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PATENTED DEC. 8, 1903.

E. E. WINKLEY.

ADJUSTING DEVICE FOR FORMS OF SOLE PRESSING MACHINES.

APPLICATION FILED JUNE 23, 1898.

NO MODEL.

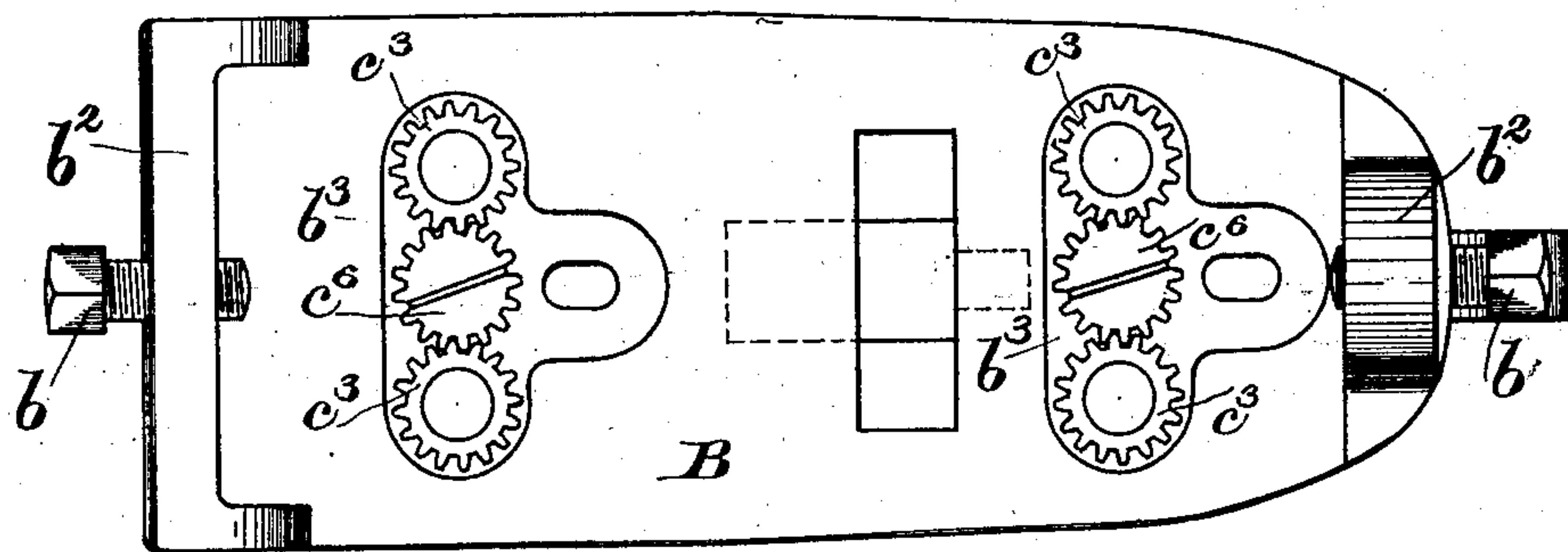


FIG. 1.

