E. A. WITHERS.

SORGHUM-MILL.

No. 192,475. Patented June 26, 1877.

Fig. 1.

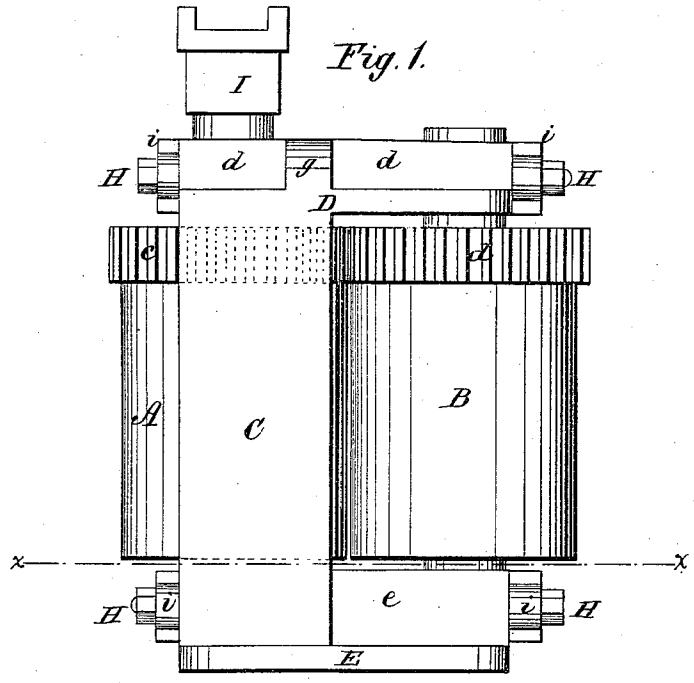


Fig. 2.

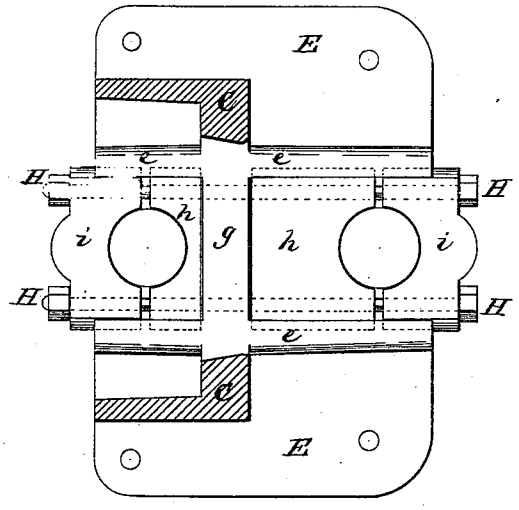
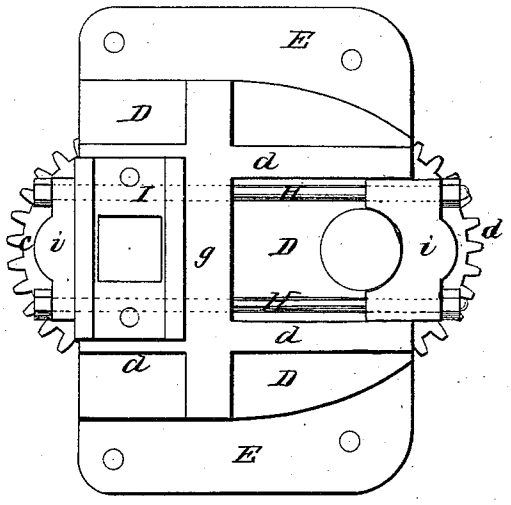


Fig. 3.



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EDWARD A. WITHERS, OF MARIETTA, GEORGIA.

IMPROVEMENT IN SORGHUM-MILLS.

Specification forming part of Letters Patent No. **192,475**, dated June 26, 1877; application filed March 24, 1877.

To all whom it may concern:

Be it known that I, EDWARD A. WITHERS, of Marietta, in the county of Cobb and State of Georgia, have invented a new and useful Improvement in Sorghum-Mills; and I do hereby declare that the following is a full, clear, and exact description of the same.

This improvement pertains to the construction of the frame of a sorghum or sugar-cane mill, and the manner of connecting the rollers therewith; the object being to effect the utmost economy in dimensions, weight, and cost of the frame, and to enable the rollers to be applied and removed with the greatest facility.

In the accompanying drawing forming part of this specification, Figure 1 is a side elevation. Fig. 2 is a cross-section on line *x x*, Fig. 1. Fig. 3 is a top-plan view.

A and B indicate the crushing-rollers of the mill, which are placed vertical, and provided with journals and meshing-gears *c d* in the usual manner. The frame consists of a vertical slotted standard, C, and horizontal parallel flanges, forming, respectively, the head D and base E. The head D has the parallel ribs *d d*, and the base corresponding ribs *e e*. The two sets of ribs correspond in position or arrangement relative to the standard C, and are connected and strengthened by a transverse rib, *g*. The head or top flange D is cut out semicircularly on each side of the strengthening-rib *g*, to form one part of the bearing of the rollers A B, while the corresponding portions of the lower bearings are formed by loose blocks *h*, placed between the guide-ribs *e*. The caps or outer portions *i* of the respective upper and lower bearings have the usual form, but are connected in pairs by wrought-iron screw-bolts H, which pass intermediately through the strengthening-ribs *g*. Thus, the rollers being admitted to the frame, or rather to the bearings, from the outside, they may be easily and quickly applied to or removed from the frame, and the strain to which the roller-journals are subjected being outward it is borne entirely by the bolts H connecting the caps *i*, so that the frame may be made very light.

I thus combine the qualities eminently desirable in this as well as other machines, to wit, ease of adjustment or removal of parts, maximum strength, compactness of form, and minimum weight and cost of manufacture.

It is obvious the rollers A B may be placed horizontal, if desired. In such case the socket I for the sweep is detached and a power-wheel substituted therefor.

What I claim is—

1. A sorghum or sugar-cane mill-frame, formed of the standard C and the top and bottom flanges D E, provided with parallel ribs *d d* and *e e*, as shown and described.

2. The improved mill composed of the metallic frame formed of standard C, top and bottom flanges D E, having ribs *d d e e* and cross-rib *g*, the rollers A B, the caps and bearings, and the bolts H, all arranged as shown and described.

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Witnesses:

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