R. L. DUNCAN.

Millstone Dress.

No. 205,533. Patented July 2, 1878.

Fig. 1.

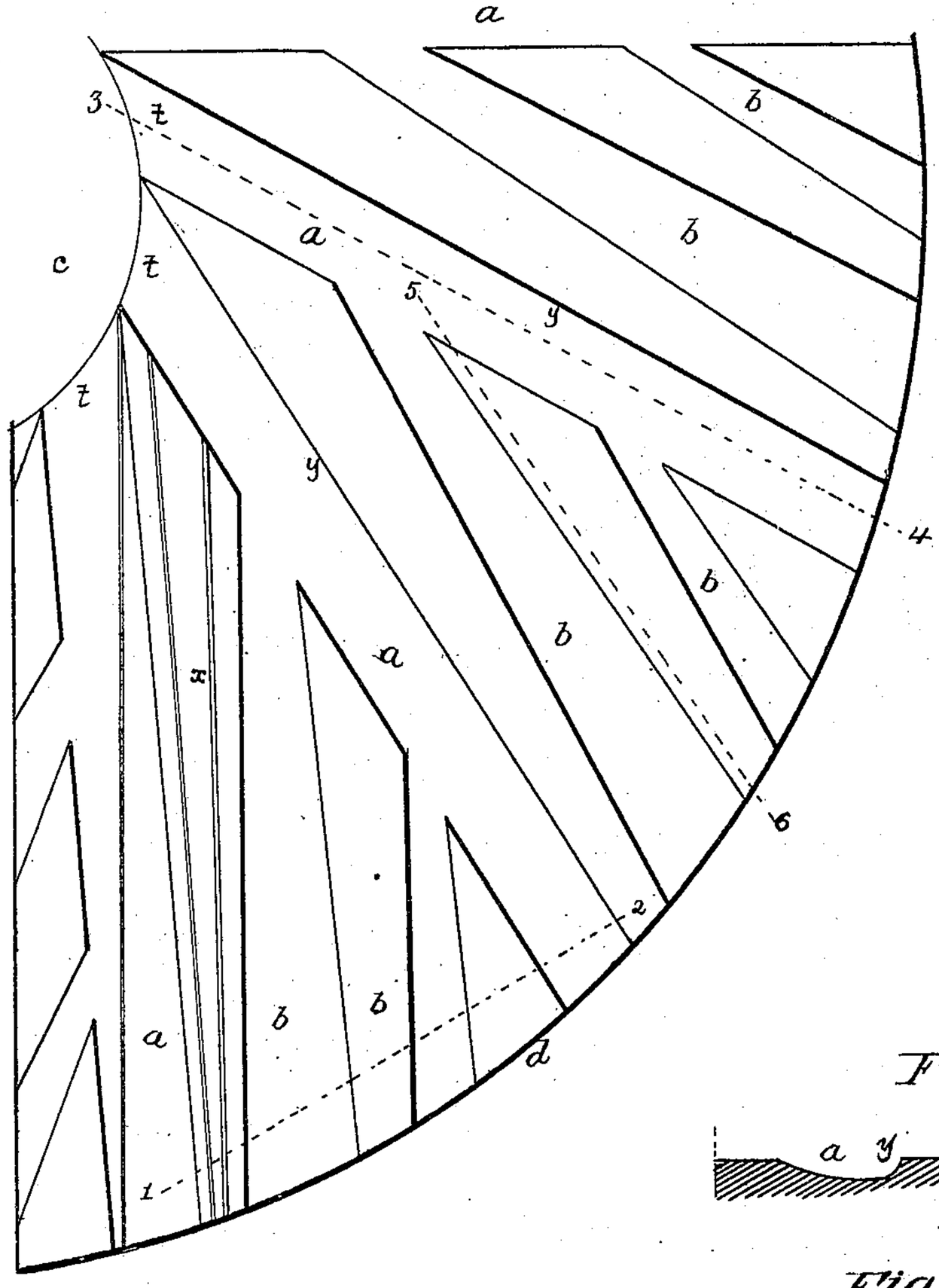


Fig. 2.

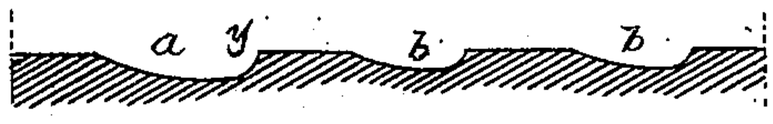


Fig. 3.

