

No. 682,595.

Patented Sept. 10, 1901.

M. J. OWENS & A. R. WILSON.  
MACHINE FOR FIRE-FINISHING GLASS ARTICLES.

(Application filed June 24, 1899.)

(No Model.)

2 Sheets—Sheet 1.

Fig. 1.

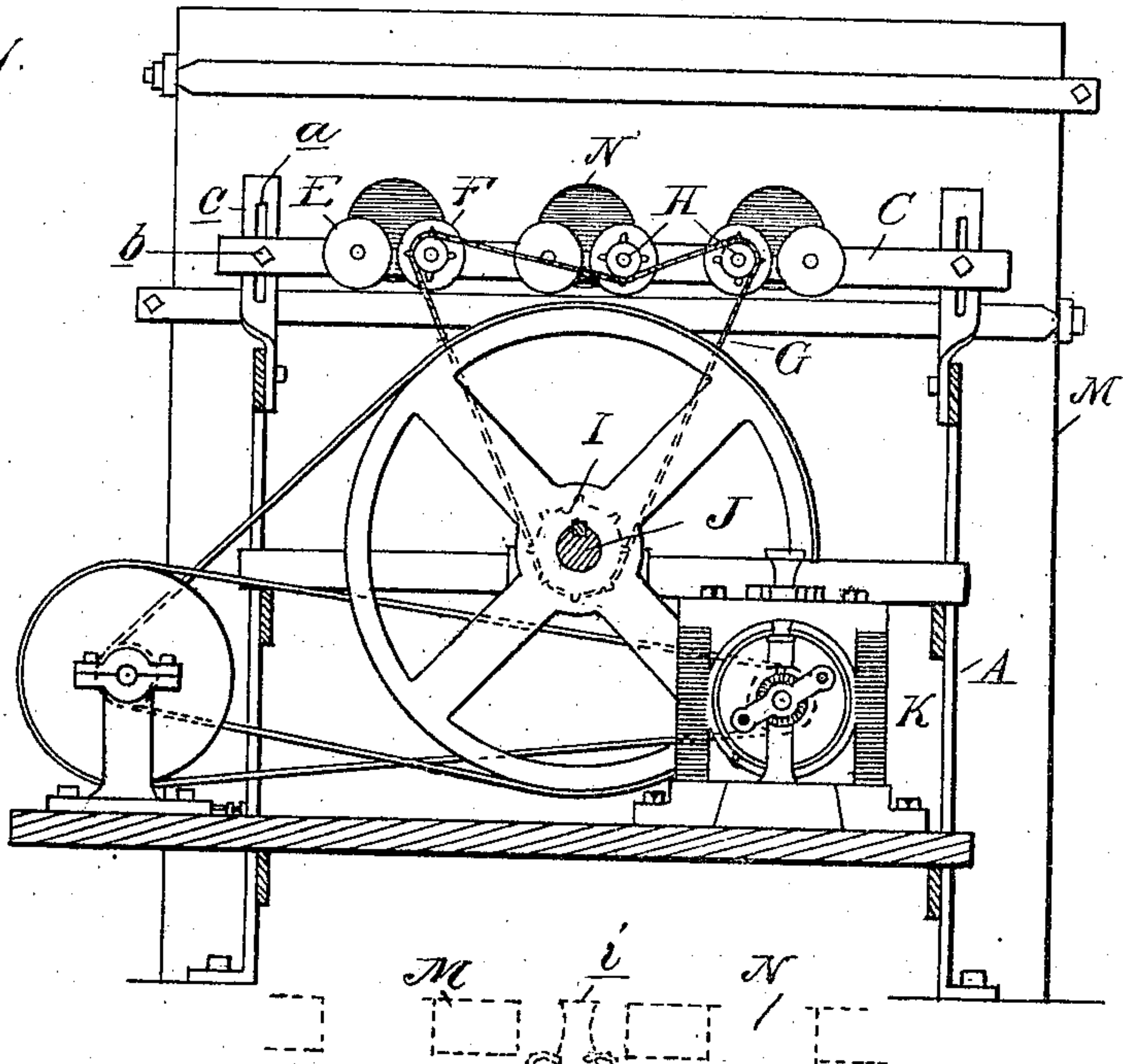
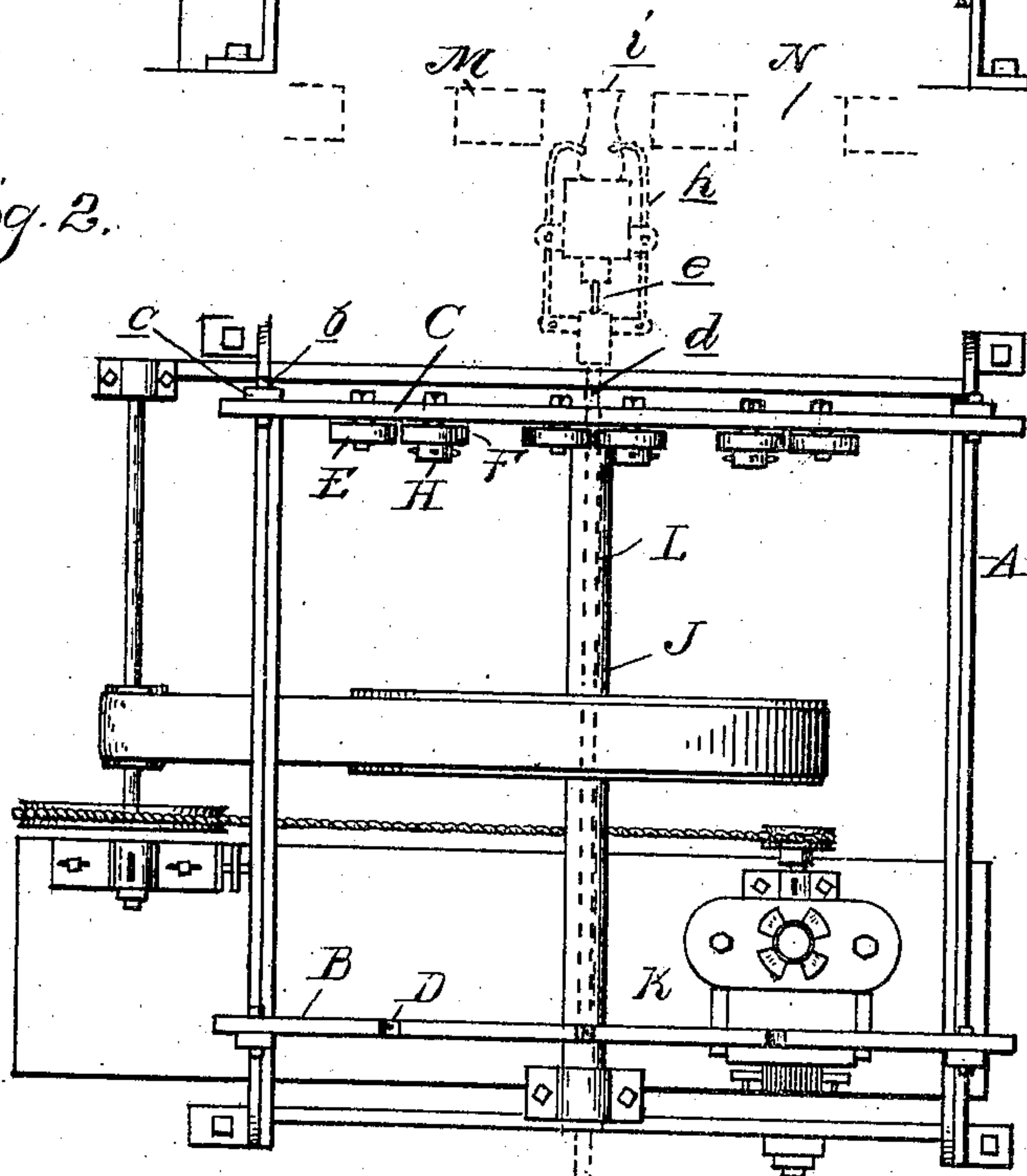


Fig. 2.



