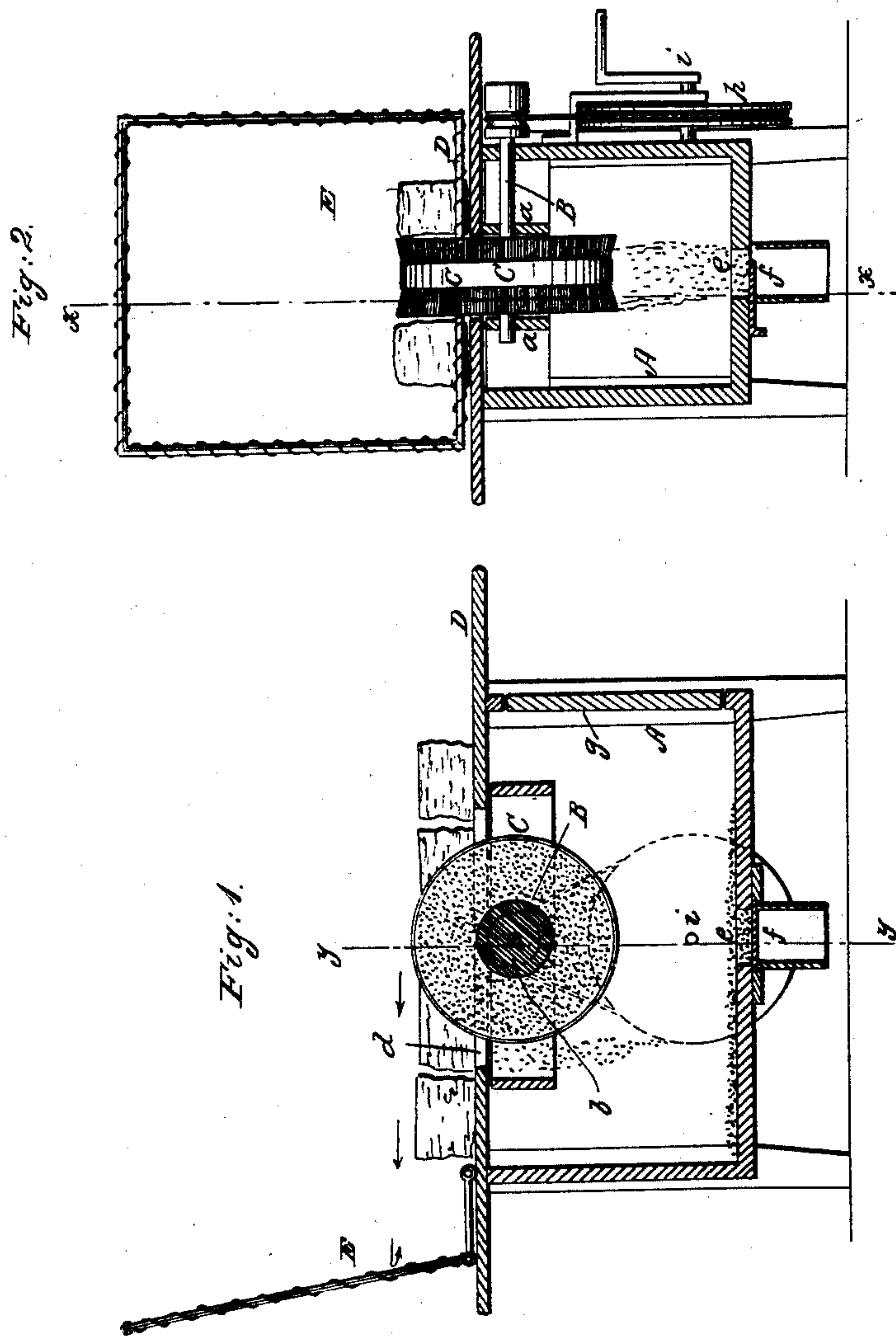


C. S. IRWIN.
Device for Cleaning Starch.

No. 28,278.

