

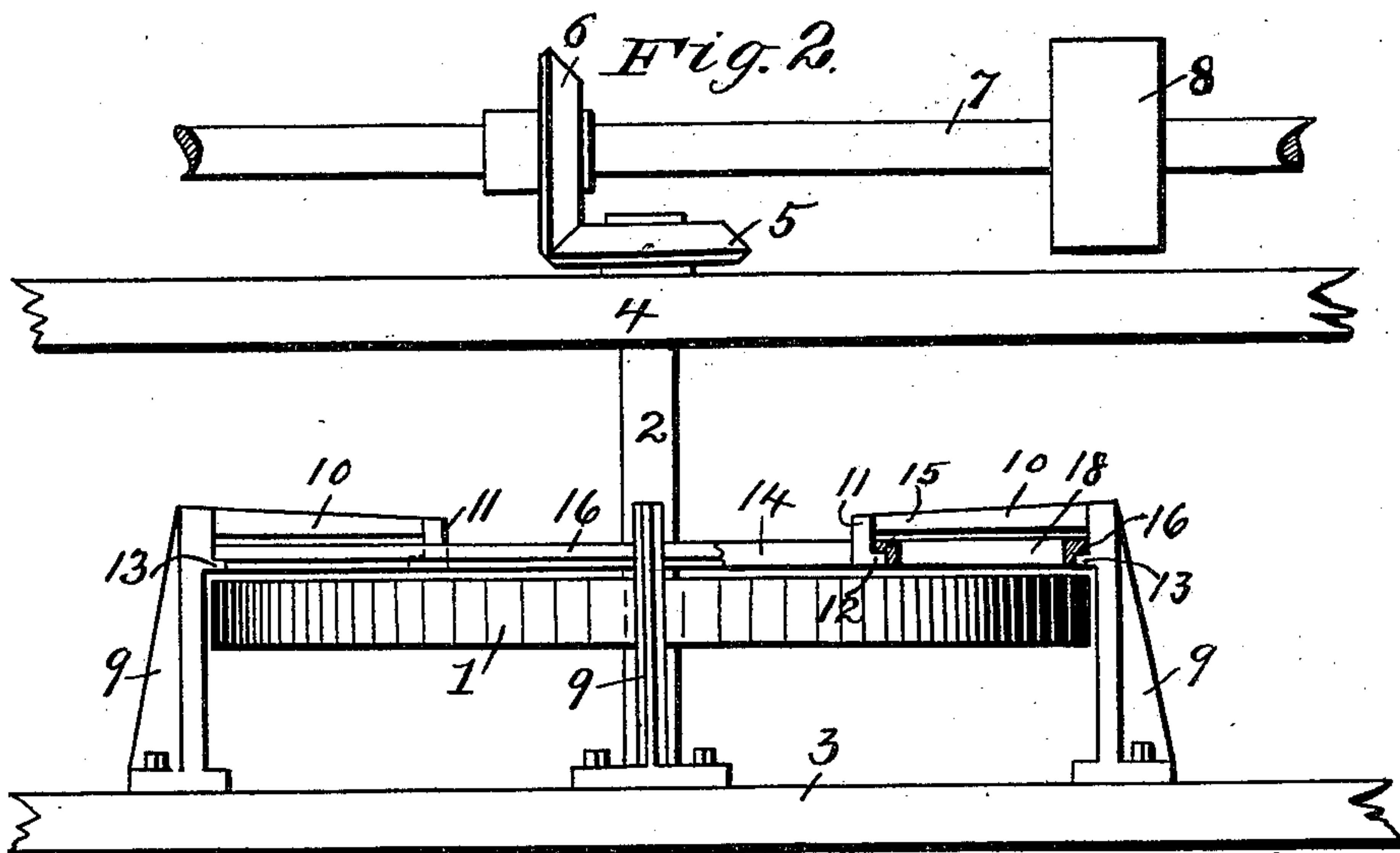