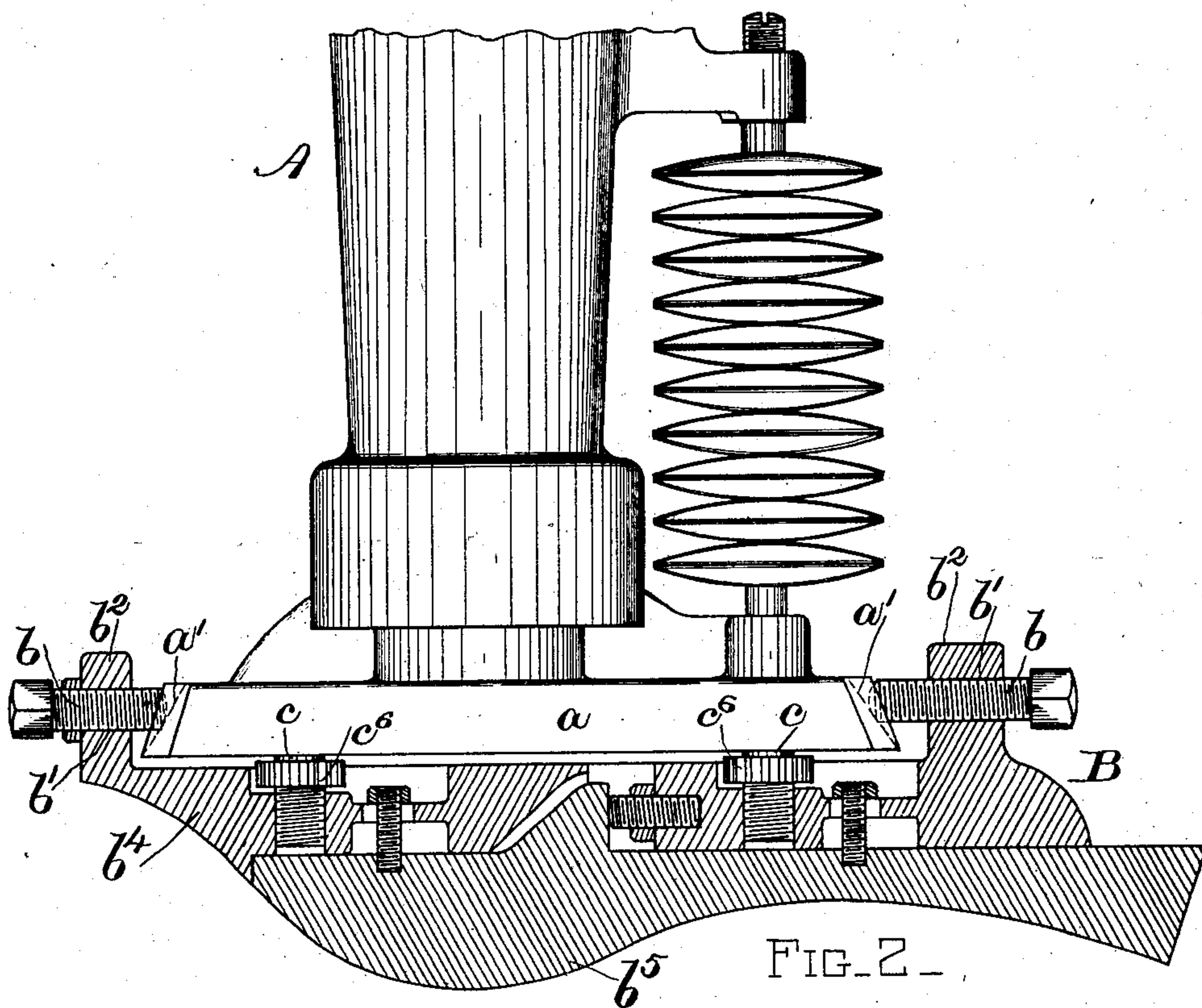


FIG. 2.

WITNESSES.

