H. S. SMITH.

BARREL-POLISHING MACHINE.

No. 170,908. Patented Dec. 7, 1875.

Fig 2

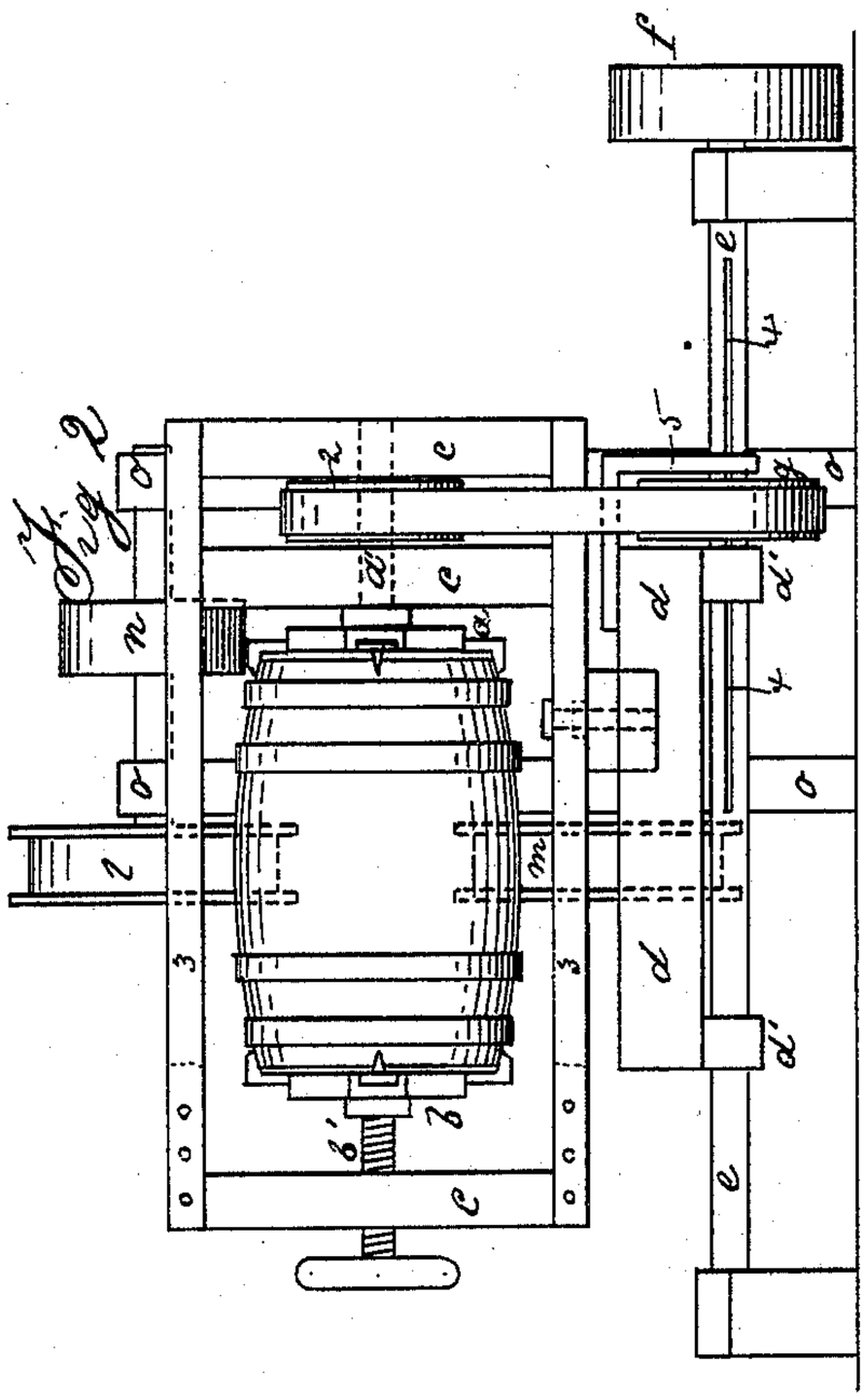


Fig 3

