

(No Model.)

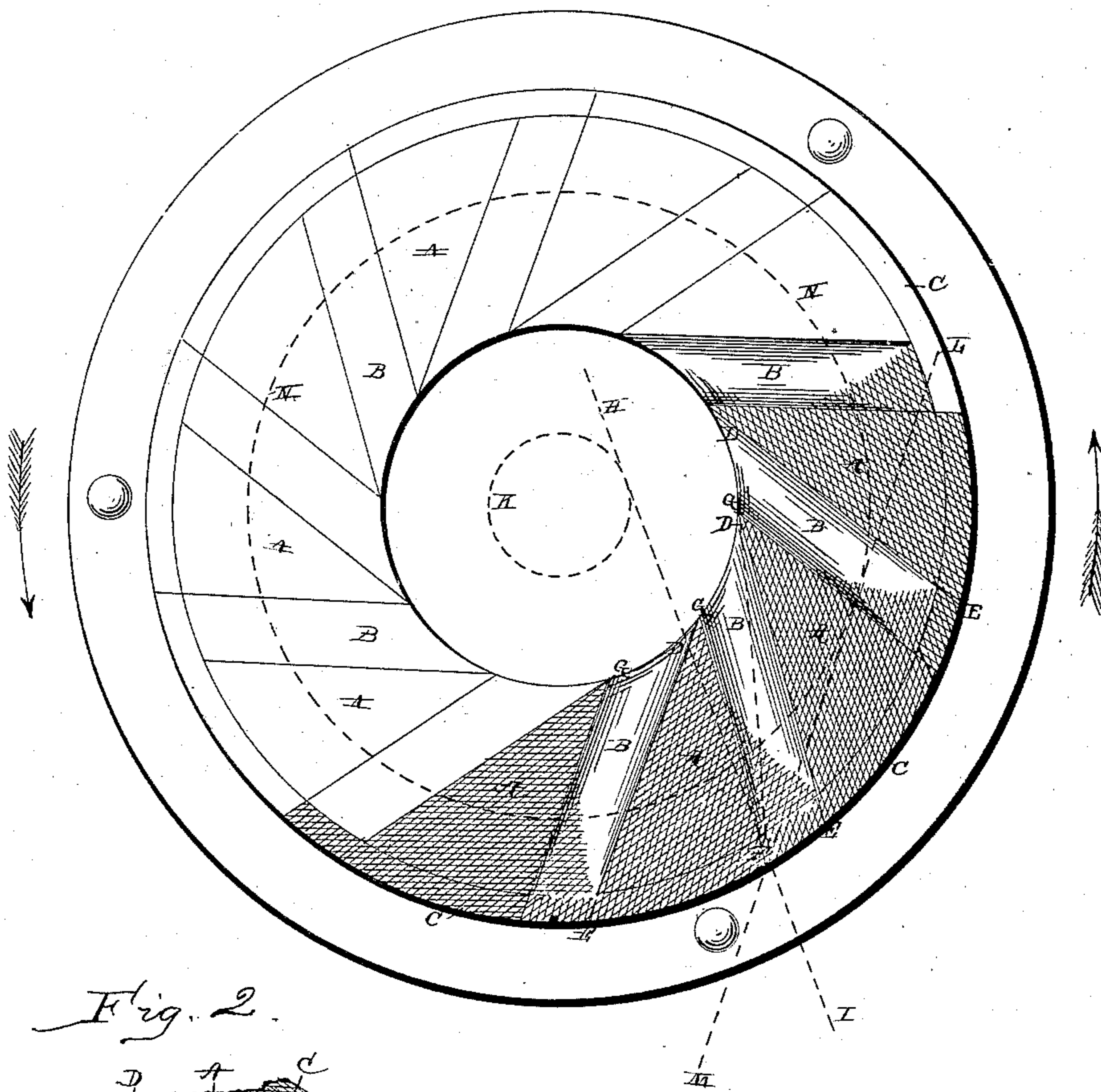
H. E. & C. W. SYLVESTER.

MILLSTONE DRESS.

