

(No Model.)

J. DEMPSTER.
MILLSTONE DRIVER.

No. 277,688.

Patented May 15, 1883.

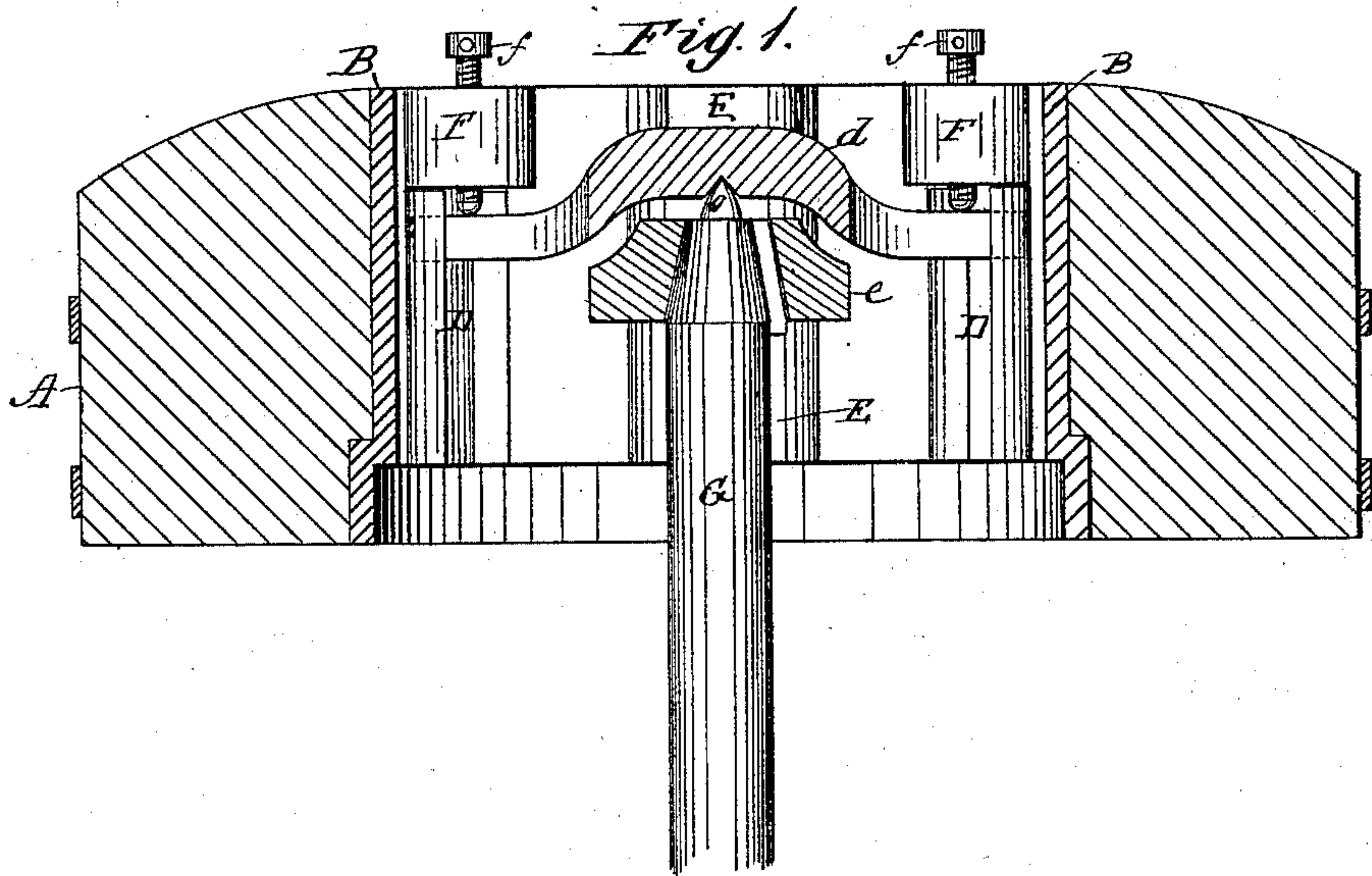
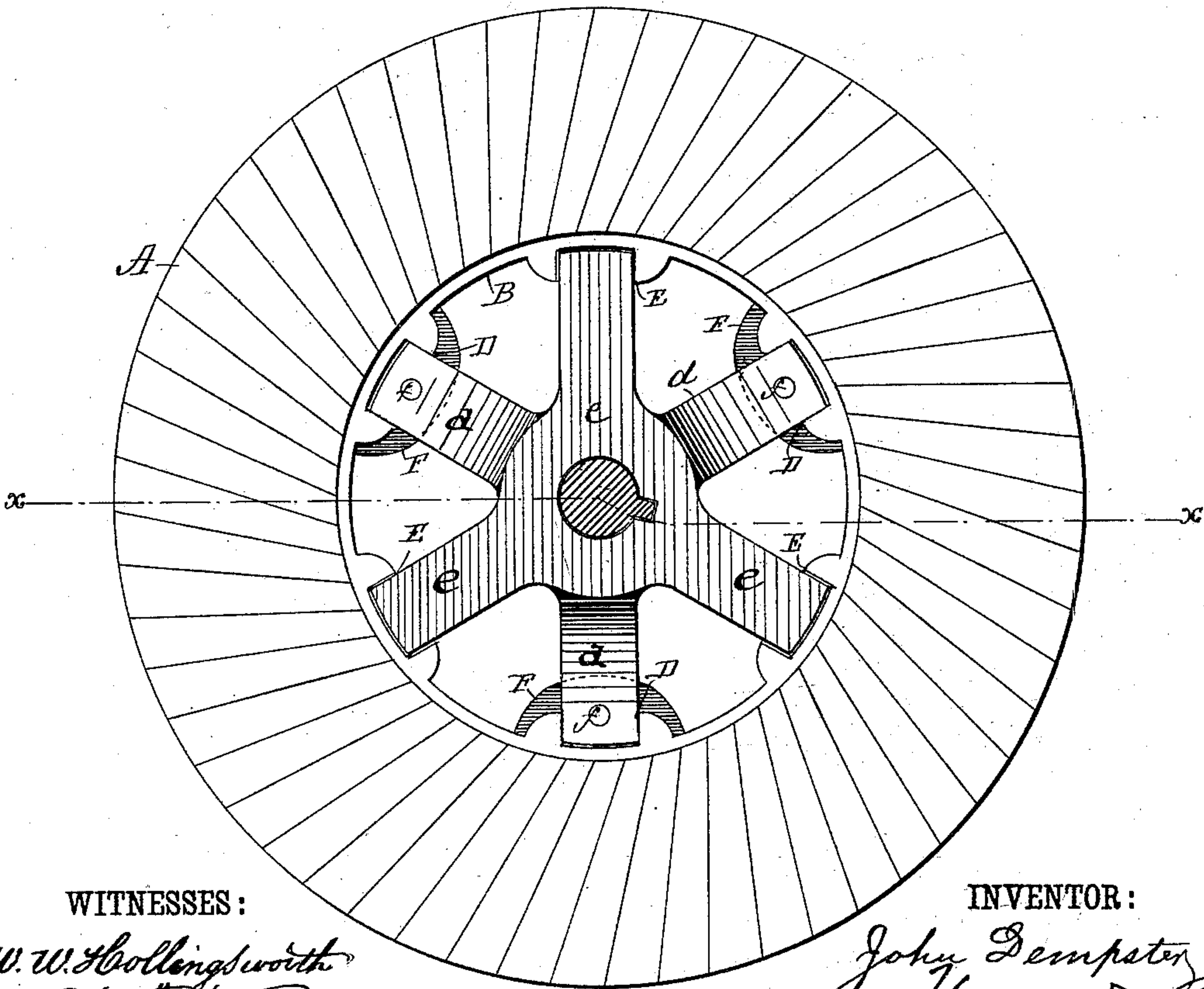


