

No. 737,791.

PATENTED SEPT. 1, 1903.

W. STEWART.  
GLASS SHEARING MACHINE.  
APPLICATION FILED MAY 18, 1903.

NO MODEL.

2 SHEETS—SHEET 1.

Fig. 1.

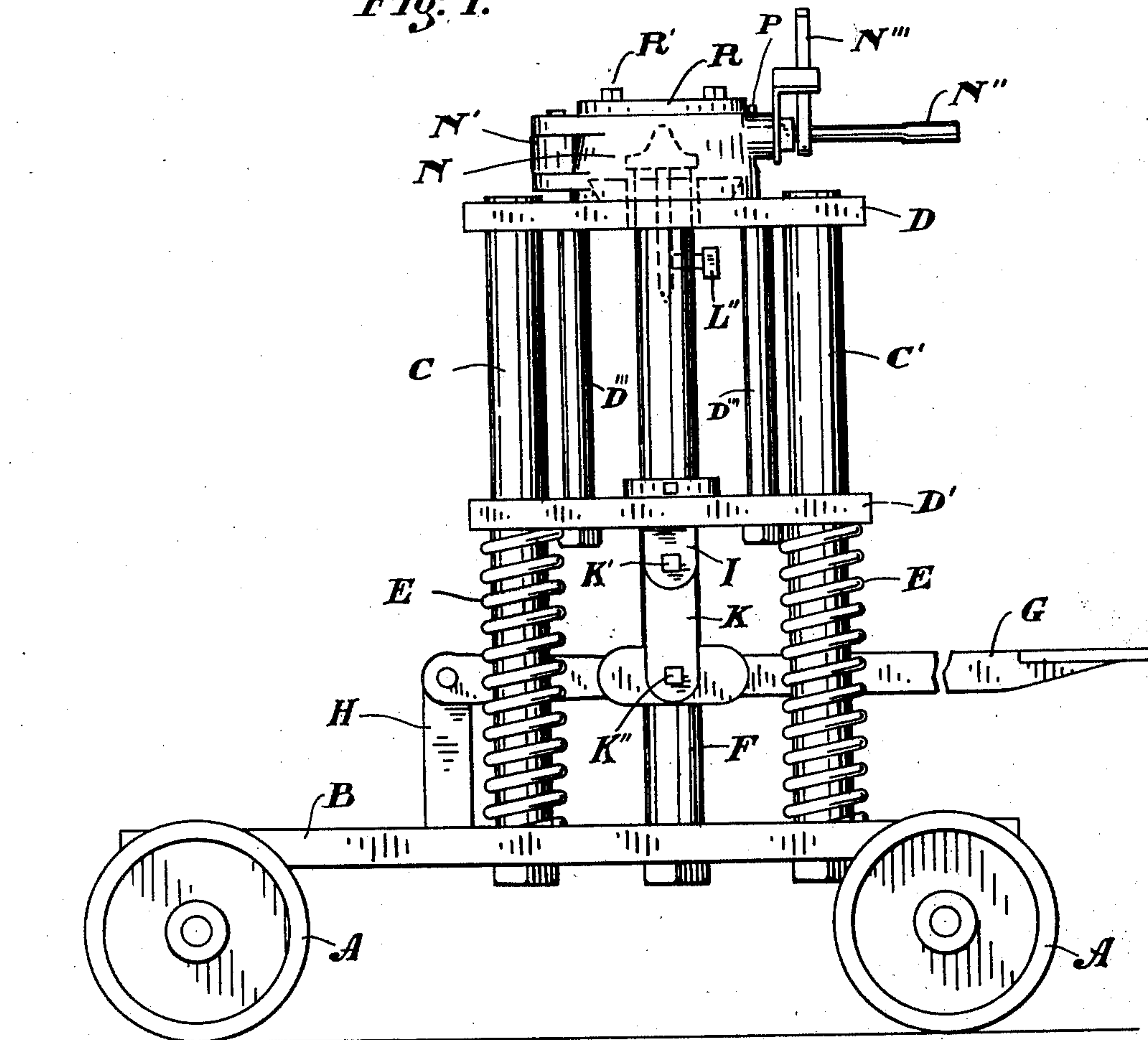
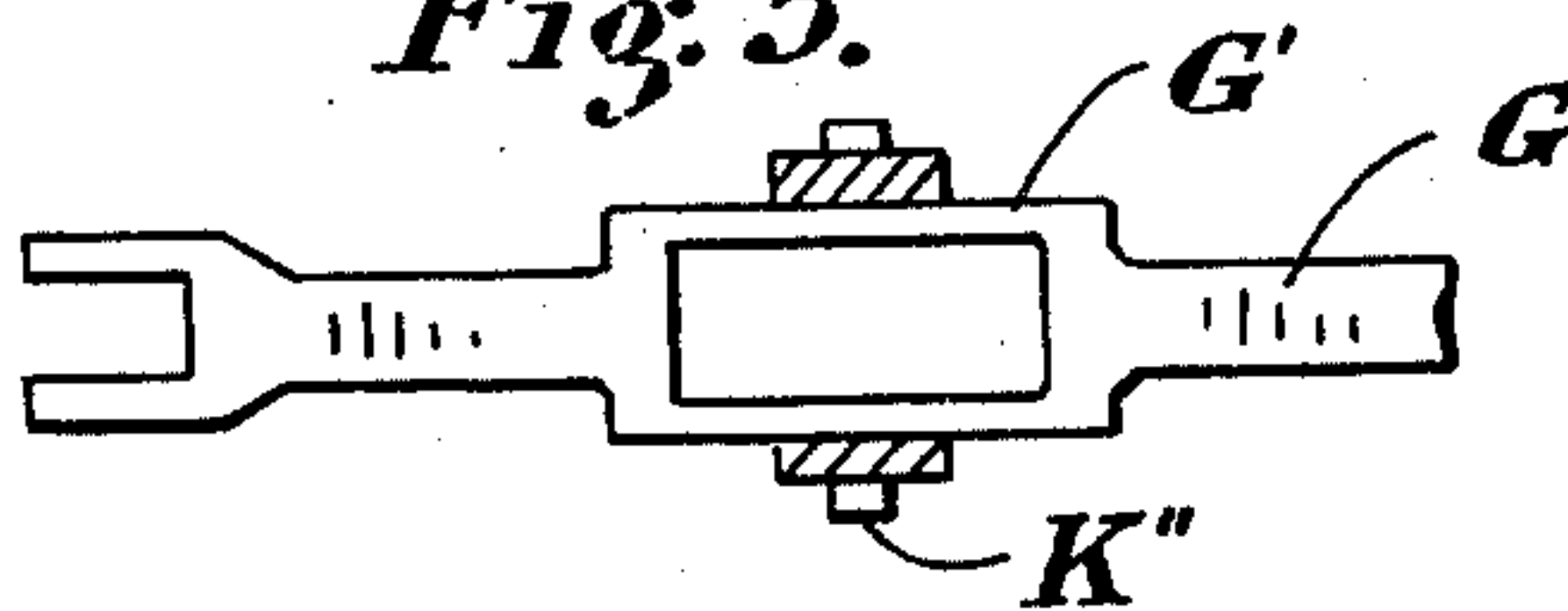


