

(No Model.)

3 Sheets—Sheet 1.

A. P. BALDWIN & T. L. SEDGWICK.
MACHINE FOR STRAIGHTENING AND POLISHING METALLIC SHAFTING.
No. 378,063. Patented Feb. 14, 1888.

Fig. 1.

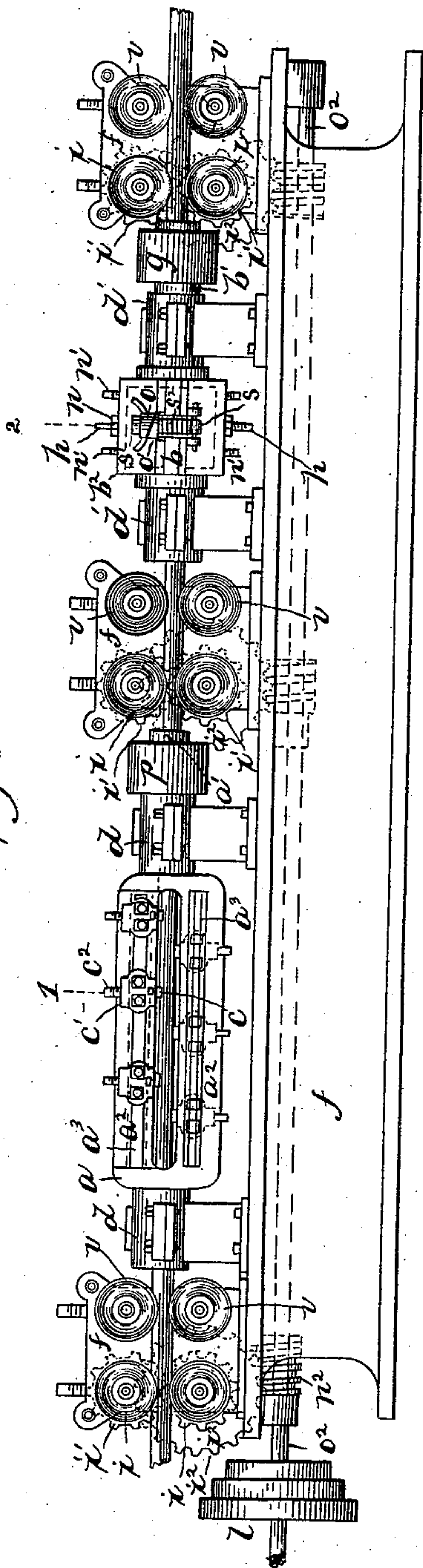
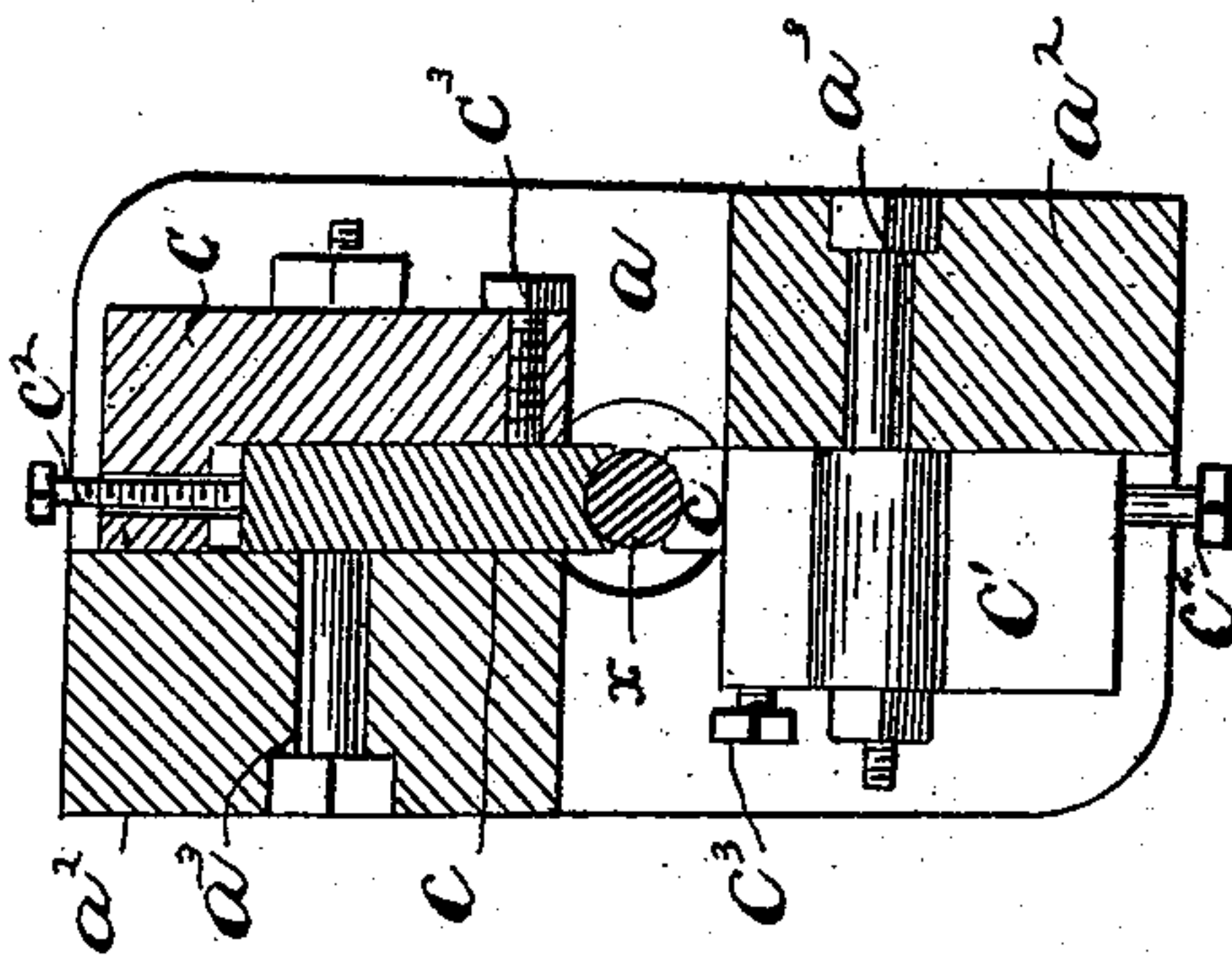


