

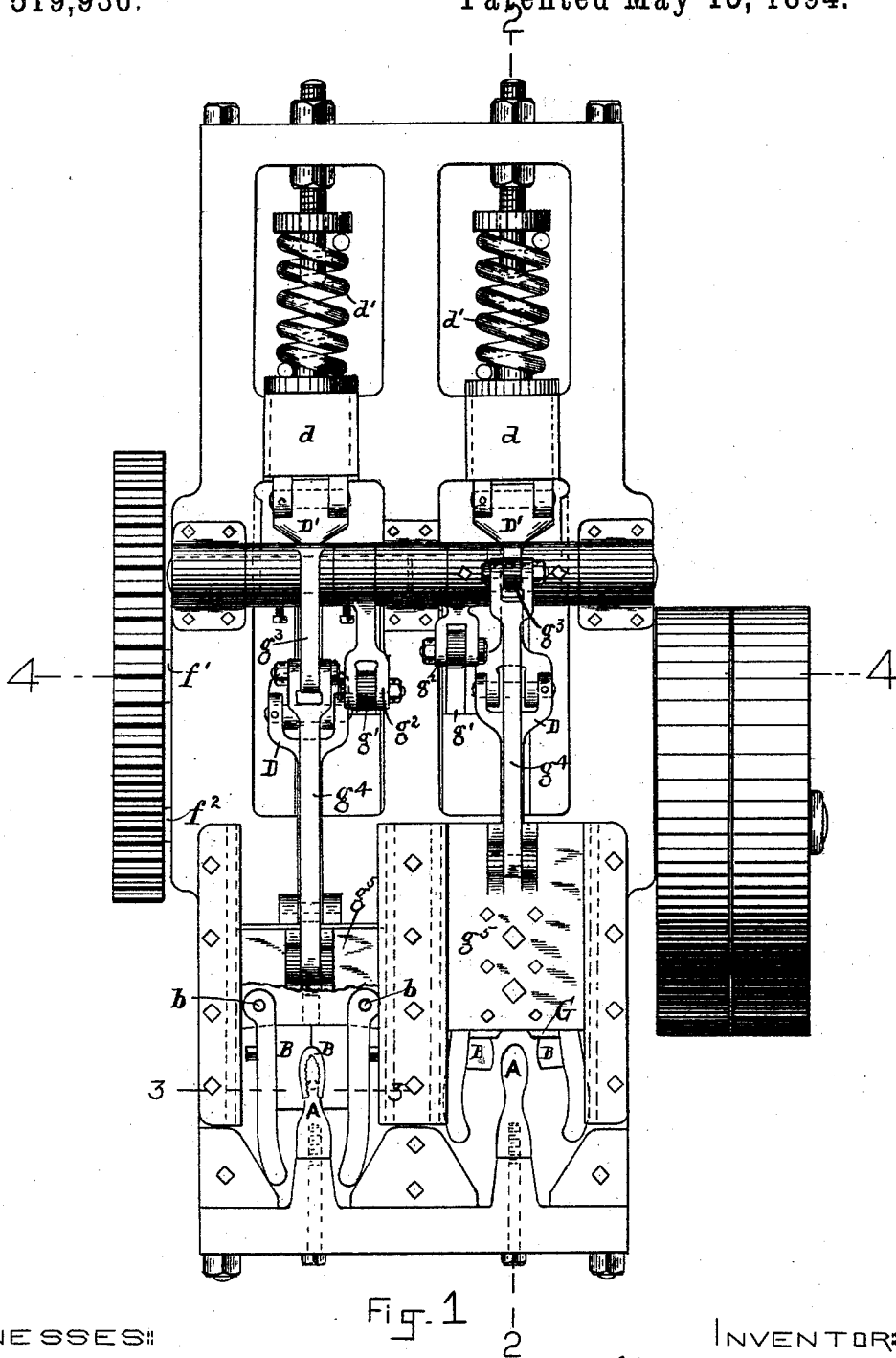
(No Model.)

3 Sheets—Sheet 1.

W. J. YOUNG.
HEEL STIFFENER MACHINE.

No. 519,936.

Patented May 15, 1894.



WITNESSES:

John P. Snow.
H. E. Remick & Co.

Fig. 1

2

INVENTOR:

William J. Young
by his attorneys,
Mayer & Berch.