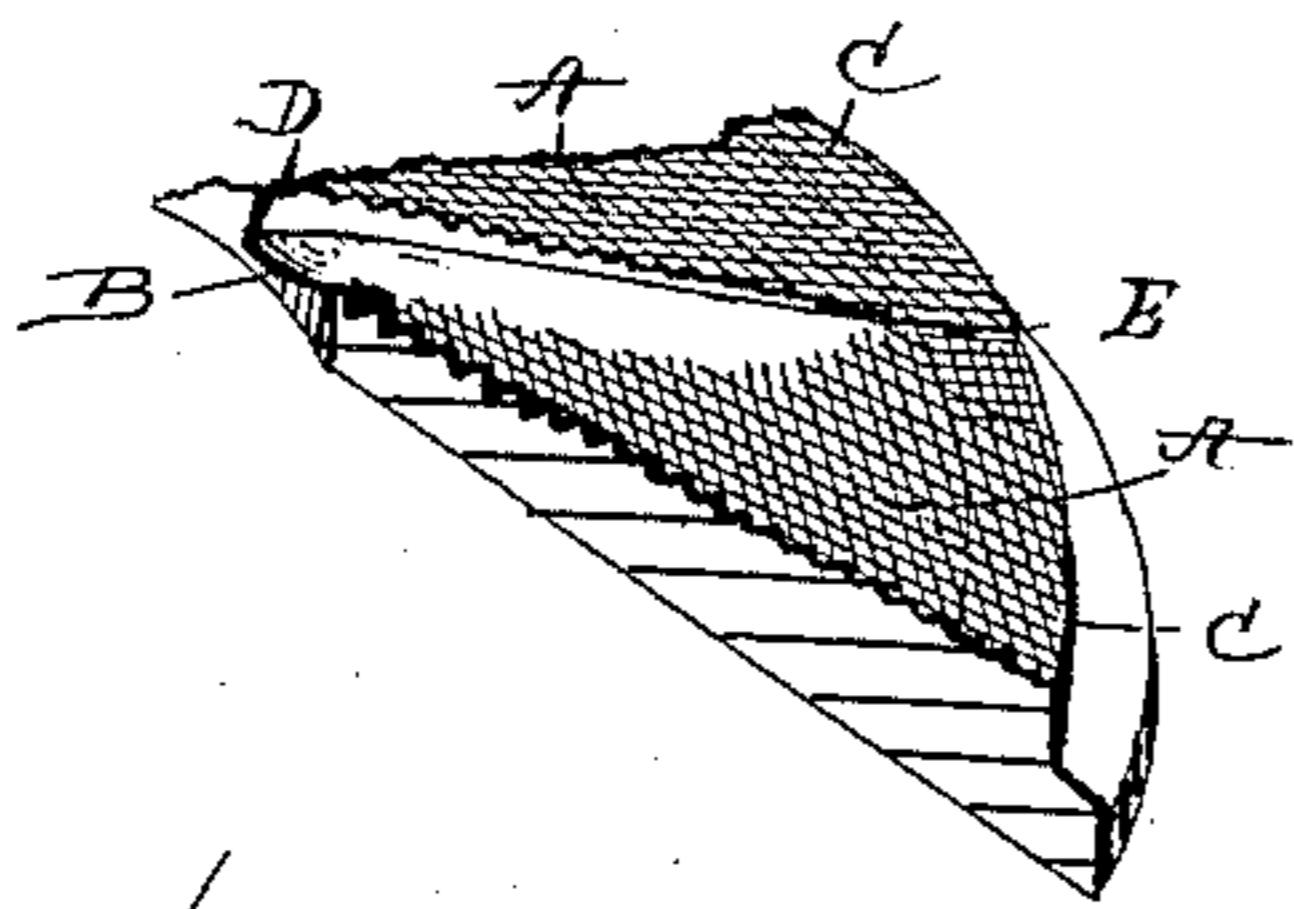
No. 336,533.

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*Fig. 1.*



*Fig. 2.*



-Witnesses.-

*A. J. Gardner*

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*att'y.*

# UNITED STATES PATENT OFFICE.

HENRY E. SYLVESTER AND CHARLES W. SYLVESTER, OF MARENGO, ILL.

## MILLSTONE-DRESS.

SPECIFICATION forming part of Letters Patent No. 336,533, dated February 16, 1886.

Application filed June 26, 1885. Serial No. 169,866. (No model.)