Fig. 4.



Witnesses.

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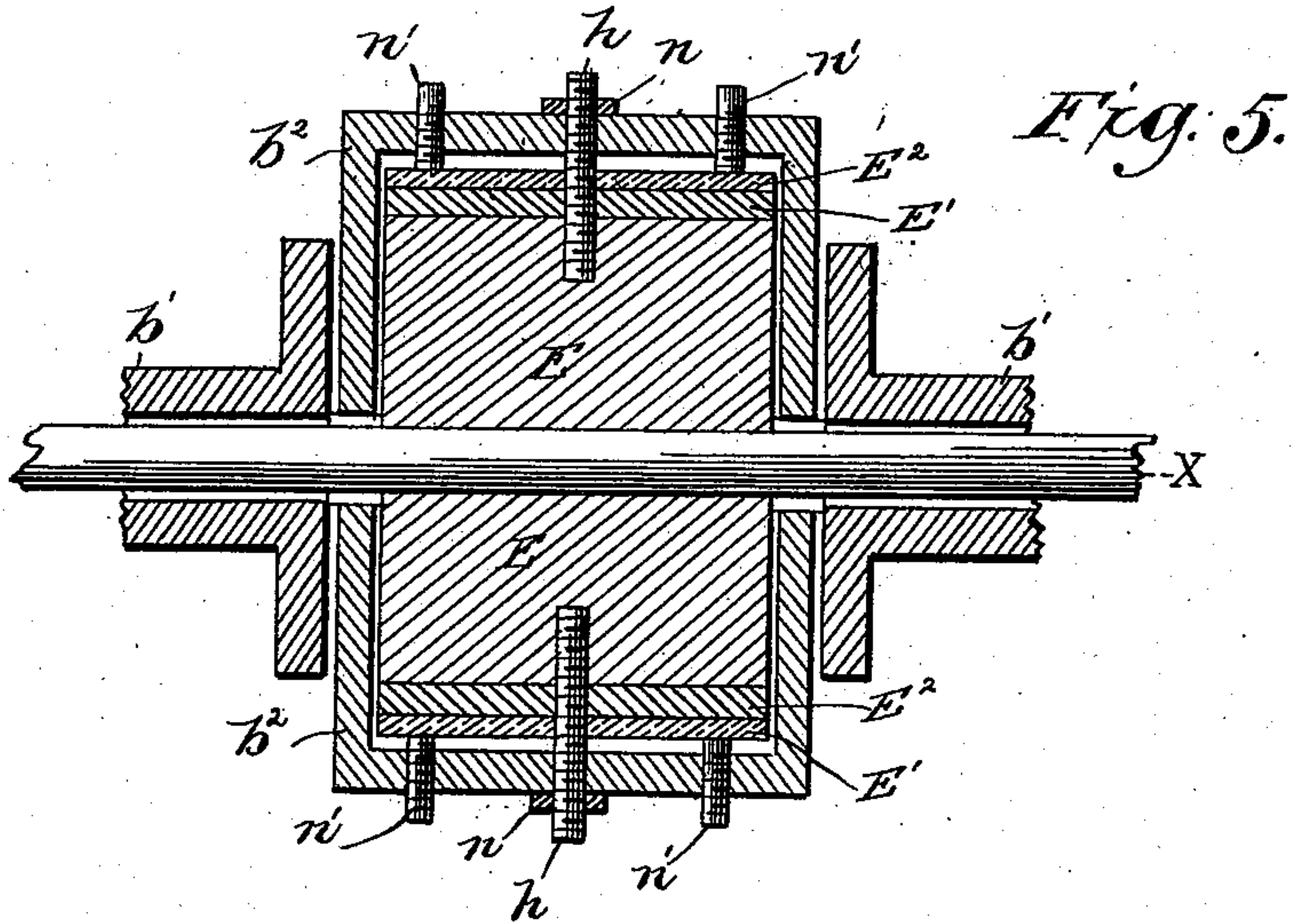


Fig. 6.