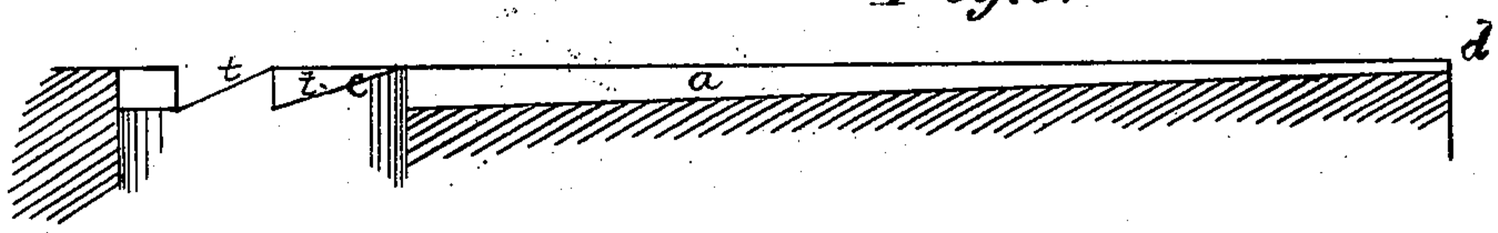
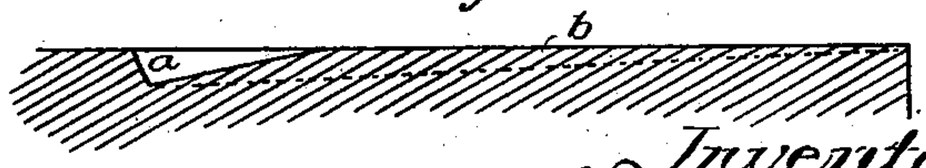


Fig. 4.



Attest:

Fred. Benjamin

Edwin A. Welsh

Inventor

R. L. Duncan

By his attorney

Charles E. Foster

UNITED STATES PATENT OFFICE.

ROBERT L. DUNCAN, OF DECATUR, GEORGIA.

IMPROVEMENT IN MILLSTONE-DRESSES.

Specification forming part of Letters Patent No. **205,533,** dated July 2, 1878; application filed December 28, 1877.

To all whom it may concern:

Be it known that I, ROBERT L. DUNCAN, of Decatur, DeKalb county, Georgia, have invented an Improved Millstone-Dress, of which the following is a specification:

The object of my invention is a mill-dress of a peculiar character, hereinafter described, adapted to stones of various sizes and degrees of hardness, and capable of grinding rapidly with comparatively little power, without heating the meal, and without wearing the stones unequally.

In the drawing, Figure 1 is a plan view of sufficient of a millstone to illustrate my improved dress. Fig. 2 is a section on the line 1 2, Fig. 1; Fig. 3, a section on the line 3 4, Fig. 1; and Fig. 4 a section on the line 5 6, Fig. 1.

The dress consists, essentially, of the leading-furrows *a* and the discharge-furrows *b*, the number and angle of which, as well as the depth, depend upon the size, hardness, speed, and on the power applied to the stone. The leading-furrows are of equal width throughout their length, but increase in depth from the periphery *d* to the eye *c* of the stone, and are flat at *t* near the eye and hollowed out and rounded, the curve increasing toward the edges *y* as they approach the periphery, the shape on a transverse section at the periphery being that shown at *a*, Fig. 2.

In like manner the discharging-furrows increase in depth toward the leading-furrows, and are hollowed toward the periphery, where they are of the cross-section shown at *b*, Fig. 2. The discharge-furrows, however, are much wider at the periphery than at their inner ends, the outer width generally being double the inner width.

The dress of the runner and bed-stone is the same, except that when the power is strong the channels in the runner are made deeper than those in the bed. It will be seen that in this dress the area of grinding-face and the depths of the channels increase toward the eye, so that the working force of the stones shall be exerted at this point, avoiding the loss of power which would be required to grind near the periphery.

The rapidity of the work is also increased by scooping out the channels, as shown, so as to hold a larger quantity of meal, operate evenly upon the same, and insure a uniform wear on the faces of the stones, thus avoiding the necessity of constant resharpening.

This dress can be adapted to stones of different grades and powers by simply changing the draft and depth of the channels, according as the stone is hard or soft or runs fast or slow.

In some cases the grinding lands or faces may be striped with one, two, or more fine grooves, *x*, arranged as shown.

I claim—

1. The combination of the straight leading furrows *a*, of uniform width, extending from the eye to the periphery, with faces of gradually-increasing curvature, and the discharge-furrows *b*, of increasing width and curvature toward the periphery, as set forth.

2. The combination of the leading-furrows *a* and discharge-furrows *b*, when the bottom faces of each gradually increase in curvature toward the outer ends, as set forth.

In testimony whereof I have signed my name to this specification in the presence of two subscribing witnesses.

R. L. DUNCAN.

Witnesses:

ERNEST M. WORD,

J. D. GRIFFIN.