C. Ritching,
C. E. Lytle.

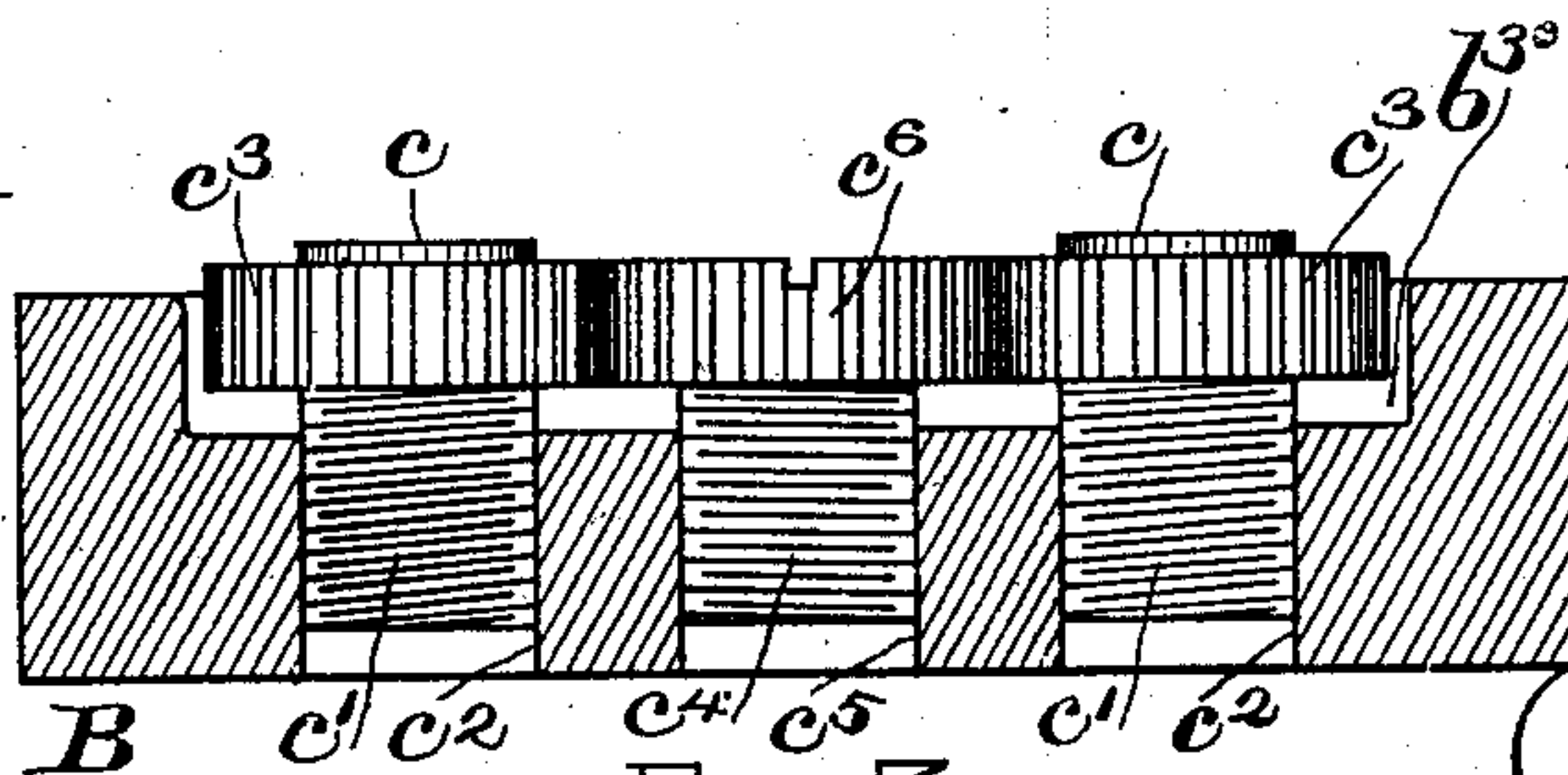


FIG. 3.

INVENTOR.

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UNITED STATES PATENT OFFICE.

ERASTUS E. WINKLEY, OF LYNN, MASSACHUSETTS, ASSIGNOR, BY MESNE ASSIGNMENTS, TO THE TRIPP GIANT LEVELER COMPANY, OF LYNN, MASSACHUSETTS, AND PORTLAND, MAINE, A CORPORATION OF MAINE.

ADJUSTING DEVICE FOR FORMS OF SOLE-PRESSING MACHINES.

SPECIFICATION forming part of Letters Patent No. 746,224, dated December 8, 1903.

Application filed June 23, 1898. Serial No. 684,260. (No model.)

To all whom it may concern:

Be it known that I, ERASTUS E. WINKLEY, a citizen of the United States, residing at Lynn, in the county of Essex and State of Massachusetts, have invented certain new and useful Improvements in Adjusting Devices for Forms of Sole-Pressing Machines; and I do hereby declare the following to be a full, clear, and exact description of the invention, such as will enable others skilled in the art to which it appertains to make and use the same.

The present invention relates to forming and shaping machines, and more particularly to an improved sole-pressing machine designed to beat out, conform, and set a shoe-sole to the desired shape required in the finished shoe. In these machines the shoe-sole is compressed between an iron last or form upon which the shoe is placed which acts upon the interior surface of the bottom of the shoe and an iron form which acts upon the outer surface of the sole. This iron form which acts upon the outer surface of the shoe-sole is of a suitable shape to conform to the contour of the bottom of the last or form upon which the shoe is mounted and impart to the shoe-sole the desired lateral and longitudinal curvatures. It is often necessary to adjust the sole-pressing-form upon its carriage so that its pressing-surface will be drawn farther away from the surface of the last or form carrying the shoe or to more closely approximate such last or form, and also it is absolutely essential for the purpose of securing good results that the pressing form shall be securely supported upon each side of its longitudinal medial line in order to prevent a side-wise or lateral displacement of the form during the operation of pressing the shoe-sole.

The object of the present invention, therefore, is to produce a sole-pressing form which shall be capable of the adjustment before stated and to provide such form with complementary stops or abutments upon each side of its longitudinal medial line and provide for a simultaneous and equal adjustment of said stops or abutments, whereby the stops or abutments upon both sides of the longitudinal medial line will be of the same height and insure the form against any lateral

or sidewise tipping movement during the operation of the machine.

To the above end the present invention consists of the devices and combinations of devices which will be hereinafter described, and pointed out in the claims.

The present invention is illustrated in the accompanying drawings, in which—

Figure 1 shows a top plan view of the form removed from its carrier. Fig. 2 represents a portion of the form-carrier with the form secured thereto, the form being shown in longitudinal vertical section. Fig. 3 represents a transverse vertical section through the form, taken at a point which will show the construction and operation of the adjustable stops or abutments.

Similar letters of reference will be used to designate corresponding parts throughout the specification and drawings.