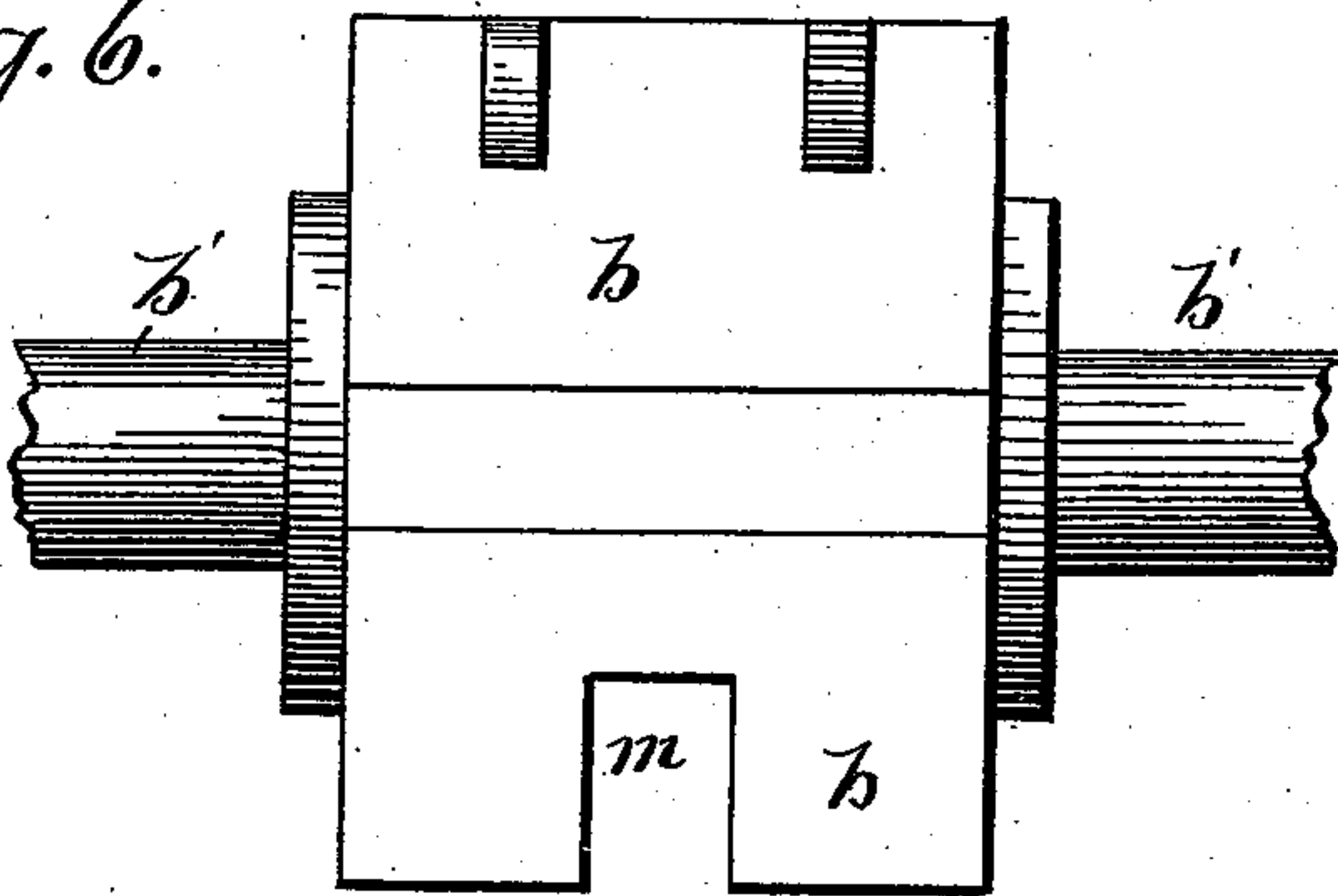