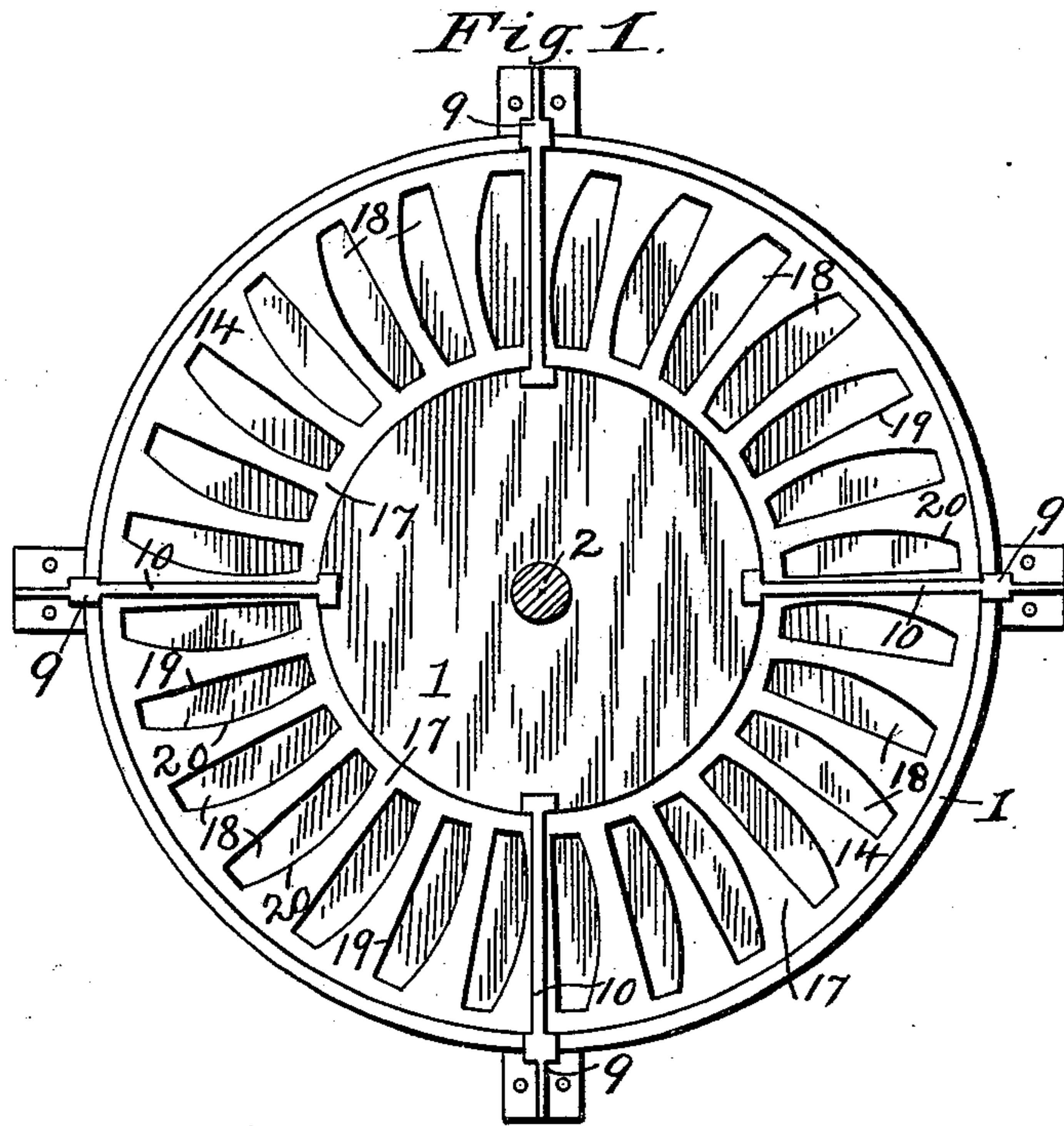
No. 683,985.