In the drawings the invention is shown as applied to a form of that type of sole-pressing machines which is disclosed in Letters Patent of the United States, issued to S. D. Tripp April 8, 1884, No. 296,406, in which the sole-shaping action is produced by a rolling pressing movement, the last or form which carries the shoe and the sole-pressing form being mounted upon swinging pivoted carriers, which by suitable mechanism are simultaneously rocked, so that the shoe-sole will be pressed and shaped by a rolling action which progresses along the shoe-sole in a longitudinal direction.

In the drawings, A represents the lower portion of the pivoted carrier which supports the sole-pressing form, and B represents the pressing-form, the said pressing-form being secured to the foot *a* of the carrier A by suitable set-screws *b*, which engage inclined notches *a'* in the opposite ends of the foot *a*, the said screws being tapped into threaded bearings *b'* in suitable upward projections *b²*, formed on the back of the form B. The under face of the foot *a* is a plain surface, and in order to support the form B while in operation and against the great pressure under which these machines are operated I have provided the form B with suitable stops or abutments *c*, which, as clearly shown in the drawings, are arranged in pairs

at opposite ends of the form B and upon the opposite sides of the longitudinal medial line. In the illustrated embodiment of the present invention there are shown four of the stops 5 or abutments c ; but it is obvious that any suitable number may be employed.

It is, as hereinbefore stated, absolutely essential in order to secure good results that the stops or abutments c upon opposite sides 10 of the longitudinal medial line be adjusted to project the same distance beyond the upper or rear face of the form B, and I secure this result by connecting each pair of the stops or abutments for a simultaneous adjustment. 15 In the illustrated embodiment of the present invention the stops or abutments c are carried upon the upper ends of threaded studs c' , which are tapped into threaded bearings c^2 , formed in the rear face of the form B, and 20 each of the studs c' carries a pinion c^3 , which may be formed integrally therewith or fixedly secured thereto, or, if preferred, the stop or abutment c , pinion c^3 , and studs c' may be formed integrally. For the purpose of simul- 25 taneously raising and lowering the stops or abutments in each pair I have provided a threaded stud c^4 , fitted into a threaded bearing c^5 , formed intermediate the bearings c^2 , and the stud c^4 is provided with a pinion c^6 , 30 which meshes with the pinions c^3 . The screw-thread of the stud c^4 is formed in an opposite direction to the threads of the studs c' , as clearly shown in Fig. 3 of the drawings.

The pinion c^5 may be provided with any 35 suitable means whereby it may be turned, and thereby turn the pinions c^3 , and, as shown in the drawings, the pinion c^6 for this purpose is provided with a diametrical slot which may be engaged by the ordinary screw-driver for 40 the purpose of turning said pinion. The back of the form is cut out or recessed at each end, as shown at b^3 , for the purpose of accommodating the pinions c^3 and c^6 .

From the foregoing description of the con- 45 struction of the illustrated embodiment of the present invention it will be clear that the rotation of the pinion c^6 will impart a simultaneous rotation to the pinions c^3 and that therefore if the threads of the studs c' are of 50 equal and uniform pitch the stops or abutments c will be raised or lowered simultane-

ously equal distances and that the form will be rigidly and accurately supported upon the foot a and a lateral tipping thereof positively prevented. By providing the stud c^4 with a 55 thread equal in pitch but opposite in direction to those on the studs c' the gear c^6 is caused to rise and fall in unison with the gears c^3 , and thus to remain always in full engagement therewith. If desired, the form B may 60 be made in two parts, as shown—the rear part b^4 and the removable face part b^5 —in which event the adjustable stops or abutments c will be provided in the rear part b^4 . It is of course obvious and clearly within the scope of the 65 present invention that instead of providing the adjustable stops or abutments c on the form B that the rear face of such form may be a plain face and the stops or abutments c secured to the foot a on the carrier A and ar- 70 ranged to bear against the plain face of the form B.

Having described the construction, organization, and mode of operation of the present invention, I claim as new and desire to secure 75 by Letters Patent of the United States—

1. The combination with a form-carrier of a removable form secured thereto, a plurality of stops or abutments screw-threaded into one of said members and engaging the other, 80 a gear secured to each stop or abutment, an adjusting-gear engaging said gears, and a screw-threaded stem to which the adjusting-gear is fixed, substantially as described.

2. The combination, with a form-carrier, of 85 a removable form secured thereto, a plurality of stops or abutments screw-threaded into one of said members and engaging the other, a gear secured to each stop or abutment, an adjusting-gear engaging said gears, and a 90 stem to which the adjusting-gear is fixed, the said stem being screw-threaded into one of the two first-mentioned members with a thread equal in pitch but opposite in direction to those on the said stops or abutments, sub- 95 stantially as described.

In testimony whereof I affix my signature in presence of two witnesses.

ERASTUS E. WINKLEY.

Witnesses:

T. HART ANDERSON,
HORACE VAN EVEREN.