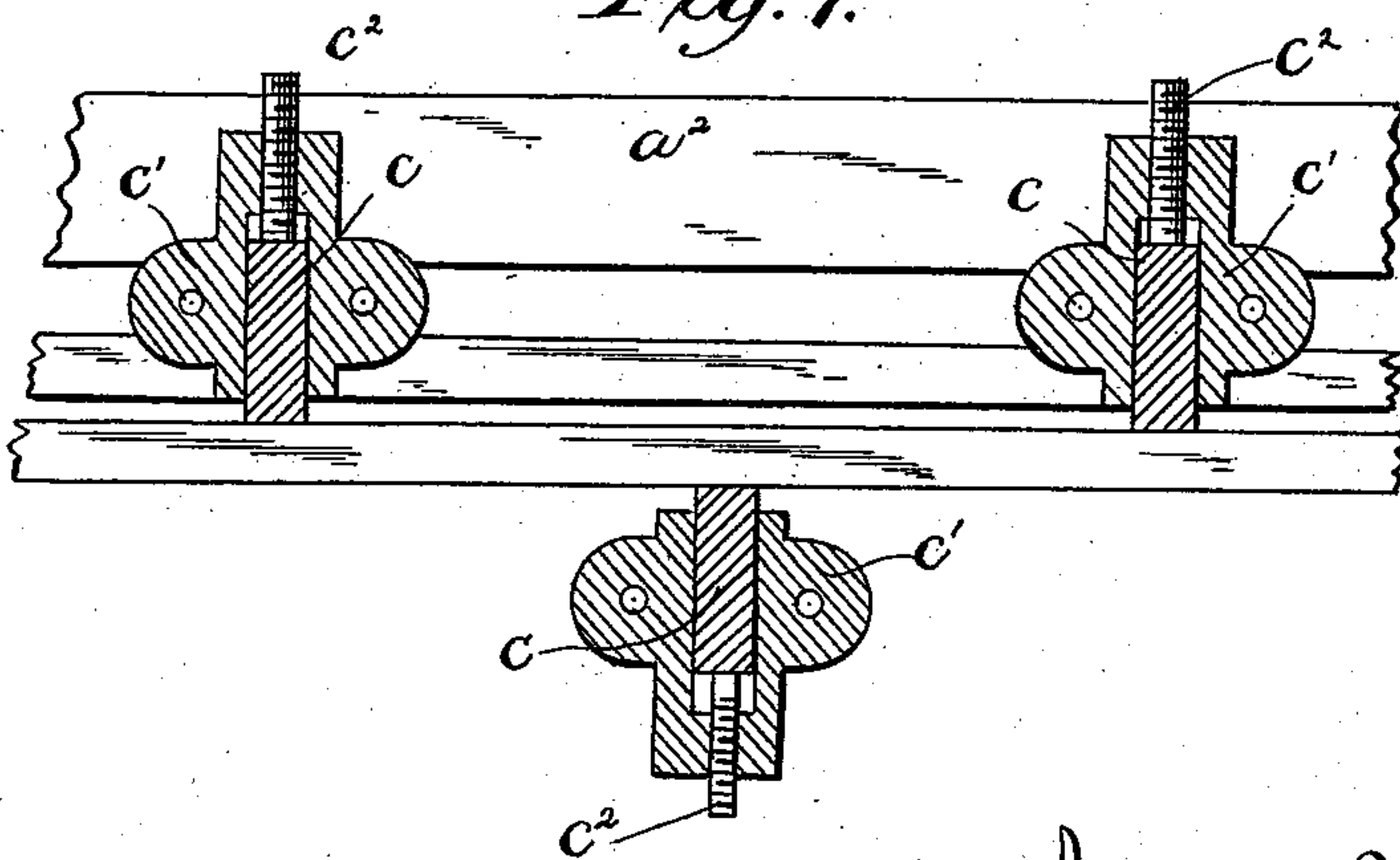