Patented May 15, 1860.



Witnesses:
J. W. Coombs.
R. S. Spencer.

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UNITED STATES PATENT OFFICE.

CHARLES S. IRWIN, OF MADISON, INDIANA.

IMPROVEMENT IN THE CONSTRUCTION OF MACHINERY FOR CLEANING STARCH.

Specification forming part of Letters Patent No. 28,278, dated May 15, 1860.

To all whom it may concern:

Be it known that I, CHARLES S. IRWIN, of Madison, in the county of Jefferson and State of Indiana, have invented a new and useful Machine for Cleaning Starch; and I do hereby declare that the following is a full, clear, and exact description of the same, reference being had to the annexed drawings, making a part of this specification, in which—

Figure 1 is a side sectional view of my invention, taken in the line *x x*, Fig. 2; Fig. 2, a transverse vertical section of the same, taken in the line *y y*, Fig. 1.

Similar letters of reference indicate corresponding parts in the two figures.

The object of this invention is to supersede the manual process of cleaning starch preparatory to the papering and final drying of the same for domestic use. In the manufacture of starch a slimy crust forms on the side of the lumps in the preliminary drying process, and this crust has heretofore been removed by scraping with a knife—an operation which consumes considerable time and is attended with much waste.

The within-described invention consists in the employment or use of a rapidly-revolving disk-brush placed on a suitable box or receiver, and used in connection with a bed, which is also placed on the receiver and arranged to operate as hereinafter described, to effect the desired end.

To enable those skilled in the art to fully understand and construct my invention, I will proceed to describe it.

A represents a box or receiver, which may be of rectangular or other suitable form and of any convenient size. On the upper part of this box A a shaft, B, is placed transversely in proper bearings, *a*, and on this shaft a disk-brush, C, is secured. This brush C is formed of good bristles, fitted longitudinally around a hub, *b*, on the shaft B, the bristles being bound in proper position by a central band, *c*, as shown clearly in Fig. 2. The disk-brush has two face-sides, the periphery not being used. The shaft B is a trifle below the upper edge of the box or receiver A, and on the top of said box or receiver a horizontal bed or platform, D, is placed. The bed or platform D has a rectangular opening, *d*, made in it,

through which the brush C passes, the brush projecting some distance above the platform, as shown clearly in both figures. The bed or platform D is not secured permanently on the box or receiver A, but it is secured thereon by any suitable catch or fastening, so that it may be readily removed for lubricating shaft B, and other necessary purposes. The bottom of the box or receiver A is provided with an opening, *e*, which is covered by a slide, *f*, and one end of the box or receiver is furnished with a door, *g*. A screen, E, is also placed on the bed or platform D, near one end, to prevent the escape of dust, which might otherwise be lost or wasted. The shaft B is driven from a large pulley, *h*, on a driving-shaft, *i*; or multiplying-gear may be used. The shaft B and brush C are rapidly rotated, making about five hundred revolutions per minute.

The lumps of starch to be scraped or operated upon (shown in red outlines) are held just above the bed or platform D and shoved lightly past the faces or sides of the disk-brush C, the latter completely and rapidly removing the slimy crust, the scrapings or cleanings passing down through the opening *d* into the box or receiver A, from whence they are removed through the opening *e*. The door *g* admits of the box or receiver being thoroughly cleared or swept out.

By this simple device two minors or boys can cleanse as much starch in a given time as eight experienced workmen by the usual exclusively manual process and with less waste.

I do not claim, broadly, the employment or use of a disk-brush irrespective of the application and arrangement herein shown and described; but,

Having thus described my invention, what I claim as new, and desire to secure by Letters Patent, is—

The rotating disk-brush C, placed on the box or receiver A, in connection with the bed or platform D, also placed on the box or receiver, all being arranged as and for the purpose set forth.

CHAS. S. IRWIN.

Witnesses:

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