Patented Oct. 8, 1901.

I., A. J. & S. P. REITZ.
WHETSTONE MAKING MACHINE.

(Application filed Dec. 14, 1900.)

(No Model.)



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UNITED STATES PATENT OFFICE.

IGNATIUS REITZ, ALBERT J. REITZ, AND SIMON P. REITZ, OF PORTSMOUTH, OHIO.

WHETSTONE-MAKING MACHINE.

SPECIFICATION forming part of Letters Patent No. 683,985, dated October 8, 1901.

Application filed December 14, 1900. Serial No. 39,879. (No model.)

To all whom it may concern:

Be it known that we, IGNATIUS REITZ, ALBERT J. REITZ, and SIMON P. REITZ, residents of Portsmouth, Ohio, have invented a new and useful Improvement in Whetstone-Making Machines, which invention is fully set forth in the following specification.

Our invention relates to the art of making whetstones, and more particularly to a machine designed to facilitate the simultaneous and rapid production of a large number of such stones; and to this end the invention consists in a movable bed upon which a plurality of suitable whetstone-blanks may be laid, combined with stationary means for loosely retaining the blanks against advancing with the movable bed, but permitting the blanks to tumble or roll over and over on their longitudinal axes until they are worn to a form substantially circular in cross-section.

Our inventive idea may receive various mechanical expressions, and in its preferred form it consists in a revolving bed or table and an annular frame, preferably of metal, supported above and in close proximity to the table, said frame having oblong openings therein, within which the blanks are loosely retained, while they are at the same time permitted to rest upon the revolving bed. This form of our invention is illustrated in the drawings, in which—

Figure 1 is a plan view with the propelling means removed; and Fig. 2 is a side elevation, a part being shown in section.

In said drawings, 1 is a bed or table mounted to revolve with the shaft 2, which is stepped at its lower end in a suitable base 3 and turns in a suitable bearing 4 at its upper end, beveled gears 5 and 6 connecting it to a power-shaft 7, driven from any suitable source of power—as, for example, by means of a belt over the pulley 8. A suitable number of standards 9, here shown as four in number, are erected upon the base 3, so as to project upward just outside of the periphery of the revolving bed or table 1, and each standard is provided with an arm 10, extending some distance above and toward the center of the bed or table 1. On the inner end of each arm 10 is a downwardly-projecting part 11,

having a return-lip 12 (see Fig. 2) extending toward the standard 9, while a similar lip or lug 13 projects inwardly from each standard 9. An annular frame or plate 14, preferably of very hard metal and provided with inner and outer flanges 15 and 16, is supported by means of said flanges upon the lips or lugs 12 and 13 immediately above the revolving bed or table 1. For convenience of construction and assemblage said frame or plate 14 is formed in sections 17, here shown as four in number, and have their respective corners resting upon the lips or lugs 12 and 13. This frame or plate 14 has a plurality of oblong openings 18, preferably arranged radial to the center of the machine. The exact form of these openings will depend upon the shape which it is desired to impart to the finished whetstone. If the finished stone is to be cylindrical in shape, the opposite sides of the openings or slots 18 will both be straight lines and substantially parallel. If, on the other hand, it is desired to have the finished stones taper on a slightly-curved line from their middle point toward each end, one side of each opening or slot 18 will be on a straight line, while the other side will be formed on a curve substantially conforming to the desired outline of the finished stone. This construction is the one illustrated in Fig. 1 of the drawings, each of the openings 18 having one straight side 19 and one curved side 20.

The operation is as follows: The blanks from which the finished whetstones are to be made having been formed in any suitable manner and of any desired shape in cross-section (preferably octagonal) are placed within the openings 18 in the frame 14 and rest directly upon the bed or table 1, and, power being applied to revolve said table, the blanks are caused to tumble or roll over and over on their longitudinal axes and constantly impinge against the side of the openings 18 of the frame 14, and this frame, being composed of exceedingly hard material—as, for example, very hard cast metal—acts to wear or grind away the outer surface of the blank until the latter substantially conforms to that side of the opening 18 against which it impinges during its rolling or tumbling movements. In the particular form of these

openings shown the stone would be given its finished shape by the curved side 20, the table 1 revolving in the direction indicated by the arrow in Fig. 1.

5 Our invention is not limited to a revolving table as the means for imparting the rolling or tumbling motion to the blanks, as it is obvious that any means for supporting the blanks and having movement transverse to
10 the openings 18 in the frame 14 might be employed; nor is the invention limited to the particular means shown for supporting the frame 14, as other suitable supporting means for said frame might be employed without de-
15 parting from the spirit of our invention.

Having thus described our invention, we claim—

1. A machine for making whetstones consisting of a frame having openings therein for
20 receiving and retaining the blanks, and one of whose walls acts as a grinding or abrading surface, a revoluble table supporting the blanks in said frame and imparting a rolling or tumbling movement thereto and means for
25 revolving said table.

2. In a machine for making whetstones a frame having blank-receiving openings each opening having a wall which acts as the grinding or abrading surface.

3. In a machine for making whetstones a 30 frame having blank-receiving openings each opening having a wall which acts as the grinding or abrading surface the shape of said wall corresponding to a line drawn from end to end of the surface of the finished stone. 35

4. In a whetstone-making machine the combination of a stationary frame or plate having compartments open at the bottom and having one side formed on a curve with bed or table in position to support the blanks in
40 said compartments and means for imparting movements to said bed or table.

5. In a whetstone-making machine the combination with a frame or plate having radial openings therein with one side formed on a
45 curve, of a bed or table located immediately beneath said frame or plate and supporting the blanks in said openings, and means imparting rotary movement to said bed or table.

In testimony whereof we have signed this
50 specification in the presence of two subscribing witnesses.

IGNATIUS REITZ.
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Witnesses:

JOHN R. HUGHES,
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