Fig. 7.



Witnesses

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UNITED STATES PATENT OFFICE.

AARON P. BALDWIN AND THOMAS L. SEDGWICK, OF AKRON, OHIO, ASSIGN-
ORS TO THE AKRON IRON COMPANY, OF SAME PLACE.

MACHINE FOR STRAIGHTENING AND POLISHING METALLIC SHAFTING.

SPECIFICATION forming part of Letters Patent No. 378,063, dated February 14, 1888.

Application filed September 16, 1886. Serial No. 213,744. (No model.)

To all whom it may concern:

Be it known that we, AARON P. BALDWIN and THOMAS L. SEDGWICK, citizens of the United States, residing at Akron, in the county of Summit and State of Ohio, have invented a new and useful Improvement in Machines for Straightening and Polishing Metallic Shafting, of which the following is a specification.

In the drawings forming a part hereof, Figure 1 is a side elevation of the machine. Figure 2 is a plan of the same. Figure 3 is a cross-section, on an enlarged scale, of the polisher at line 2 in Fig. 1; and Fig. 4 is a similar section of the straightener at line 1 in Fig. 1. Figure 5 is a longitudinal vertical section of the polisher. Figure 6 is a plan of the polisher with the hinged parts b^2 removed, and Figure 7 is a longitudinal vertical section of a part of the straightener through its axis.