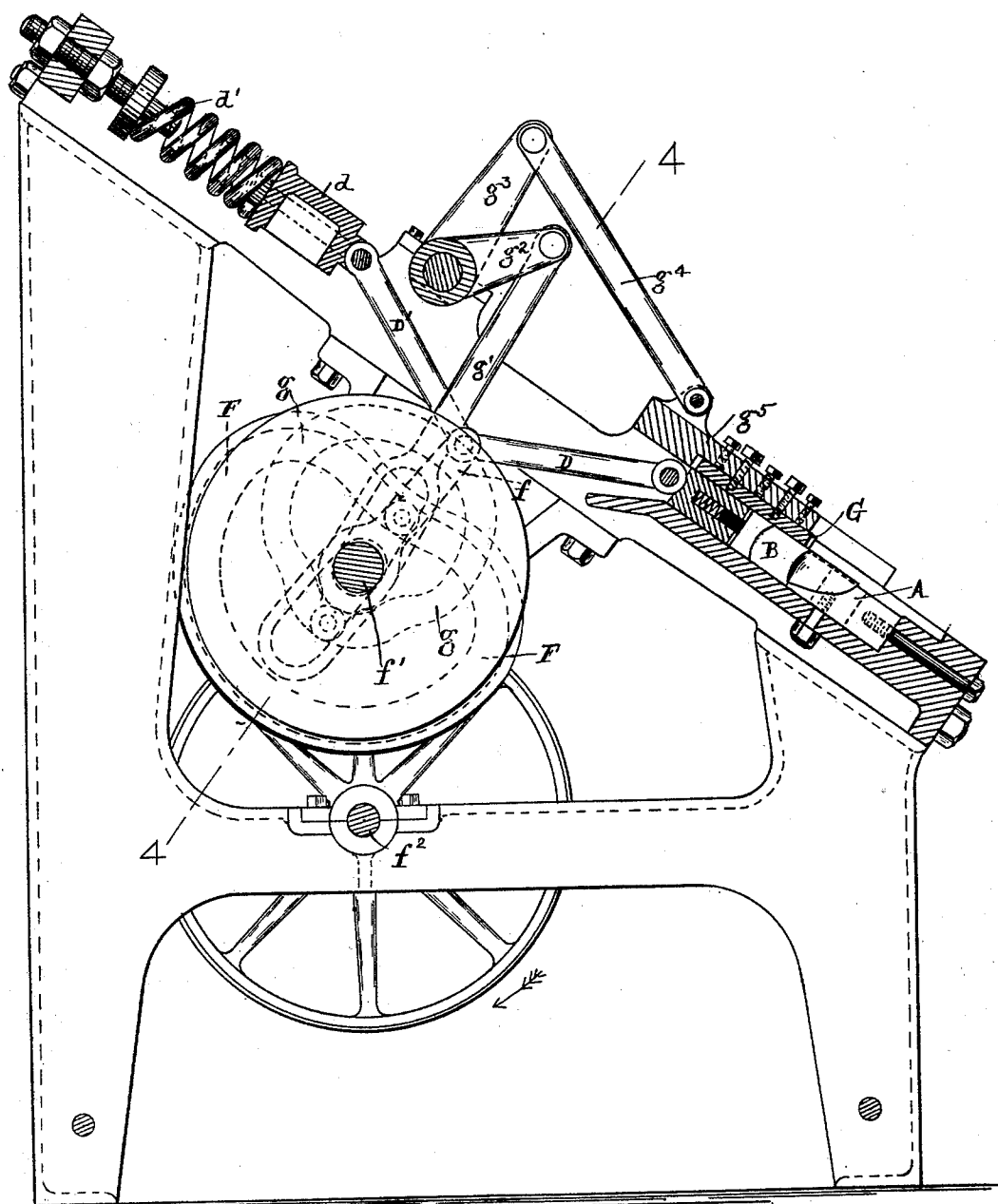
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W. J. YOUNG.
HEEL STIFFENER MACHINE.

No. 519,936.

Patented May 15, 1894.



WITNESSES:

Fig. 2.

INVENTOR:

John R. Snow,
H. E. Penick & Co.

Wm. J. Young
by his attorneys,
Wagner & Beach.

(No Model.)

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W. J. YOUNG.
HEEL STIFFENER MACHINE.

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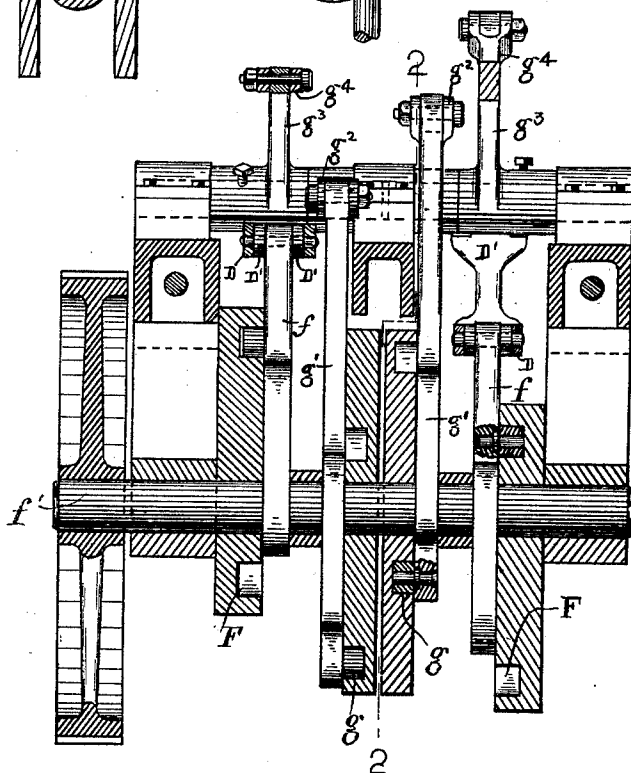
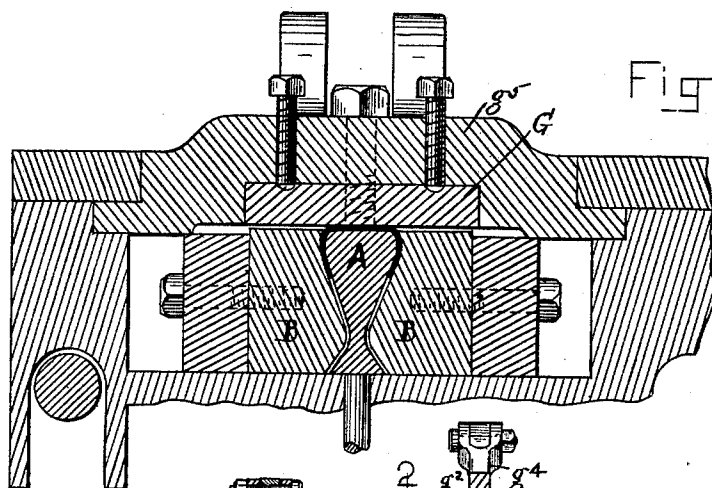


