

(No Model.)

W. GORDON.

SOLE OR HEEL EDGE BURNISHING MACHINE.

No. 352,866.

Patented Nov. 16, 1886.

Fig: 1.

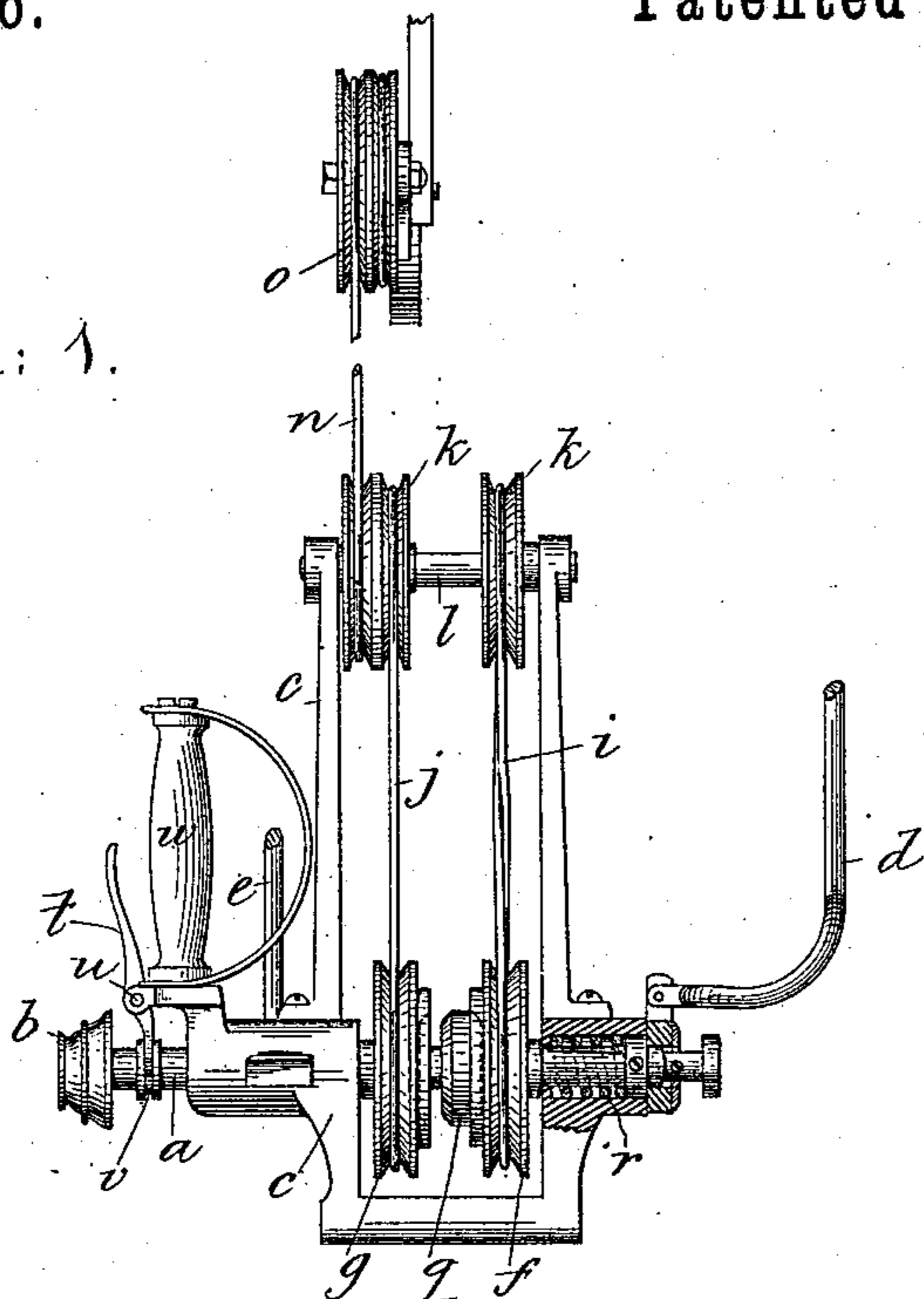


Fig: 3.