Fig. 3.



WITNESSES,  
Thomas L. Ryan  
John M. & P. Lee

INVENTOR,  
William Stewart  
by  
H. B. Vail Brown  
ATTORNEY.

No. 737,791.

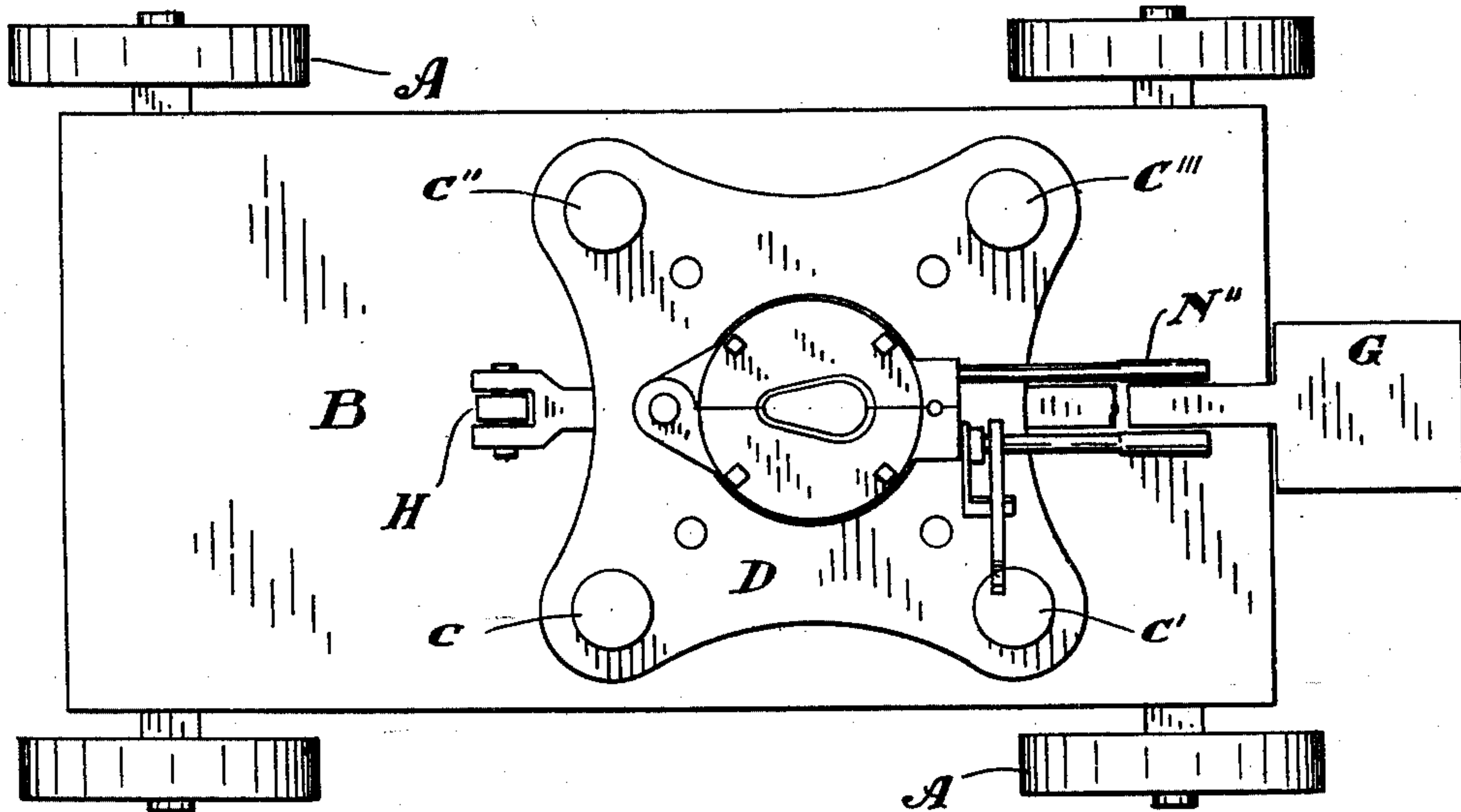
PATENTED SEPT. 1, 1903.

