

R. BYRNE.
Paint-Mills.

No. 155,826.

Patented Oct. 13, 1874.

FIG. 1.

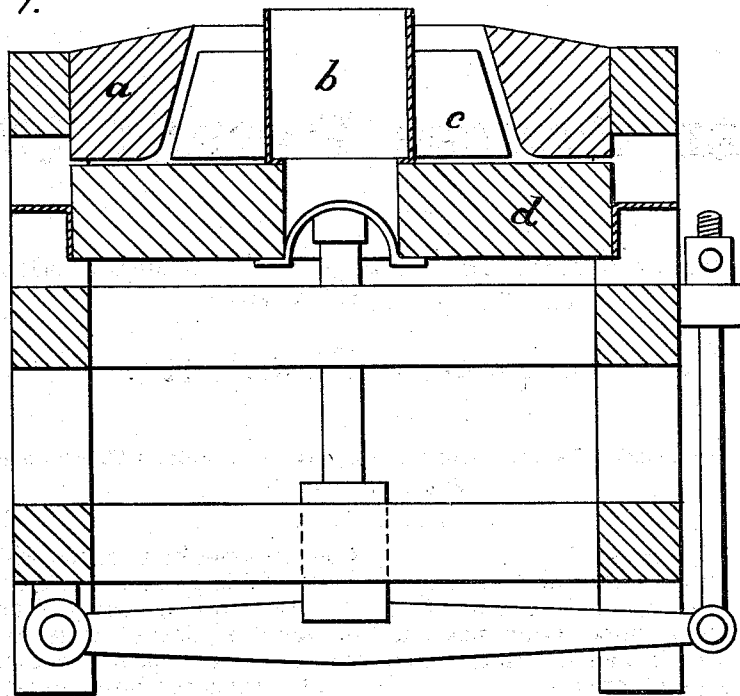
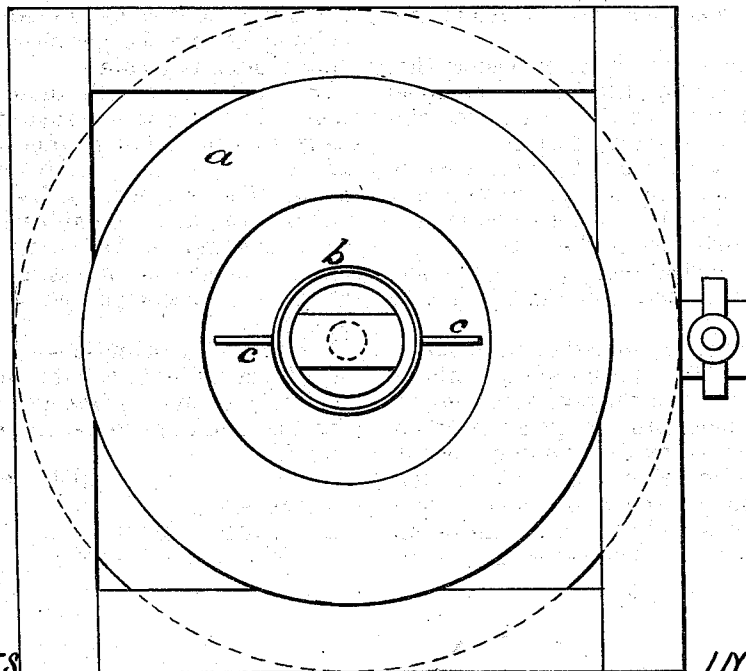


FIG. 11.



WITNESSES

Geo. Gallagher
Daniel Brown

INVENTOR.

Richard Byrne

UNITED STATES PATENT OFFICE.

RICHARD BYRNE, OF BROOKLYN, ASSIGNOR TO HIMSELF AND JOSEPH J. MARRIN, OF NEW YORK, N. Y.

IMPROVEMENT IN PAINT-MILLS.

Specification forming part of Letters Patent No. **155,826**, dated October 13, 1874; application filed September 29, 1874.

To all whom it may concern:

Be it known that I, RICHARD BYRNE, of Brooklyn, in the county of Kings and State of New York, have invented certain new and useful Improvements in Paint-Mills, of which the following is a specification:

The said improvements relate to mills for grinding paint and other similar material; and consists in providing the running stone with an open cylindrical cap over the shaft, through which there may be a constant current of air.

The open cylinder has wings or feeders that revolve with it in the chamber of the upper stone, by which the materials are mixed and forced between the grinding-surfaces.

To enable others skilled in the arts to which it pertains to make and use my invention, I will proceed to describe its construction and operation with reference to the drawing.

Figure 1 is a vertical section of a mill made with my improvements, and Fig. 2 is a plan of the same.

The central chamber, formed by the enlargement of the eye of the upper stone *a*, contains the open cylinder *b* and the revolving wings *c*, which may be made either angular or otherwise, and are carried by the running stone *d*, that is hung and driven in the usual manner. In a pair of stones three feet in diameter, and in which the eye is eight inches in diameter, I prefer to make the chamber in the upper

stone two feet in diameter, which reduces the width of the grinding-surface to six inches.

By these arrangements the air has a largely-increased freedom of access to the interior of the stones; the opening to the shaft, and the bail by which the lower stone is driven, keep these parts cool, leaves them constantly subject to observation, and enables them to be easily oiled; the material is received in a large and airy chamber in the upper stone, and the grinding is effected by the reduced surface remaining toward the periphery where the circular motion is greatest.

In a mill made with these improvements there is less power required, it may be more easily kept in running order, and the stones have smaller surfaces to be cut or dressed; the material is much less liable to be discolored by heat, and the uniformity of the grinding motion and the free access of the air enables it to be ground in less oil. Better work, therefore, is accomplished with diminished expense.

I claim as my invention—

The open cylinder *b*, with the wings *c*, applied thereto and operating, in combination with the grinding-stones, in the manner described.

RICHARD BYRNE.

Witnesses:

DANIEL BROWN,
GEO. GALLAGHER.