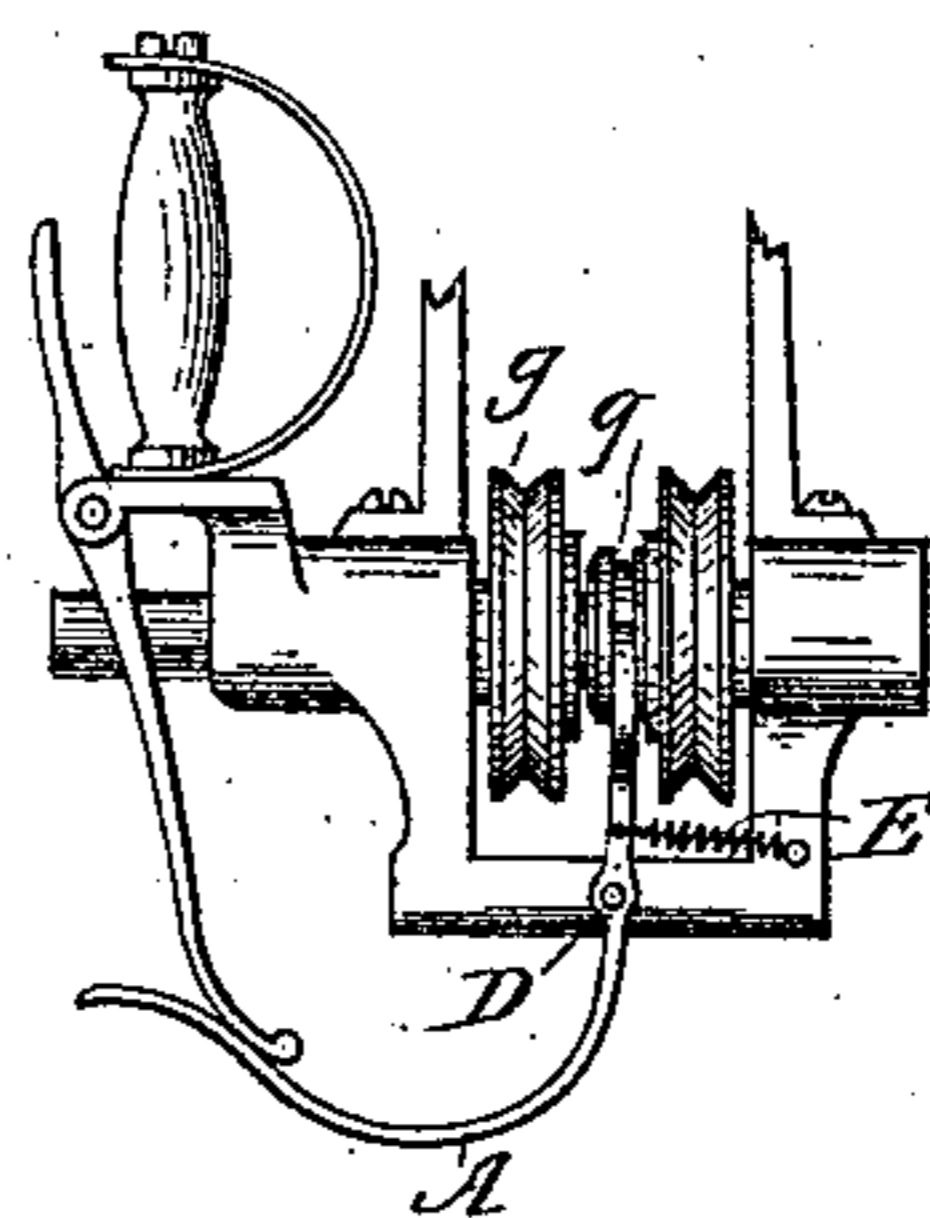
