L. CROOKE.

Tumbling-Barrel.

No. 203,595. Patented May 14, 1878.

Fig. 1.

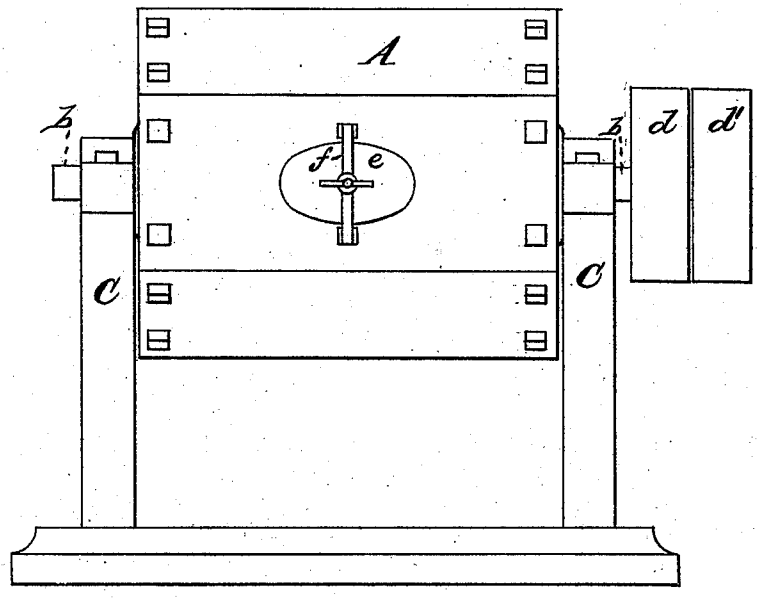
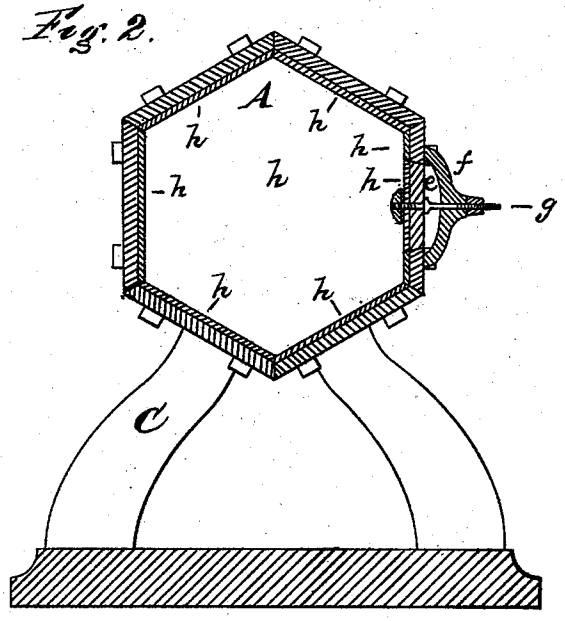


Fig. 2.



Witnesses
W. L. Penniman.
C. Wills

Inventor.
Lewis Crooke
by his Att'y
E. L. Fenwicke

N. PETERS, PHOTO-LITHOGRAPHER, WASHINGTON, D. C.

UNITED STATES PATENT OFFICE.

LEWIS CROOKE, OF NEW YORK, N. Y.

IMPROVEMENT IN TUMBLING-BARRELS.

Specification forming part of Letters Patent No. **203,595**, dated May 14, 1878; application filed April 2, 1878.

To all whom it may concern:

Be it known that I, LEWIS CROOKE, of the city, county, and State of New York, have made an invention of a new and useful Burnishing Tumbling-Barrel; and that the following is a full, clear, and exact description and specification of the same, reference being had to the accompanying drawing, which forms part of the description.

The object of this invention is to enable articles to be burnished mechanically or by power; and it consists of a tumbling-barrel having its inner surface of glass or its equivalent, which presents a smooth hard surface, adapted to burnish metals, so that the bodies which are agitated in the barrel by its motion are rubbed by its interior burnishing-surface, and are thereby burnished.

To enable others to construct and use my my invention, I will proceed to describe a burnishing tumbling-barrel embodying it, and of the construction which is the most expedient, having in view the making of the barrel at a low cost.

Figure 1 represents a side view of said burnishing tumbling-barrel. Fig. 2 represents a central transverse section of the same.

The burnishing tumbling-barrel represented in the accompanying drawings is a strong hexagonal vessel, A, constructed, by preference, of wood, and having its heads fitted with gudgeons *b b*, which are arranged to revolve in suitable bearings in the stands C C. One of the journals is in practice made long enough to receive belt-pulleys *d d'*, one of which is fast to the gudgeon, while the other is loose thereon, so that a driving-belt may be shifted from one pulley to the other, for the purpose of revolving the barrel or of stopping its motion. One of the sides of this barrel is pierced with a charging-hole, for the introduction and removal of the articles to be burnished; and this hole has a plate, *e*, fitted to it, which may be secured in place by a cross-bar, *f*, and screw-bolt *g*.

The interior of this vessel is faced with plates of glass *h h*, so that the interior surface of the barrel has a smooth, hard, vitreous surface, which is well adapted to burnishing surfaces of metal articles by rubbing upon them, in manner analogous to the burnishing of such articles by rubbing their surfaces with the smooth hard surface of a burnishing-tool held in the hand of a workman.

The articles to be burnished are placed in the barrel, by preference, with some liquid, such as water or a weak acid; the charging-opening is closed; the barrel is caused to revolve; and the operation is continued as long as deemed expedient to burnish the articles.

The inventor is not restricted to any particular form of barrel, nor to the arrangement of the gudgeons or trunnions at its heads, as the barrel may be round, or may be square in section; and the journals may be secured to its sides crosswise of its length, or may be at diagonally-opposite corners. The interior surface also need not necessarily be of glass, as a surface of smooth glazed porcelain will answer the purpose. Care should, however, be taken that the interior burnishing-surface does not present any rough projections, because these would scratch the surface of the articles to be burnished. The exterior of the barrel need not necessarily be made of wood, as iron may be used for that purpose; but in such case it is expedient to bed the vitreous lining in some cement, so as to prevent it from being jarred by contact with the metal. The barrel may also, if deemed best, be formed of but one material—as, for example, of heavy plate-glass, having a smooth vitreous surface at its interior.

A burnishing tumbling-barrel is well adapted to the burnishing of shot, balls, and other globular metal articles.

I claim as my invention—

The burnishing tumbling-barrel, substantially as before set forth, having a smooth vitreous interior burnishing-surface.

Witness my hand this 30th day of March, A. D. 1878.

LEWIS CROOKE.

Witnesses:

C. T. BRUEN,

JOHN M. HARRINGTON.