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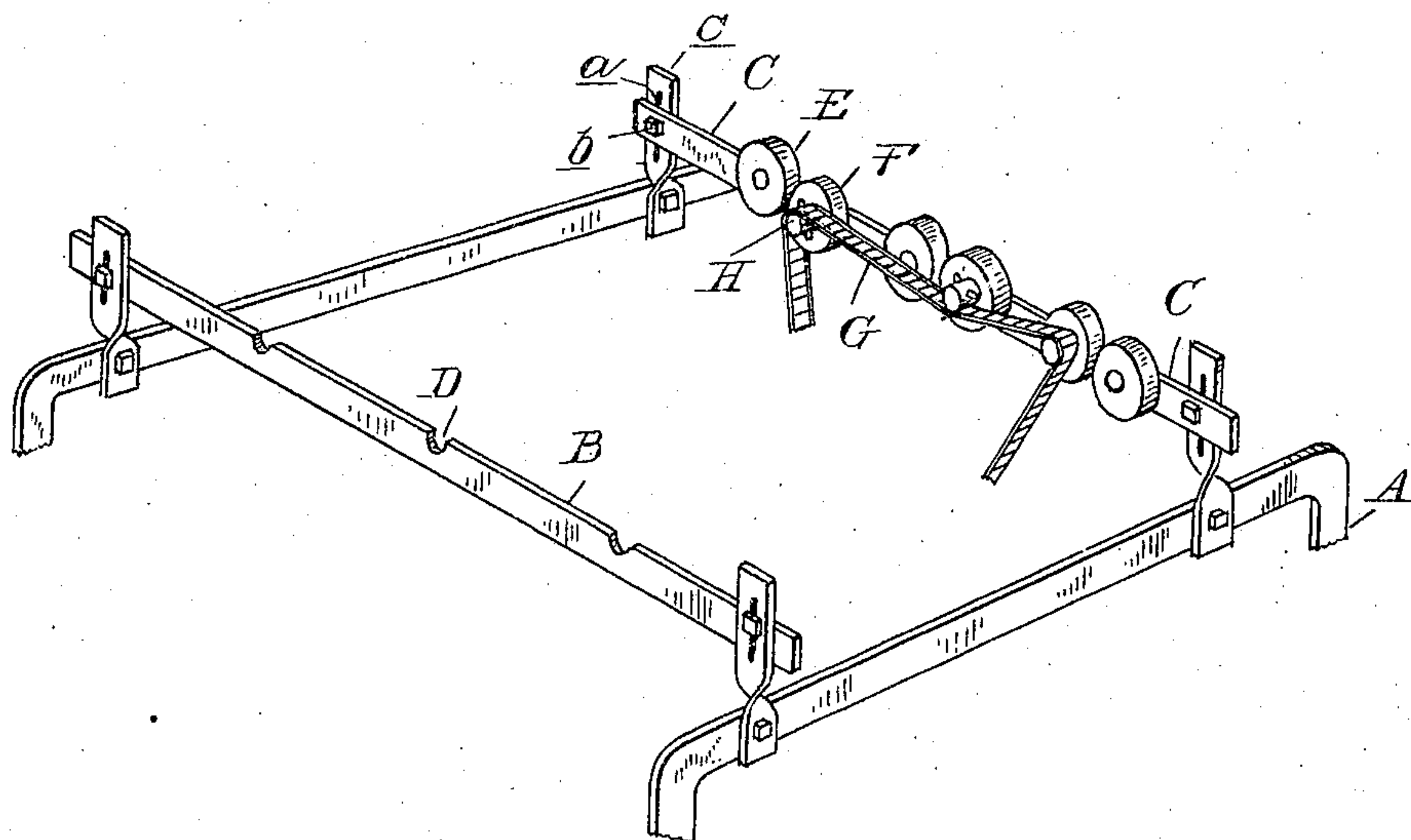
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Fig. 3.



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# UNITED STATES PATENT OFFICE.

MICHAEL J. OWENS AND AMOS R. WILSON, OF TOLEDO, OHIO, ASSIGNORS  
TO THE TOLEDO GLASS CO., OF SAME PLACE.

## MACHINE FOR FIRE-FINISHING GLASS ARTICLES.

SPECIFICATION forming part of Letters Patent No. 682,595, dated September 10, 1901.

Application filed June 24, 1899. Serial No. 721,717. (No model.)