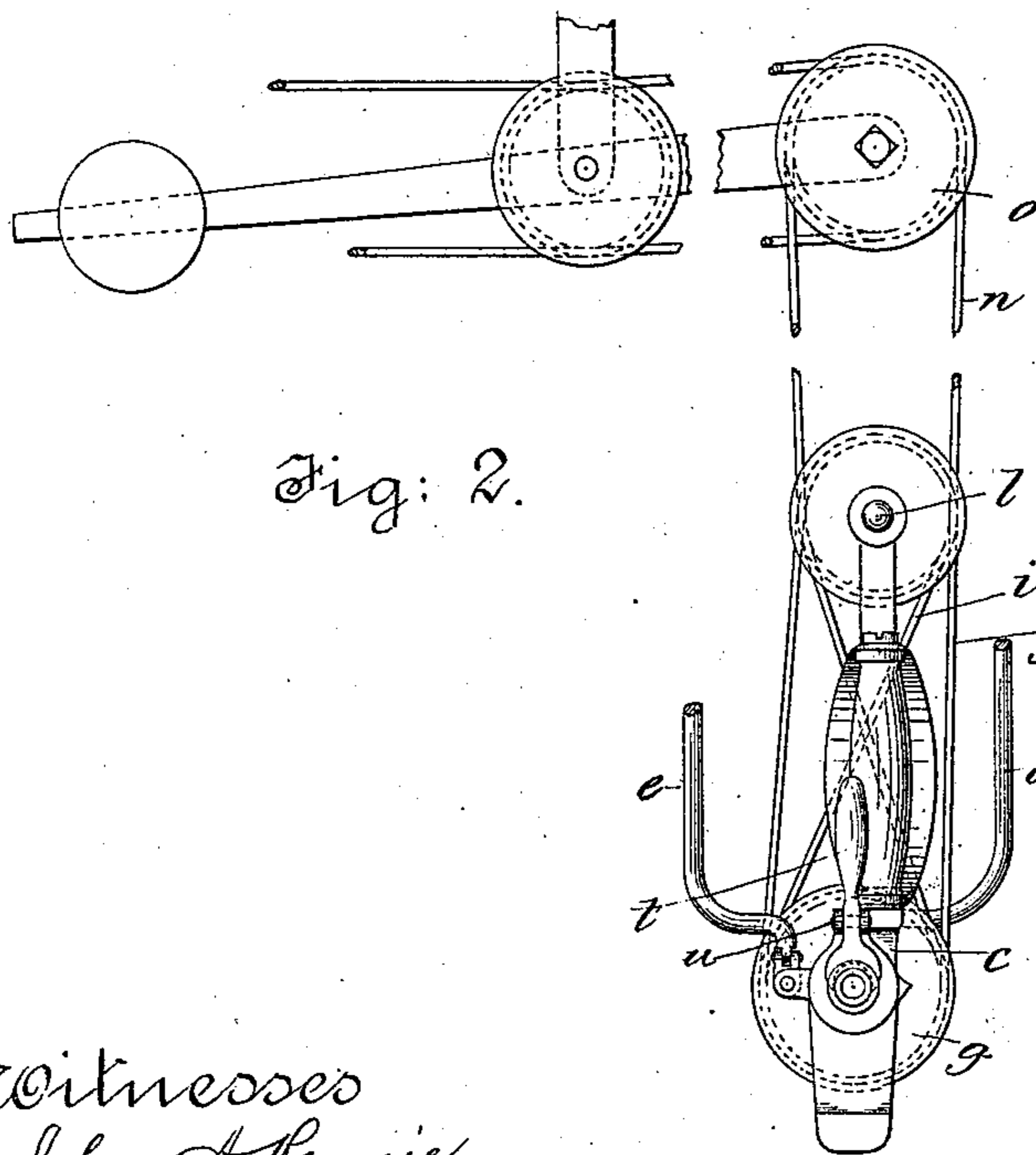