*To all whom it may concern:*

Be it known that we, HENRY E. SYLVESTER and CHARLES W. SYLVESTER, of Marengo, in the county of McHenry and State of Illinois, have invented certain new and useful Improvements in Millstone-Dresses; and we do hereby declare the following to be a full, clear, and exact description of the invention, such as will enable others skilled in the art to which it pertains to make and use it, reference being had to the accompanying drawings, which form part of this specification.

This invention relates to improvements in dress for millstones, and is designed to produce a surface for the same in which cross-cuts are used, each cut carrying the material being ground from the eye toward the periphery.

The improvement consists in the construction of the dress, as hereinafter set forth and claimed, reference in the following description being had to the annexed drawings, in which—

Figure 1 represents a plan view of the dressed surface of a millstone or burr, and Fig. 2 a perspective of a portion of the burr.

The lands are designated by A, the main or feeding furrows by B, and the skirt by C. The feeding-furrows are tangent to the eye, as shown, and are deepest at the point of beginning at the eye, as designated by D, where their depth equals about four-fifths the thickness of the burr-plate, and they decrease in depth along the line D E, which represents the termination of the preceding land, also along the line D F, which is represented as extending diagonally through the length of the furrow, and also along the edge of the eye to the inner point of the succeeding land, as designated by D G. Thus the furrow decreases in depth from the foremost point D at the eye till it is on a level with the grinding-surfaces—the land and skirt—at the point of conjunction or blending.

The grinding-surfaces are formed of cross-ing cuts or grooves in the manner below described. One cut or series thereof is parallel to a line, designated by H I, drawn tangent to a circle, which is shown in dotted lines at K, and is one-sixth the diameter of the burr, and the other cut or series thereof is parallel to a line, L M, drawn tangent to a circle, which is shown in dotted lines at N, and which is three-quarters the diameter of the burr.

The above description relates to one land and the portion of the skirt immediately following only, it being apparent that the imaginary lines H I and L M must be redrawn for each land. The grooves or cuts are of equal width throughout, but are deeper near the eye than at the skirt. Both series of cuts extend toward the periphery of the burr, and are in line with the travel of the material toward the said periphery, thus accelerating the operation of grinding. The edges of the furrows at the eye are slightly gouged out, as is seen in Fig. 2, to admit of a free feed. The rear edges of the lands are tangent to the eye, as is evident from the drawings, the said edges being shown by the lines D E. The front edges are parallel to the rear edges of the preceding lands. The surfaces of the lands fall away slightly from the skirt toward the eye. The grain, after entering the furrows B, is cracked as it approaches the lands, and as it enters the cuts is broken still finer, traveling in a zigzag direction through the said cuts toward the skirt, which latter reduces it to the requisite fineness, according to the gage of the stones. As the grinding is all done in the grooves or cuts, the burrs are self-sharpening, since the wear is all on the sides and not the surface of the teeth formed by the cross-cuts. The two cuts, both being forward or in the general direction of the travel of the material, enable the grain, whether wet or dry, heavy (like corn) or light, (like oats,) to be ground with uniformity, rapidity, and thoroughness not attainable when the cuts run in other directions. The outer ends of the furrows are encroached upon by the cuts, where the said furrows are nearly on a level with the lands, which latter are entirely covered by said cuts.

In the drawings but a few of the lands are shown in detail, the same being considered sufficient for illustrating the invention.

We claim—

1. A dress for millstones in which are cross-cuts entirely covering the lands, each cut extending in the general direction of the travel of the grain toward the periphery of the burr, substantially as specified.

2. A millstone-dress having two series of cuts, one series being parallel to a line drawn tangent to a circle one-sixth of the diameter of

the burr, and the other series being parallel to a tangent to a circle three-quarters of the diameter of the said burr, substantially as specified.

- 5 3. A dress for millstones in which are cross-cuts entirely covering the lands and skirt, and deeper at the eye than at the said skirt, said cuts extending in the general direction of the travel of the grain toward the periphery of  
10 the burr, substantially as specified.

In testimony whereof we affix our signatures in presence of two witnesses.

HENRY E. SYLVESTER.  
CHARLES W. SYLVESTER.

Witnesses:

J. T. BELDIN,  
J. M. MARKS.