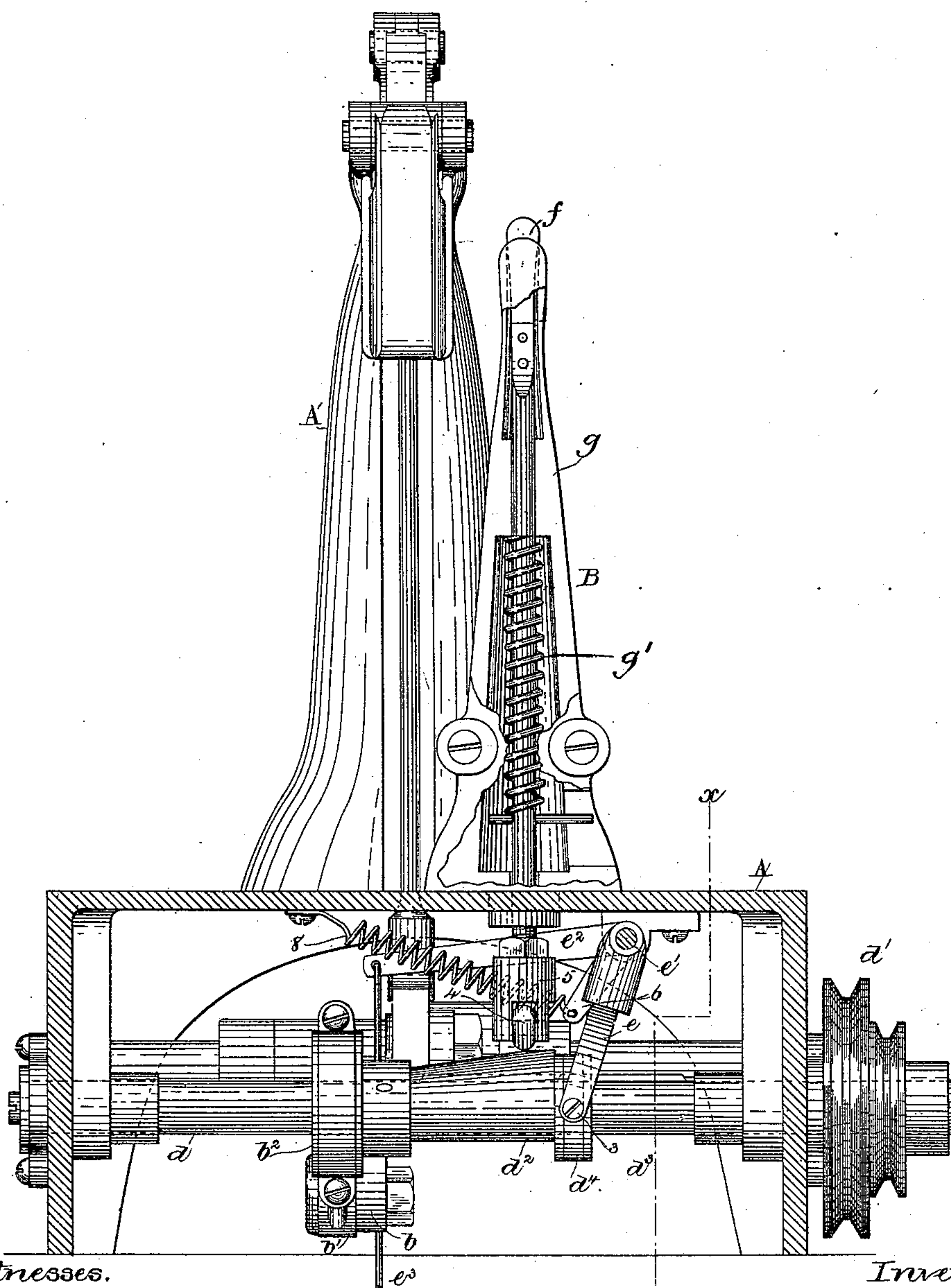


2 Sheets—Sheet 1.

No. 433,916.

Patented Aug. 5, 1890.

Fig:1.



Witnesses.

Fred. S. Grubb of
Frederick. Emery-

Inventor:

Frank D. Walden,
by Henry & Gregory
Allis.

(No Model.)