Fig. 2.



WITNESSES:

W. W. Hollingsworth
W. K. Stevens

INVENTOR:

John Dempster
BY *Wm. T. Q.*

ATTORNEYS.

UNITED STATES PATENT OFFICE.

JOHN DEMPSTER, OF KNOXVILLE, TENNESSEE.

MILLSTONE-DRIVER.

SPECIFICATION forming part of Letters Patent No. 277,688, dated May 15, 1883.

Application filed December 27, 1882. (No model.)

To all whom it may concern:

Be it known that I, JOHN DEMPSTER, a citizen of the United States, residing at Knoxville, in the county of Knox and State of Tennessee, have invented a new and Improved Millstone-Driver, of which the following is a specification.

My invention relates to that class of millstones in which the shaft or spindle stands vertically and supports the stone by means of a rynd resting upon the upper end of the spindle or cock-head; and my object is to provide means whereby the runner-stone may be balanced on the cock-head and be operated in running balance, and means whereby the runner-stone may also be rigidly secured to the spindle and trued thereon.

To this end my invention consists in the construction and combination of parts hereinafter fully described and claimed, reference being had to the accompanying drawings, in which—

Figure 1 is a central vertical section, showing my invention attached to an upper runner millstone. Fig. 2 is an inverted plan of the same.

A represents the runner-stone, made up in this instance by the common process of using burr-stone blocks and cement, which I build around and firmly join to a cylindrical casting, B, forming the eye of the stone of peculiar construction. The exterior of this cylinder may be shaped in any desired form to hold fast in the cement between the stone blocks, and its height will correspond to the height of the stone, less the amount of stone which is assigned for wear and to be cut away in dressing the face of the stone during its lifetime. I provide the interior of cylinder B with two sets of grooves, D E, each set consisting of three or more grooves.

F represents ears projecting from the cylinder B into the eye over grooves D, and provided with screw-threaded holes.

f represents adjusting-screws passing down through the ears F and supporting the stone by their points resting on the horns of the balance-rynd d. The horns fit closely, yet admit of vertical adjustment in grooves D. This rynd has the usual cock-eye to fit upon the cock-head g of the spindle G.

e is another rynd, which I call the "rigid

driver," whose horns fit closely but have vertical play in grooves E. Rynd e is keyed firmly to the spindle below the cock-head, and serves as the driver, communicating motion from the spindle to the stone through the walls of grooves E or D. The stone is hung in balance by means of rynd d, resting on the cock-head and supporting the stone upon the adjusting-screws f. When thus hung the stone is revolved by the driver e, placed in the grooves E, which extend the whole height of the inner face of the cylinder B.

To hang the stone rigidly upon the spindle to run therewith, the balance-rynd d is removed and the grooves D are placed upon the horns of the fixed rynd or driver e, and adjusted to bring the face of the stone true with the face of the bed-stone by means of the aforesaid adjusting-screws f. The horns of this rynd fit grooves D more closely than they fit grooves E, in order that the stone may run rigidly with the spindle in the latter case, and with some freedom with respect thereto in the former case. This is accomplished by the grooves E being slightly wider than grooves D and the horns of the two rynds being of equal width. When hung upon the spindle by means of the balance-rynd d and driven by the rigid rynd e my millstone has all the adaptability of fine meal or flour grinding stones. When the balance-rynd is removed and the stone is rigidly hung to the spindle by means of the rigid driver, as described, it is adapted to granulate wheat by being adjusted parallel to the bed-stone, and so revolved at any fixed distance desired therefrom. By this means of hanging burr-stones I am able to granulate wheat in a superior manner and to produce a large percentage of middlings relative to the break-flour.

What I claim as my invention is—

1. The combination, with a cast-iron cylinder forming the eye of a millstone, provided internally with two sets of vertical grooves and screw-ears over one set of said grooves, of two rynds and a spindle, all as described, for the purpose specified.

2. The runner-stone, the cylinder B, provided with the two sets of internal grooves, D and E, and a set of screw-ears, F, and the screws f, in combination with a spindle, G, having a cock-head, g, a balance-rynd, d, pro-

vided with a cock-eye, and a driving-rynd, *e*, rigidly keyed to said spindle, as shown and described.

3. The combination, with the runner-stone,
5 the cylinder B, forming the eye thereof, and having two sets of grooves, D and E, and the screw-ears F, the screws *f*, and the spindle G, of two rynds, both fitted to occupy the grooves D, one rynd being rigidly keyed to the spindle
10 at all times and the other adapted to be bal-

anced upon or removed from the spindle, as described, whereby the stone may be run at one time balanced on the cock-head and at another time be rigidly secured to the spindle, for the purposes specified.

JOHN DEMPSTER.

Witnesses:

JAS. A. SCOTT,

CHAS. HOPKINS.