W. STEWART.  
GLASS SHEARING MACHINE.  
APPLICATION FILED MAY 18, 1903.

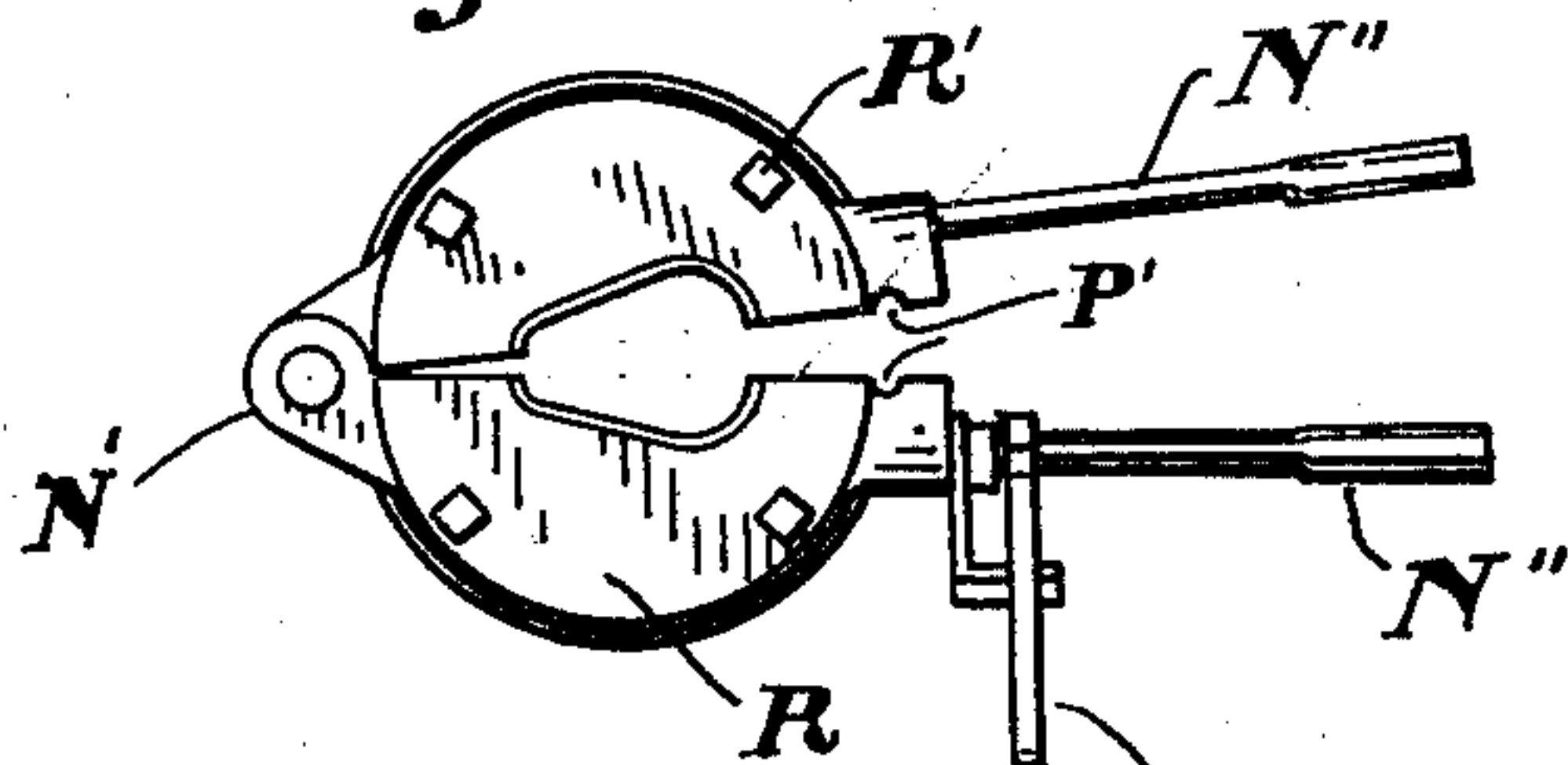
NO MODEL.

