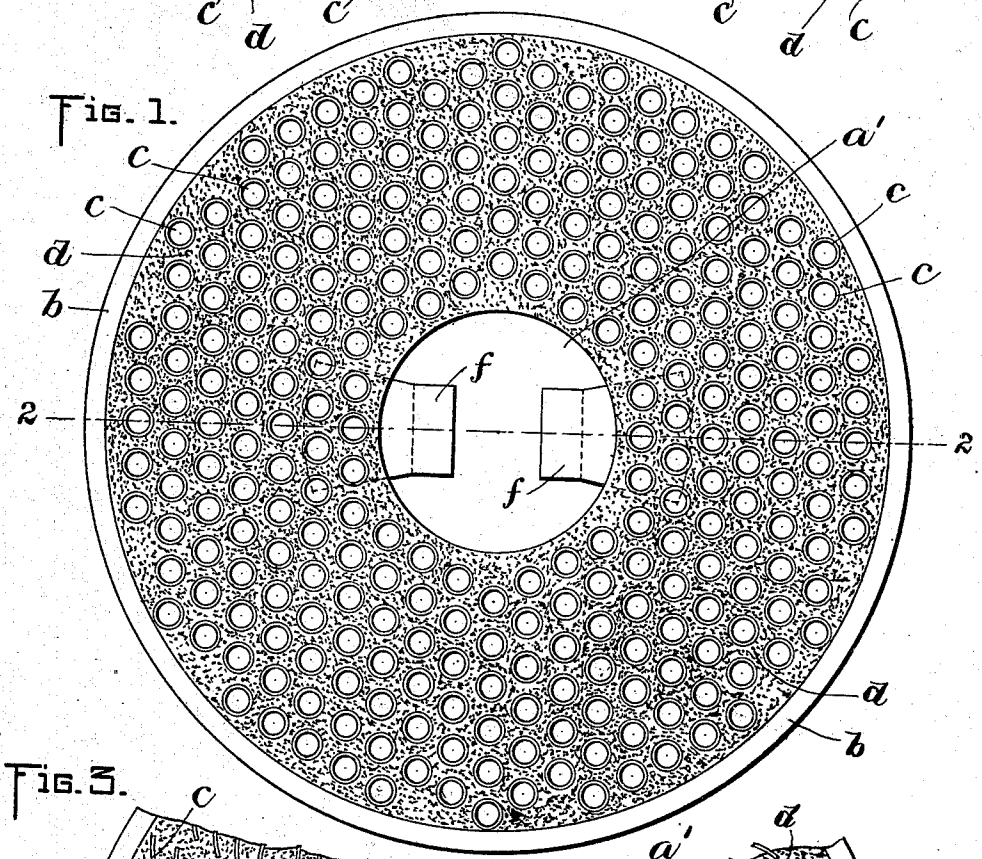
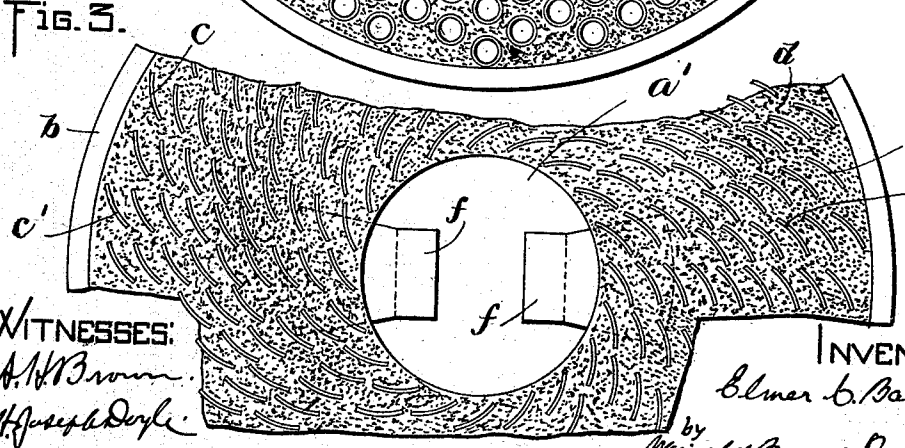


Fig. 3.



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THE NORRIS PETERS CO., PHOTO-LITHO., WASHINGTON, D. C.

UNITED STATES PATENT OFFICE.

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STONE DRESSING OR POLISHING TOOL.

SPECIFICATION forming part of Letters Patent No. 716,171, dated December 16, 1902.

Application filed May 10, 1901. Serial No. 59,679. (No model.)

To all whom it may concern:

Be it known that I, ELMER C. BASSETT, of Milton, in the county of Norfolk and State of Massachusetts, have invented certain new and useful Improvements in Stone Dressing or Polishing Tools, of which the following is a specification.

This invention relates to tools or appliances for dressing or polishing granite blocks to perform the first part of the operation of imparting a high polish thereto.

The invention consists in the improvements which I will now proceed to describe and claim.