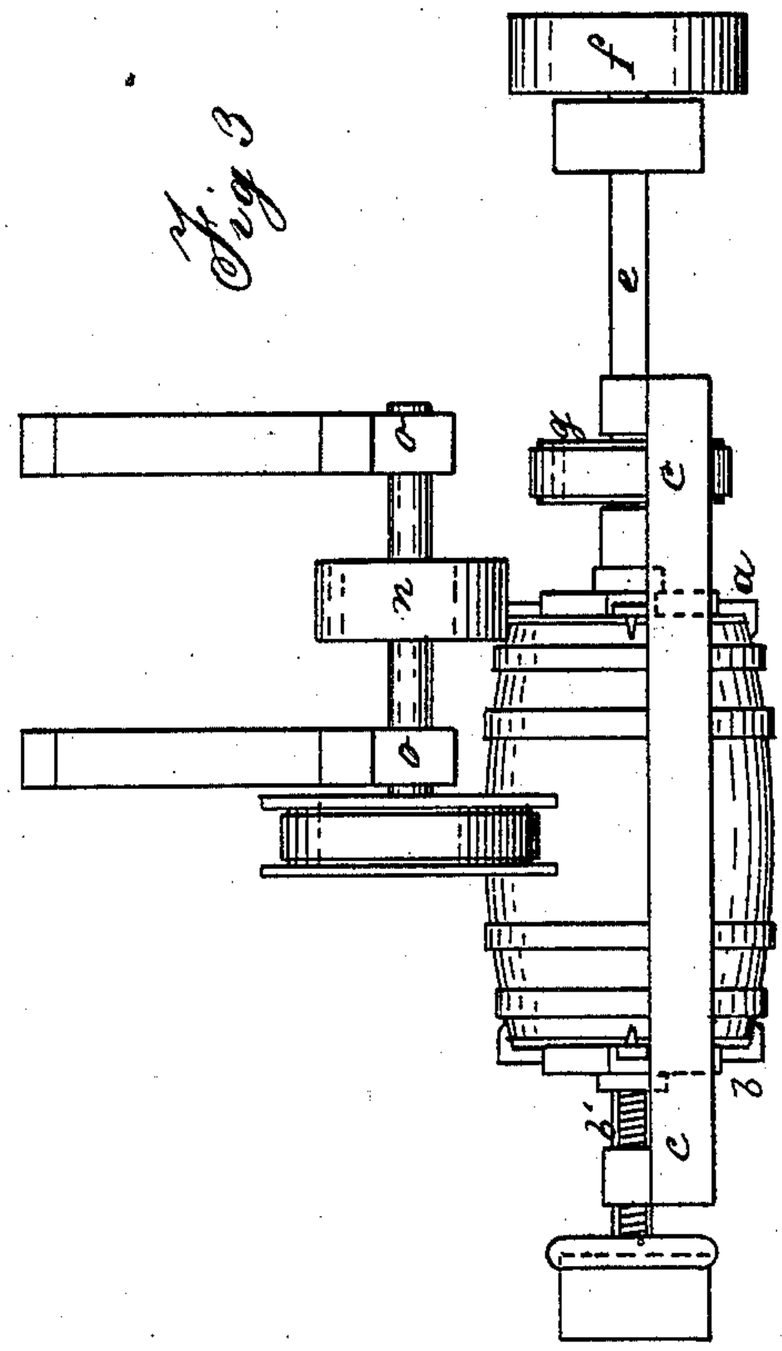


Fig 1

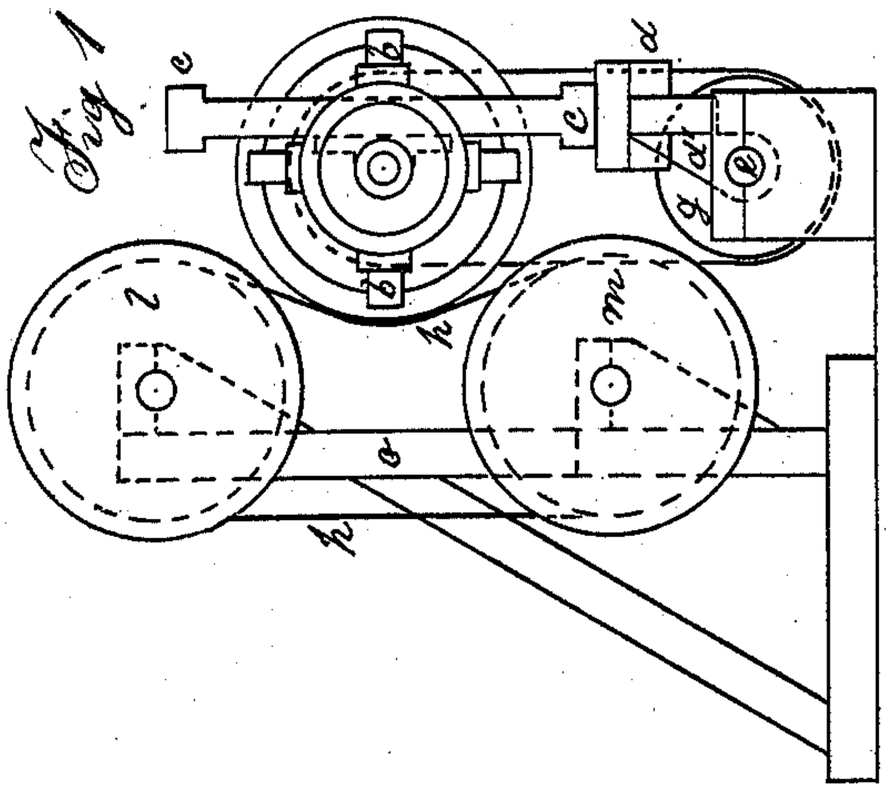
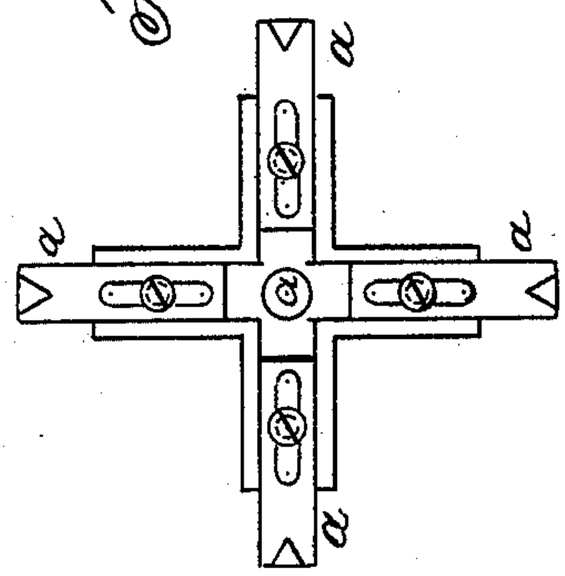