The part of the machine which straightens the shafting, and which is termed a "flier," a , is formed with hollow journals a' a' , and is rotated by means of pulley p in bearings d d . It is provided with dies c , arranged in alternate order on opposite sides of the axis of the flier. They are adjustable between the side bars, a^2 , of flier a and holders c' by means of set-screws c^2 c^3 . Side bar, a^2 , is formed with a slot, a^3 , through which holders c' are adjustably bolted. Polisher b is formed with hollow journals b' b' , and is rotated in bearings d' d' by means of pulley g . It has hinged sides or parts b^2 , which contain the polishing-blocks E , rubber cushion E' , and a metal plate or follower, E^2 . We prefer to make blocks E of wood, with the grain parallel with the axis of the polisher, as their inner ends will absorb or take up emery that should be put from time to time on the shafting and acquire a good polishing-surface. They are adjustably held by nut n and screw-bolt h , which is inserted in their outer ends through follower E^2 and cushion E' and by set-screws n' n' against the follower. They are also to some extent self-adjustable by means of the elastic cushion E' . When the hinged parts b^2 are closed, the inner ends of blocks E are brought against the shaft which is to be polished. Parts b^2 are locked or held in position by means of the hinged pin s , formed with a head, s' , and provided with spring s^2 and

cams o o' . Polisher b and parts b^2 are formed with slots m m m for pin s to enter, and one of parts b^2 is formed with a recess, m' , in which cam o' rests when parts b^2 are locked in the position shown in Fig. 3, whereby pin s is prevented from becoming dislodged. When cam o is turned from said position a half-revolution, cam o' may be lifted from recess m' and pin s swung on its hinge out of slots m m m , and then parts b^2 may be opened to allow access to blocks E .

There are three sets of feed-rolls, i i , one set between flier a and polisher b and the other two at the ends of the machine. They are supported by frame f , and are rotated by means of toothed wheels i' i' , worm-wheels i^2 , worms n^2 , shaft o^2 , and pulley l . Guide-rolls v v are for the purpose of steadying shaft x and lessening its vibration while it is being operated on by flier a and polisher b . The shaft x is to be fed through flier a to polisher b , and is operated on by them simultaneously. The flier should be rotated at a much higher speed than the polisher and in an opposite direction from the rotation of the latter, for the purpose of lessening the tendency of the shaft x to turn or twist. The axis of polisher b is in line with a prolongation of the axis of flier a . When crooked unpolished shafting has been subjected to the operation of flier a or straightening device herein described, succeeded by that of polisher b , it becomes straight, true, and burnished.

We claim as our invention—

1. A machine for straightening and polishing metallic shafting, having a flier provided with straightening-dies arranged alternately on opposite sides of the said shafting and revolving around the same, and a polisher in axial line with said flier, and so arranged that the shafting to be operated on will pass from the flier or straightening device to the polisher, substantially as described.

2. A machine for straightening and polishing metallic shafting, having a flier provided with straightening-dies arranged alternately on opposite sides of said shafting and revolving around the same, and a polisher arranged in axial line with said flier, and each having rotation in the opposite direction from the other, substantially as described.

3. The flier *a* and polisher *b*, in combination at each end of the machine with feed-rolls *i i*, wheels *i' i'*, worm-wheel *i²*, and worm *n²*, and with shaft *o²*, pulley *l*, and a suitable frame, *f*, substantially as described.

4. The flier *a*, having side bars, *a²*, formed with slots *a³*, and provided with dies *c*, set-screws *c² c³*, and holders *c'*, bolted to bars *a²* through said slot, and pulley *p*, substantially as described.

5. The polisher *b*, having hinged sides *b² b²*, formed to contain blocks *E E*, slots *m m m*, recess *m'*, hinged pin *s*, having head *s'*, and provided with spring *s²* and cams *o o'*, substantially as described.

6. The polisher *b*, containing, and in combination with, blocks *E*, rubber cushions *E'*, and follower *E²*, and set-screws *n'*, substantially as described.

7. The polisher *b*, containing, and in combination with, blocks *E*, rubber cushions *E'*, follower *E²*, set-screws *n'*, screw-bolt *h*, and nut *n*, substantially as described.

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Witnesses:

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