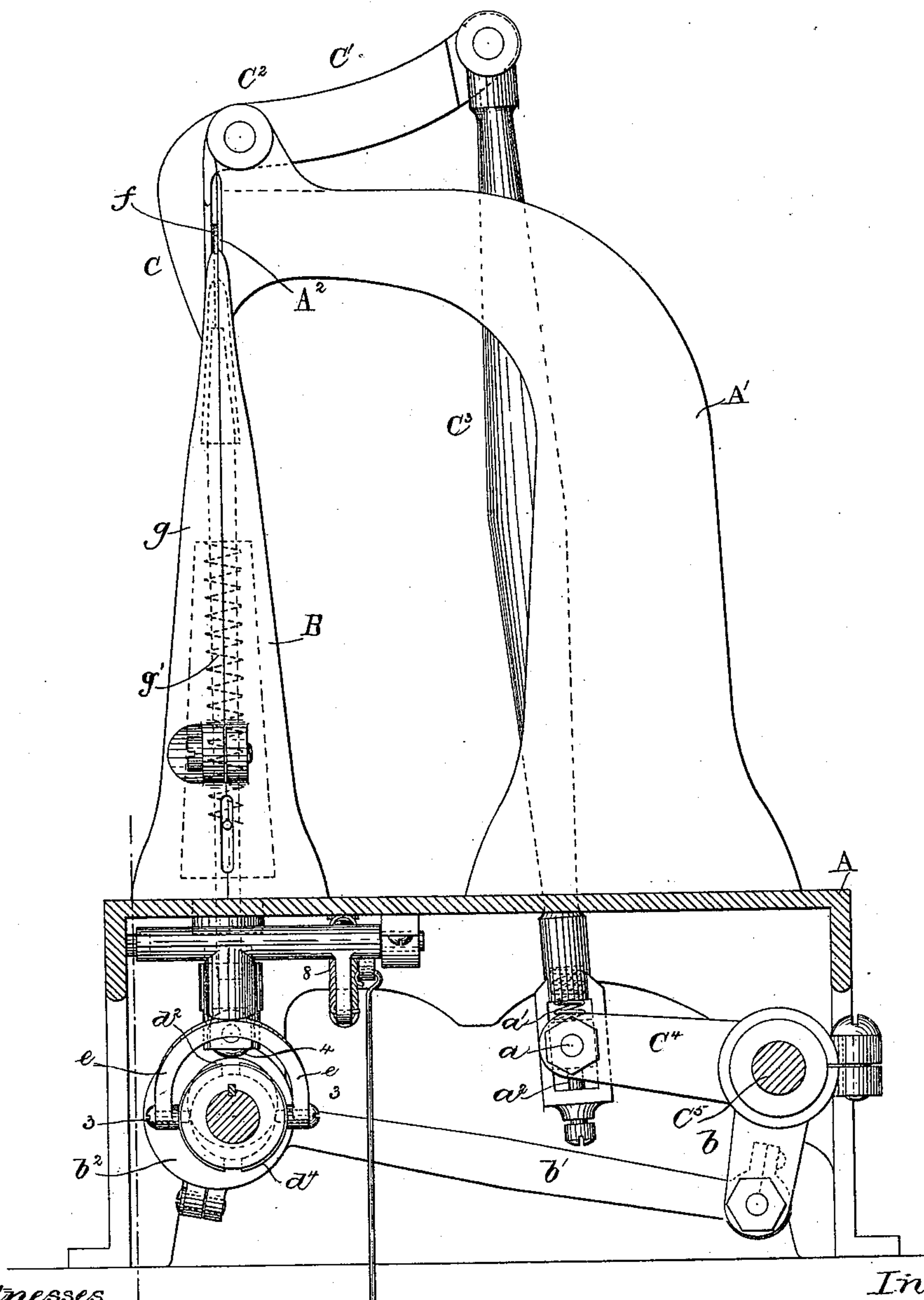
2 Sheets—Sheet 2.

F. D. WALDEN.
SHOE UPPER TURNING MACHINE.

No. 433,916.

Patented Aug. 5, 1890.

Fig. 2.



Witnesses.
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UNITED STATES PATENT OFFICE.

FRANK D. WALDEN, OF JEFFERSONVILLE, INDIANA, ASSIGNOR TO FRED. A. WATSON, OF CHICAGO, ILLINOIS.

SHOE-UPPER-TURNING MACHINE.

SPECIFICATION forming part of Letters Patent No. 433,916, dated August 5, 1890.

Application filed May 4, 1889. Serial No. 309,642. (No model.)

To all whom it may concern:

Be it known that I, FRANK D. WALDEN, of Jeffersonville, county of Clarke, State of Indiana, have invented an Improvement in Shoe-Upper-Turning Machines, of which the following description, in connection with the accompanying drawings, is a specification, like letters and figures on the drawings representing like parts.

This invention has for its object to improve the machine shown in United States Patent No. 380,959, granted to me April 10, 1888.

