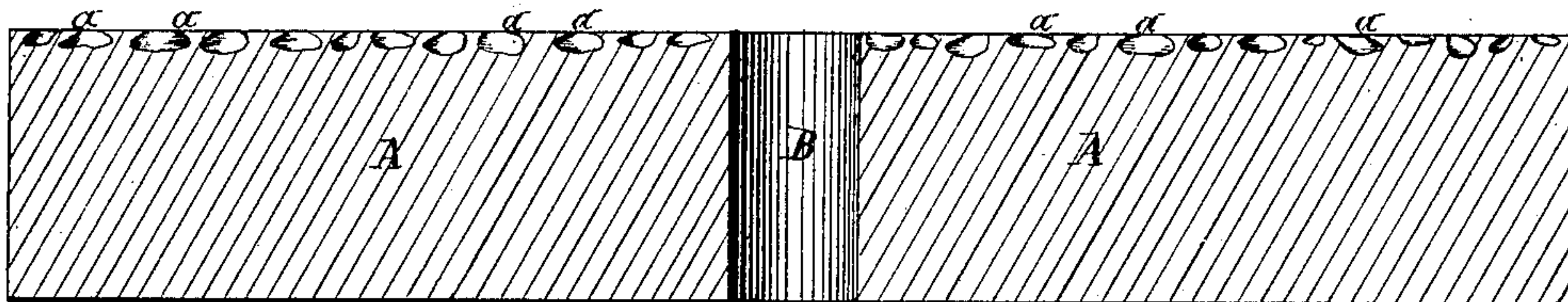


G. T. SMITH.
MILL-STONE.

No. 170,120.

Patented Nov. 16, 1875.



Witnesses.

Henry Orth
Harry Coleman.

Inventor.

George T. Smith
by H. H. Doubleday atty.

UNITED STATES PATENT OFFICE.

GEORGE T. SMITH, OF ST. LOUIS, MISSOURI.

IMPROVEMENT IN MILLSTONES.

Specification forming part of Letters Patent No. **170,120**, dated November 16, 1875; application filed September 1, 1875.

To all whom it may concern:

Be it known that I, GEORGE T. SMITH, of the city of St. Louis, in the county of St. Louis and State of Missouri, have invented a new and useful Improvement in Millstones, which method or process is fully set forth in the following specification:

It is known that one of the serious defects in the operation of grinding grain, particularly wheat, upon a new stone, or upon one which has recently had its furrows dressed out, or one which has had any considerable depth taken off from its face, or a portion of its face, by the ordinary methods employed in stone-dressing, is owing to the fact that such dressing has left sharp edges upon many of the honey-comb like cells which are present in large numbers on the face of the stone. These sharp edges, under the ordinary methods of dressing stone, such as with the emery-wheel, the diamond, and the hand-pick, or the machine-pick, must be worn away by the action of the wheat upon them, and, until they have been so dulled, cut up the bran badly, reducing a large portion of it to such fine particles that it can not be readily removed from the flour, thus materially injuring the product of the mill. But by the time the edges of the cells are dulled, as above explained, the stone is more or less out of face, from the fact that some of the blocks are harder than others, for which reason the grinding is unsatisfactorily done, and recourse is had to the pick or other means for facing off the high spots, which again sharpen the edges of the cells.

The object of my invention is to round off or blunt these above-mentioned sharp edges during the process of dressing the stone, and thus put the stone during this finishing operation, and before any grain is ground upon it, into substantially the same condition, so far as relates to the edges of the cells, as it has heretofore been reduced by the action of the grain after weeks, or even months, of service.

Having thus explained the nature of my invention, I will describe one method which I have adopted for carrying it into effect.

Having reduced the face of the stone A as nearly as possible to a perfect plane by the use of a pick, or any of the well-known stone-dressing machines, or otherwise, and having

cut in it suitable furrows, which may be of any usual or approved style, I take dry sand, or sand and water, and, by means of a rubbing-stone, an iron or wooden plate, or other equivalent means, the sand being placed upon the stone, with the rubbing-plate upon the sand, I scour, grind, and polish, by attrition, the sharp and rough edges *a* of the cells *c*, until they are rounded and dulled, continuing the operation for such length of time as the quality or grit of the stone, or the desired thoroughness of the work, may indicate or require.

This operation I apply to both the face or lands of the stone and the furrows, and it will be readily understood that a stone thus prepared or dressed will do very much better work than the same stone could possibly do when dressed in the usual manner, because its grinding-face will be as nearly in a plane as may be, and the furrows will be in the best possible form with such feather edge, as may be desired, while at the same time the edges of the cells will be dulled. Hence, the bran will be larger, the meal will be cooler, the flour will be more free from specks, and the entire result will be more satisfactory than could be produced by stone in the condition in which they have been ordinarily employed in mills.

I usually employ sand similar to that used for polishing marble, but may use any other which can be conveniently obtained, or emery or other suitable scouring material may be substituted therefor.

Under some circumstances I may dispense with picks or other mechanical appliances for reducing the face of the stone to a plane, using the sand or its equivalent for this purpose, by scouring down the spots which are pointed by the staff, and thus round off or dull the edges of the cells at the same time that the stone is faced, and the furrows may be dressed in the same manner.

What I claim is—

A millstone, having its grinding-surface reduced to a plane, and the edges of the cells dulled, substantially as set forth.

GEORGE T. SMITH.

Witnesses:

A. J. HILL,

H. H. DOUBLEDAY.