UNITED STATES PATENT OFFICE.

BENJAMIN D. SANDERS, OF WELLSBURG, WEST VIRGINIA.

IMPROVEMENT IN DRESSING MILLSTONES.

Specification forming part of Letters Patent No. **208,269**, dated September 24, 1878; application filed July 31, 1878.

To all whom it may concern:

Be it known that I, BENJAMIN D. SANDERS, of Wellsburg, county of Brooke, State of West Virginia, have invented or discovered a new and useful Improvement in Dressing Millstones; and I do hereby declare the following to be a full, clear, concise, and exact description thereof.

In the use of burr-stone for milling purposes it occasionally becomes necessary to redress the grinding-faces of the stone. This has been done in various ways, as by face cracking or roughening such surface, or scoring or cutting it with a suitable tool or a diamond.

In all such cases it is necessary to lift or remove the upper stone, which occasions delay and expense, and the services of a skilled workman must also be employed.

One of the principal objects in view in such redressing is to remove a glaze or glit which the face of the stone acquires in use, and leave the clean natural grit of the stone.

I have experimented at considerable length and in various ways to discover, if possible, some cheaper and better way of removing this glaze from the stones, and as a result of such experiments I have found that the desired end can be most effectually gained by the use of a stone or mineral substance which will readily pulverize into very fine grains, but will also, when so pulverized, have more or less erosive qualities or adaptation to or capacity for removing this objectionable glaze.

The article best answering the requirement of the case I have found to be what is commonly known as "pumice stone," and the manner in which I prefer to use the same is as follows: The stones being adjusted, say, as for ordinary grinding, and preferably while running at a comparatively slow rate of speed, I feed to them a small quantity of pumice-stone, preferably in granulated form, say, about one or two gills, more or less, according to the size of the stones and their condition. These granules or grains will be caught and easily crushed in the bosom of the stones, and as they are reduced and carried toward the skirt or periphery I lower the upper stone somewhat until the grinding-faces are in close relation, such as would be given for very fine grinding. This operation is continued for a little time, say, for one or two minutes, when under ordinary conditions the desired result will be attained, and upon readjusting the stones they will be again ready for use. During this operation the pulverized pumice spreads evenly and uniformly over the surface of the burrs or stones, and its effect is to cut away or remove the glaze or glit which the stones may have acquired, leaving instead the clean natural grit of the stones, in which condition they are best adapted for good work in grinding.

In this operation the dressing may be said to be done automatically, or the stones may be said to dress themselves.

By the use of this material, as described, I accomplish a superior result without lifting or removing the stones from place, and with little loss of time. At the same time the knowledge and skill required are only such as are possessed by millers generally.

For convenience in feeding, I prefer to use the pumice-stone in granulated form, as mentioned, the granules or grains approximating in size the grains of cereals usually ground.

The pumice may be used, however, in powdered form, and, especially when the upper stone has been lifted for any cause, the powdered pumice may be spread on the bed-stone, and when the upper stone is replaced the dressing may be effected by running the stones substantially as before described.

While I consider pumice-stone the best adapted for effecting a dressing of the stones in the way described, yet I include herein as coming within my invention, and as the mechanical equivalent of such stone, any stone or mineral which being passed between the stones or burrs while running will effect the desired dressing of the grinding-faces.

This method of dressing the stones is equally applicable whether the grinding-faces or lands are smooth or more or less roughened. In either case it leaves the clean natural grit of the stones in the best possible condition for work.

I am aware that it has been proposed to use common sand for the purposes above indicated; but my experience has been that sand

is unsuited to the purpose and will not give good results. Hence the use of the same is hereby disclaimed.

I claim as my invention—

The process herein described of automatically dressing millstone or burr-stones—namely, subjecting them while running to the action of pumice-stone, granulated or powdered, substantially as described.

In testimony whereof I have hereunto set my hand.

BENJAMIN D. SANDERS.

Witnesses:
J. J. McCORMICK,
CLAUDIUS L. PARKER.