Fig: 2.



Witnesses
John A. Rennie,
A. J. Harrison.

Inventor,
W. Gordon
Per
Wm. B. Crossley
his Atty.

UNITED STATES PATENT OFFICE.

WILLIAM GORDON, OF BOSTON, MASS., ASSIGNOR OF ONE-HALF TO ARTHUR FULLER, OF SAME PLACE, AND EDWARD C. JUDD, OF LYNN, MASS.

SOLE OR HEEL EDGE BURNISHING MACHINE.

SPECIFICATION forming part of Letters Patent No. 352,866, dated November 16, 1886.

Application filed March 20, 1886. Serial No. 195,928. (No model.)

To all whom it may concern:

Be it known that I, WILLIAM GORDON, of Boston, in the county of Suffolk and State of Massachusetts, have invented certain new and useful Improvements in Sole or Heel Edge Burnishing Machines, of which the following is a specification.

This invention relates to that class of machines for burnishing the edges of boot and shoe soles and heels, in which a rotary burnishing-tool is employed; and it has for its object to provide improved means for operating said tool, so that it can be rotated in either direction at the will of the operator.

To these ends my invention consists in the improved mechanism which I will now proceed to describe and claim.

Of the accompanying drawings, forming a part of this specification, Figure 1 represents a side elevation, and Fig. 2 a front elevation, of a burnishing-machine embodying my invention.

The same letters of reference indicate the same parts in both the figures.

In the drawings, *a* represents a shaft which holds and rotates a burnishing-tool, *b*, said tool being engaged with the shaft in any suitable manner, preferably by frictional contact of the shank of the tool with the walls of a socket in the shaft in which said shank is inserted.

The shaft *a* is journaled in bearings which are in this instance supported by a pendulous frame, *c*, adapted to swing freely in any direction, and supported by rods *d e*, jointed thereto and suitably secured to a support overhead. The means for supporting the shaft and the burnishing-tool form no part of my present invention, and therefore need not be particularly described.

f g represent two pulleys mounted to rotate loosely on the shaft *a*. Said pulleys are rotated in opposite directions, the pulley *f* being rotated by a crossed belt, *i*, and the pulley *g* by a straight belt, *j*, said belts being driven by pulleys *k k*, attached to a shaft, *l*, journaled in the frame *c*. The shaft *l* is rotated by a belt, *n*, running on driving-pulley *o*.

To the shaft *a*, between the loose pulleys *f g*, is affixed a clutch, *q*, formed to co-operate with the adjacent sides of said loose pulleys

in locking one or the other of said pulleys to the shaft *a*. Said shaft is longitudinally movable, so that the clutch *q* may be engaged with either of the loose pulleys, and is normally held by a spring, *r*, in the position shown in Fig. 1, the clutch *q* being thereby normally engaged with the pulley *f*, so that the shaft is normally rotated by said pulley.

When it is desirable to reverse the rotation of the shaft and burnishing-tool, the shaft is moved endwise against the pressure of the spring *r* until the clutch *q* is engaged with the pulley *g*. This movement of the shaft may be effected by any suitable means. I have here shown a lever, *t*, pivoted at *u* to the supporting-frame *c*, and engaged at one end with a groove, *v*, between two collars on the shaft *a*. The other end of said lever stands in such proximity to the operating-handle *w* that the operator can use the hand that grasps said handle in moving the lever *t* in the direction required to move the shaft *a* from its normal position.

It will be seen that by the described devices the operator can conveniently cause the tool to rotate in either direction, so that after the tool rotating in one direction has passed over the edge to be burnished its rotation may be reversed and the edge again subjected to the action of the tool.

In Fig. 3 I have shown a modification in which the shaft *a* is not movable endwise, the clutch *q* only being movable to reverse the direction of rotation of the shaft. In this modification the clutch is engaged with the shaft by a groove and feather, or otherwise, so that while it is free to move laterally on the shaft it must necessarily rotate therewith. The clutch is engaged by the slotted end of a lever, *A*, receiving a peripheral projection, *B*, on the clutch. Said lever is pivoted at *D* to the frame *c*, and is held by a spring, *E*, in the position shown in Fig. 3, the clutch being thus held in engagement with the pulley *f*. The lever *A* is extended outwardly, so that it may be operated to move the clutch *q* into engagement with the pulley *g*.

I claim—

1. In a sole or heel edge burnishing machine, the combination of a rotary tool-holding shaft, two loose pulleys thereon driven in

opposite directions, and a clutch engaged with said shaft, as described, and movable between said pulleys, so that it may be engaged with either pulley, and means, substantially as described, whereby said clutch may be moved from one pulley to the other, as set forth.

2. In a sole or heel edge burnishing machine, the combination of a rotary longitudinally-movable tool-holding shaft, two loose pulleys thereon driven in opposite directions, a clutch rigidly affixed to the shaft between said pulleys, a spring whereby the shaft is normally held in position to engage said clutch

with one of said pulleys, and means, substantially as described, for moving said shaft against the pressure of its spring to engage the clutch with the other loose pulley, as set forth.

In testimony whereof I have signed my name to this specification, in the presence of two subscribing witnesses, this 17th day of March, 1886.

WILLIAM GORDON.

Witnesses:

C. F. BROWN,

N. H. BROWN.