Fig. 4.

WITNESSES:

John R. Snow,
H. C. Pernick & Co.

INVENTOR:

William J. Young
by his attorneys,
Maynard & Beach

UNITED STATES PATENT OFFICE.

WILLIAM J. YOUNG, OF LYNN, MASSACHUSETTS.

HEEL-STIFFENER MACHINE.

SPECIFICATION forming part of Letters Patent No. 519,936, dated May 15, 1894.

Application filed March 7, 1892. Serial No. 424,017. (No model.)

To all whom it may concern:

Be it known that I, WILLIAM J. YOUNG, of Lynn, in the county of Essex and State of Massachusetts, have invented an Improved Machine for Molding Stiffeners for Boots or Shoes, of which the following is a specification, reference being had to the accompanying drawings, in which—

Figure 1 is a top view; Fig. 2 a section on line 2—2; Figs. 3 and 4 sectional details on lines 3 and 4, showing one of my improved machines in its preferred form.

My invention relates to machines for molding counters and consists in a new combination for actuating the female mold and the flange turner, which is fully described below and set forth in the claim.

In the best form of my machine I use two machines in one frame, with the cams set one hundred and eighty degrees apart so that one machine can be fed while the molds of the other continue to exert their full pressure upon the blank.

In the drawings A is the male mold and B the female mold; and for the best results the female mold should be made in two parts each swinging on a fulcrum *b*, as clearly shown in Fig. 1; so that when the toggles D D' are straightened, the molds A and B will be forced with great pressure upon the blank between the molds, and the abutment *d* will be forced slightly back against spring *d'*, which in practice exerts a pressure of several tons. The toggles are actuated by the cams F through cam rods *f*; and while the two cams F are alike yet one is set on the cam shaft at one hundred and eighty degrees from the other in order that while each may cause a dwell of one-half a revolution, yet the dwell of one will occupy the time for the delivery and feed of the other. With this form of my invention, one operator can tend both sets of molds, and the product of one of my improved machines, will be nearly double that of any single mold machine; for in spite of the fact that each stiffener is kept under great pressure while the machine is making half a revolution, the product is nearly twice that which is practical on a machine with a single pair of molds.

Where a longer dwell is desired the machine should have three pairs of molds, with three cams set at the proper difference on the cam shaft; but this will not increase the product, for the speed must of course be such as to allow the practical delivery and feed; and in one of my machines with two pairs of molds the speed is such that half a revolution suffices for the delivering and feed; consequently if one-third only of a revolution be allowed for delivery and feed the speed must be reduced.

The cam-shaft *f'* is geared to driving shaft *f*²; and each cam rod *f* is formed with the usual link through which the cam shaft passes.

I prefer to actuate the flange turners G by cams *g*, cam rods *g'*, rockers *g*² *g*³ and connecting rod *g*⁴; thereby reciprocating slide *g*⁵, to which flange turner G is fast. The flange turner will of course be omitted where stiffeners without flanges are to be formed.

The main advantage of my new combination is that it constitutes a counter molding machine of great simplicity and compactness, with none of the parts exposed to excessive wear or strain, and yet capable of giving a pressure of many tons upon the blank, and maintaining that pressure during a large part of each revolution of the cam. It is also especially well adapted for duplication in one frame thereby enabling one operator to use two machines.

What I claim as my invention is—

The improved counter molding mechanism above described, consisting of a male mold, on a fixed abutment; a female mold carried by a sliding block; a toggle, an upper moving abutment for that toggle; a spring restraining the motion of that abutment; a revolving cam disk with two cam grooves; two cam rods; each slotted to receive the cam shaft; and a flange turner; one cam rod actuating the toggle, and setting it and holding it during a large portion of a revolution, and the other actuating the flange turner; all substantially as set forth.

WILLIAM J. YOUNG.

Witnesses:

JOHN R. SNOW,
EUGENE HUMPHREY.