Fig 4.



Witnesses.
Albert H. Hook.
C. A. Brown

Inventor
Human P Smith,

UNITED STATES PATENT OFFICE.

HEMAN S. SMITH, OF BROOKLYN, NEW YORK, ASSIGNOR OF ONE-HALF HIS RIGHT TO ALANSON T. BRIGGS AND WILLIAM H. THRALL, OF NEW YORK CITY.

IMPROVEMENT IN BARREL-POLISHING MACHINES.

Specification forming part of Letters Patent No. **170,908**, dated December 7, 1875; application filed September 28, 1875.

To all whom it may concern:

Be it known that I, HEMAN S. SMITH, of Brooklyn, county of Kings and State of New York, have invented a new and useful Improvement in Machinery for Dressing Barrels, which improvement is fully set forth in the following specification, reference being had to the accompanying drawings, in which—

Figure 1 is an end view; Fig. 2, a front elevation; Fig. 3, a plan view of the machine. Fig. 4 is a front view of the chuck detached, and drawn on a larger scale than the other figures.

The object of my invention is to clean and finish the outsides of barrels by means of an endless belt; and my invention consists in a sliding swiveled frame, in which the barrel is secured, and made to revolve by suitable mechanism.

My invention further consists in the arrangement and combination of parts, that will be more fully described hereinafter.

The barrel to be cleaned, whether it has simply been bent into shape and held by a truss at each end, or after it has had all hoops forced on, is placed between the two chucks *a b*, which have their arms made adjustable in and out, as shown in Fig. 4, so as to be adaptable to all sizes of barrels. The chuck *a* is secured to the inner end of the shaft *a'*, on which shaft is placed a pulley, 2, through which the shaft receives its motion from the pulley *g* on the shaft *e*. The chuck *b* turns freely on the end of the feed-screw *b'*, which screw has its bearing on one of the vertical beams of the rectangular frame *c*.

In order to make this screw readily adaptable to barrels of different lengths, the beam in which it has its bearing has tenons formed on both of its ends, which fit in slots cut in the horizontal beams 3, whereby the beam can be adjusted back and forth, and secured in any desired position by means of pins or other devices.

The shaft *e* is journaled in suitable fixed bearings, has a pulley, *f*, secured to one end, and a groove, 4, cut in its side. Fastened to this grooved shaft *e*, by means of the two eyes *d'*, is the horizontal beam *d*, which has the pulley *g* attached to one end by means of a metal strap, 5. The pulley *g* has a pin on its interior surface, which catches in the groove in the shaft, so as to cause the two to revolve together at the same time that the pulley and the beam *d* are being moved back and forth.

Pivoted upon the top of the beam *d*, at any suitable point, is the rectangular frame *c*, in which the barrel is held. As this frame can be turned horizontally upon its axis, and as the beam *d* turns vertically around the shaft at the same time that it moves endwise, it will be readily seen that an almost universal motion may be given to the barrel, for the purpose of pressing every portion of its sides against the endless belt *h*, that passes around the two pulleys *l m*, journaled in the frame *o*. The belt *h* is coated with sand, flint, emery, or other scouring-surface, and may be made to revolve in an opposite direction to the barrel by means of the pulley *n*.

The operator takes hold of the frame *c*, and presses the barrel forward against the belt, turning and moving it, so as to clean every portion with great rapidity.

Having thus described my invention, I claim—

1. In a machine for dressing barrels, the combination of the endless belt or scouring-surface with a pivoted frame for holding the barrel, that can be turned horizontally around, substantially as shown.

2. In combination with the frame *c*, pivoted so as to be turned around, the chucks for holding the barrel, and beam *d*, adapted to be moved back and forth on the shaft, as described.

3. The beam *d*, having both an endwise and swinging motion on the shaft *e*, and having the pulley *g* fastened to its end, the pulley being feathered on the shaft, so as to revolve with it, substantially as specified.

4. The combination of the shaft *e*, beam *d*, pulley *g*, frame *c*, pivoted on the said beam, chucks, pulley 2, and belt, with the endless belt *h* and pulleys *l m*, substantially as set forth.

HEMAN S. SMITH.

Witnesses:

ALBERT H. HOOK,

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