Of the accompanying drawings, Figure 1 represents a bottom plan view of a stone dressing or polishing appliance embodying my invention. Fig. 2 represents a section on line 2 2 of Fig. 1. Fig. 3 represents a view similar to Fig. 1, showing a modification.

The same letters of reference indicate the same parts in all the figures.

In the drawings, *a* represents a head or plate, which is preferably a flat-sided disk having a marginal flange *b* projecting downwardly from its under side.

c c represent wrought-metal scrapers attached to the plate *a* and projecting therethrough into the space surrounded by the flange *b*. Said scrapers are preferably of wrought-iron and in the embodiment of my invention shown in Figs. 1 and 2 are of tubular form, their upper ends being embedded in the plate *a*, while their lower ends are flush with the lower edge of the flange *b* and constitute the cutting portions of the scrapers. The spaces between the scrapers are filled with a filling material or composition *d*, adapted to laterally support the scrapers and prevent them from being flexed or sprung, said filling being of such nature that it wears away somewhat faster than the material of the scrapers and preferably of a friable material, such as plaster-of-paris. The central portion of the plate *a* is provided with an orifice *a'* to permit the passage of powdered polishing material from the plate to the surface acted on by the scrapers, the scrapers being arranged in a series surrounding the orifice *a'*, and the filling *d* being made in annular form, so that its inner wall constitutes an extension of the orifice *a'*.

The tubular form of the scrapers gives each scraper a cross-section so formed that its acting end has elongated scraping edges separated by a relatively narrow body portion, so that the acting end of each scraper has scraping edges which are arranged to operate very effectively upon the stone, said edges extending in various directions, so that when the device is rotated in contact with the stone surface to be dressed portions of said edges act with a shearing cut, which is very desirable in polishing or dressing stone, and particularly granite.

The openings through the tubular scrapers are preferably extended through the plate *a*, so that polishing material placed upon the upper side of the plate is fed through the tubular scrapers and is thus effectively distributed and presented at the points where it is required. The plate *a* is provided with a marginal upwardly-projecting curb or wall *e* to confine the polishing material and prevent it from being thrown outwardly by centrifugal force when the appliance is being rotated.

The head *a* is provided with suitable members *f f* for engagement with a flexible jointed shaft, (not shown,) which imparts rotary motion to the head, the flexibility of the shaft permitting the appliance to be moved about upon the surface of the stone while it is being rotated.

I prefer to make the head *a* and its flange *b* of cast-iron and to cast said head around the upper ends of the scrapers *c*, the head and scrapers being thus firmly united.

In Fig. 3 I show a modification in which the scrapers *c* instead of being tubular are composed of wrought-metal strips *c'*, which are approximately flat or slightly curved in cross-section, the thickness of the metal or body of the strip between the side faces thereof being preferably about the same as the thickness of the wall of each tubular scraper *c*. The scrapers *c'* are preferably arranged ob-

liquely, as shown in Fig. 3, so that each gives a shearing cut when the appliance is rotated. The scrapers c' may be secured to the head a by casting the material of the head around the upper ends of said scrapers.

It will be observed that in each form shown the scrapers are curved in cross-section and that they are arranged in irregular order, so that no individual scraper directly follows the one preceding it. In other words, they break joints, and therefore provide a large number of individual or relatively small scrapers which will properly follow over and cut into the surface of the stone to be dressed without liability of producing a grooved or otherwise irregular surface.

I claim—

1. An appliance of the character specified comprising a head or plate having a marginal flange projecting from one of its sides, a series of tubular wrought-metal scrapers attached to the plate and projecting into the space surrounded by said flange, and a friable filling surrounding said tubular scrapers.

2. An appliance of the character specified comprising a head or plate having a marginal flange projecting from one of its sides, a series of tubular wrought-metal scrapers attached to the plate and projecting into the space surrounded by said flange, and a friable filling surrounding said tubular scrapers, the openings of the tubular scrapers extending through the head or plate so that they may conduct polishing material to the acting ends of the scrapers.

3. An appliance of the character specified comprising a head or plate having a marginal flange projecting from one of its sides, a series of tubular wrought-metal scrapers attached to the plate and projecting into the space surrounded by said flange, and a friable filling surrounding said tubular scrapers, the head or plate and the friable filling having a central orifice for the admission of polishing material to the surface acted on by the scrapers, said orifice being surrounded by the series of scrapers.

4. An appliance of the character described comprising a head or plate having a marginal flange projecting from one of its sides, a series of tubular wrought-metal scrapers attached to the plate and projecting into the space surrounded by said flange, and a friable filling surrounding said tubular scrapers, the openings of the tubular scrapers extending through the head or plate so that they may conduct polishing material to the acting ends of the scrapers, the head or plate having an upwardly-projecting marginal curb to confine the polishing material.

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

ELMER C. BASSETT.

Witnesses:

C. F. BROWN,

C. C. STECHER.