*To all whom it may concern:*

Be it known that we, MICHAEL J. OWENS and AMOS R. WILSON, citizens of the United States, residing at Toledo, in the county of Lucas and State of Ohio, have invented certain new and useful Improvements in Machines for Fire-Finishing Glass Articles, of which the following is a specification, reference being had therein to the accompanying drawings.

The invention consists in the construction of a machine for firing finished glass articles, and particularly one which comprises a support for the staff or shaft upon which the articles are held while they are being reheated or fire-finished, said support consisting of bearings arranged at two points in the length of the staff, one of the supports having actuating means for driving the staff.

The invention further consists in the construction, arrangement, and combination of the various parts, all as more fully herein-after described.

In the drawings, Figure 1 is a front elevation, partly in section, of our machine. Fig. 2 is a top plan view thereof. Fig. 3 is a perspective view of the upper part of the frame detached.

A is a frame of any suitable construction. At the top this frame is provided with the cross-bars B and C. These cross-bars are preferably vertically adjustable by any suitable means. We have shown this adjustment effected by the slots *a* in the standard *c* and the clamping-bolts *b* engaging in the slots and passing through the cross-bars. The cross-bar B is preferably provided with a series of notches D of size and shape to form a supporting shaft or staff for the article to be reheated. The cross-bar C is provided with rollers E and F, arranged in pairs in line with the notches D. These rollers have suitable actuating devices for rotating, preferably, one of each pair, so that the staff when laid thereon may be rotated by simply allowing its weight to rest on the rollers, and the rotation may be stopped by simply lifting it therefrom. The mechanism which we have shown for actuating one of each pair of rollers comprises a sprocket-chain G, engag-

ing sprocket-wheels H, formed on one of each of the pairs of rollers, as shown in Figs. 1 and 3, and over a suitable drive-wheel I on the drive-shaft J, supported in the frame of the machine. This drive-shaft is driven from any suitable source of power. We have shown it driven from a motor K, supported on the base of the frame with suitable drive connections and drive-pulleys to effect the result.

The staff L is formed of a tubular outer casing *d* and a sliding rod *e*, formed to turn therewith, but adapted to move endwise to open and close the clamping-jaws *h* for holding the article *i*, as plainly shown in Fig. 2. This construction may be varied at will and is no part of our invention.

The machine being supported in proximity to the furnace M, with the bearing for the staffs in line with the glory-holes N therein, the operator fitting the article into the support or clamp in the end of the staff rests it in one of the bearings D in the cross-bar B and then supports its inner end on one pair of rollers, which forms a support for such inner end. He is perfectly free then to move it in or out in relation to the furnace, and it will be rotated by the action of the driven roller F. The speed can be varied at the will of the operator by simply changing the force at which the staff bears upon the rollers.

What we claim as our invention is—

1. The combination of a frame, rollers journaled on the frame and constituting an anti-friction-support for a staff, a staff supported and engaged by said rollers, and means for positively rotating one of said rollers for the purpose of rotating said staff, substantially as described.

2. The combination of a frame, two cross-bars thereon, adjusting means for said bars, a support on one bar for a staff, a pair of adjacent rollers journaled on the other bar and constituting a second support for the staff, and means for positively rotating one of said rollers, substantially as described.

3. The combination of a frame, two cross-bars thereon, supports on one bar for staffs, a plurality of pairs of adjacent rollers journaled on the other bar and each pair consti-

tuting a second support for one staff, and a common means for rotating one roller of each pair, substantially as described

4. The combination of a frame, two cross-  
5 bars at the top thereof, each having a series of supports for staffs, a pair of adjacent rollers forming one support for each staff, means for rotating one of each pair of rollers and means for adjusting the cross-bars vertically.
- 10 5. The combination of a frame, rollers journaled on said frame and constituting an anti-friction-support for a staff, means for posi-

tively rotating one of said rollers for the purpose of rotating said staff, and a staff detachably supported by said roller-support and provided with means for supporting an article, substantially as described. 15

In testimony whereof we affix our signatures in presence of two witnesses.

MICHAEL J. OWENS.  
AMOS R. WILSON.

Witnesses:

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B. H. MILLER.