In the machine described in the patent referred to the reciprocating finger, co-operating with the standard, is adapted to be reciprocated by a cam, the latter acting upon a roller-stud, the extent of movement given to the finger by the cam being controllable through a lever under the control of a foot-treadle, the said cam, when moving the finger for any distance less than the maximum stroke of the cam, acting intermittingly on the said roll or meeting it with a blow. With the cam shown in the said patent it is not possible to reciprocate the finger uniformly or certainly, for the foot of the operator, through a treadle and lever, is depended upon to lift the finger and place the roll carried by it near to or farther from the center of the cam, so that more or less of the cam will in its rotation act on the roll, and after the portion of the cam to give to the finger a certain length of stroke has acted the finger is held up by the said lever, it being held at a variable height by the foot of the operator. To enable the roll at the lower end of the finger to ride at all times on the cam which actuates it, and thus enable the cam to move the finger uniformly and positively for a greater or less stroke during each rotation thereof, I have provided the machine with a tapering sleeve-like cam, which is made movable longitudinally on a rotating shaft at the lower end of the said tongue, the said cam being under the control of a lever or treadle. So, also, in the machine described in the said patent the presser-plate was not so actuated as to be capable of yielding to varying thicknesses of material.

This invention consists, essentially, in the

combination, with a standard and finger loosely contained in or guided thereby, of a rotating cam to positively actuate the said finger, and with means to move the said cam longitudinally to impart to the said finger a positive movement for a greater or less distance, as will be described; also, in the combination, with a standard and finger, and means to reciprocate the latter in the standard, of a presser-plate and connections to actuate the same in a yielding manner, as will be described.

Figure 1, in front elevation, represents a machine embodying my improvements; and Fig. 2 is an elevation of the machine shown in Fig. 1 to the left of the dotted line *x*, the standard being partially broken out in both figures.

The bed-plate A has erected upon it an upright A' and a standard or horn B. The upright has at its upper end a jaw A², opposite to which is a movable jaw or presser C, forming, as shown, part of a lever C', pivoted at C², and actuated by a link C³ and an arm C⁴ of a rock-shaft C⁵. The arm C⁴ has a stud *a*, which acts against a spiral or other spring *a'*, so that as the arm C⁴ is lifted to close the jaws on the material surrounding the finger to be described the pin, by acting on the spring, enables the jaws to be closed with a self adapting or yielding pressure. The jaws are opened positively by the pin *a* striking the adjusting-screw *a'*, the adjustment of the screw determining the extent of the opening movement of the jaws.

The rock-shaft C⁵ has an arm *b*, which is actuated by an eccentric-strap link *b'*, surrounding an eccentric *b'* on the main shaft *d*, mounted in suitable bearings of the bed-plate, the said shaft having a suitable belt or other pulley *d'*, by or through which the said shaft is rotated. The shaft *d* has splined upon it a tapering sleeve-cam *d'*, provided, as herein shown, with a collar *d'*, having an annular groove, on which is placed loosely a shoe *d'*, which, by screws or pins 3, is engaged by a yoke *e*, connected to a rock-shaft *e'*, having an arm *e'*, to the end of which is joined a rod *e'*, in practice attached to a treadle or other lever on the floor below the bench or table on which the machine stands. With

his foot on the treadle the operator may move the cam d^2 longitudinally on the rotating shaft d to place a part thereof of greater or less diameter under the roller 4 of a block 5, 5 attached to the lower end of the reciprocating rod or finger f , located in the standard or horn. The finger f is acted upon by a spiral or other spring g' , which normally keeps the roller 4 against the cam, and the finger is 10 therefore reciprocated or moved uniformly or without shock in the said horn by the cam d^2 , and for a varying distance, according as the scallop varies in size, by changing the position of the said cam. The rock-shaft has 15 a third arm, as 6, which has a spring 8, connected to it to normally turn the rock-shaft in the direction to keep the largest part of the cam under the roller 4. By the cam the finger may be made to project more or less 20 above the horn during a part of each rotation of the cam.

I claim—

1. In a machine for turning shoe-uppers,

the post and the finger, combined with the shaft d , and the tapering cam to actuate the 25 same positively and without shock, and with means to move the said cam longitudinally on the said shaft, substantially as described.

2. In a machine for turning shoe-uppers, the post, the reciprocating finger, the jaw A^2 , 30 and the movable jaw C, the arm C^4 and means to move it, combined with a spring, and a link interposed directly between the said arm and the said movable jaw, the said spring being compressed as the jaw is closed on the 35 material, thereby enabling the jaw to adapt itself to varying thickness of material, substantially as described.

In testimony whereof I have signed my name to this specification in the presence of 40 two subscribing witnesses.

FRANK D. WALDEN.

Witnesses:

ANTON JULIEN,
CHAS. E. CHANDLER.