2 SHEETS—SHEET 2.

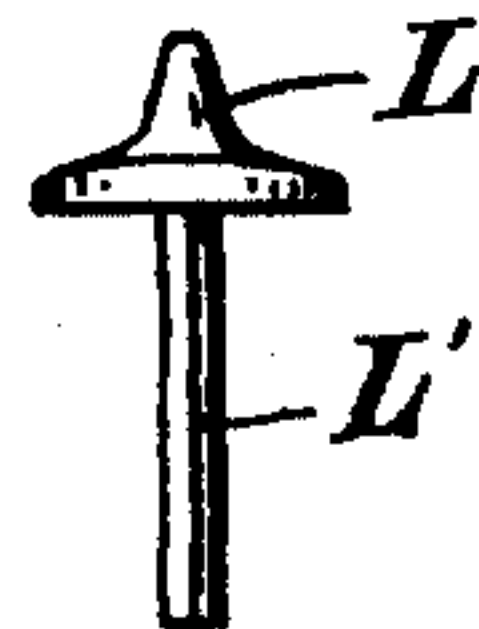
*Fig. 2.*



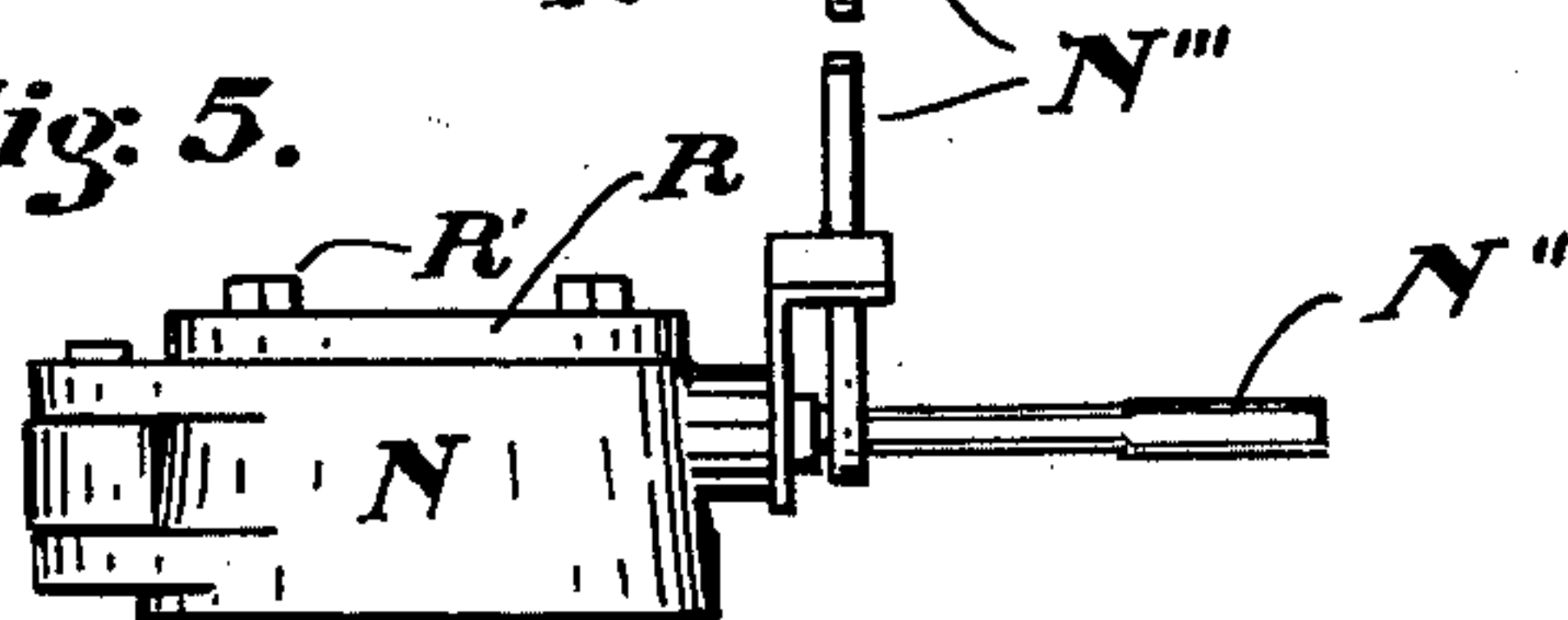
*Fig. 4.*



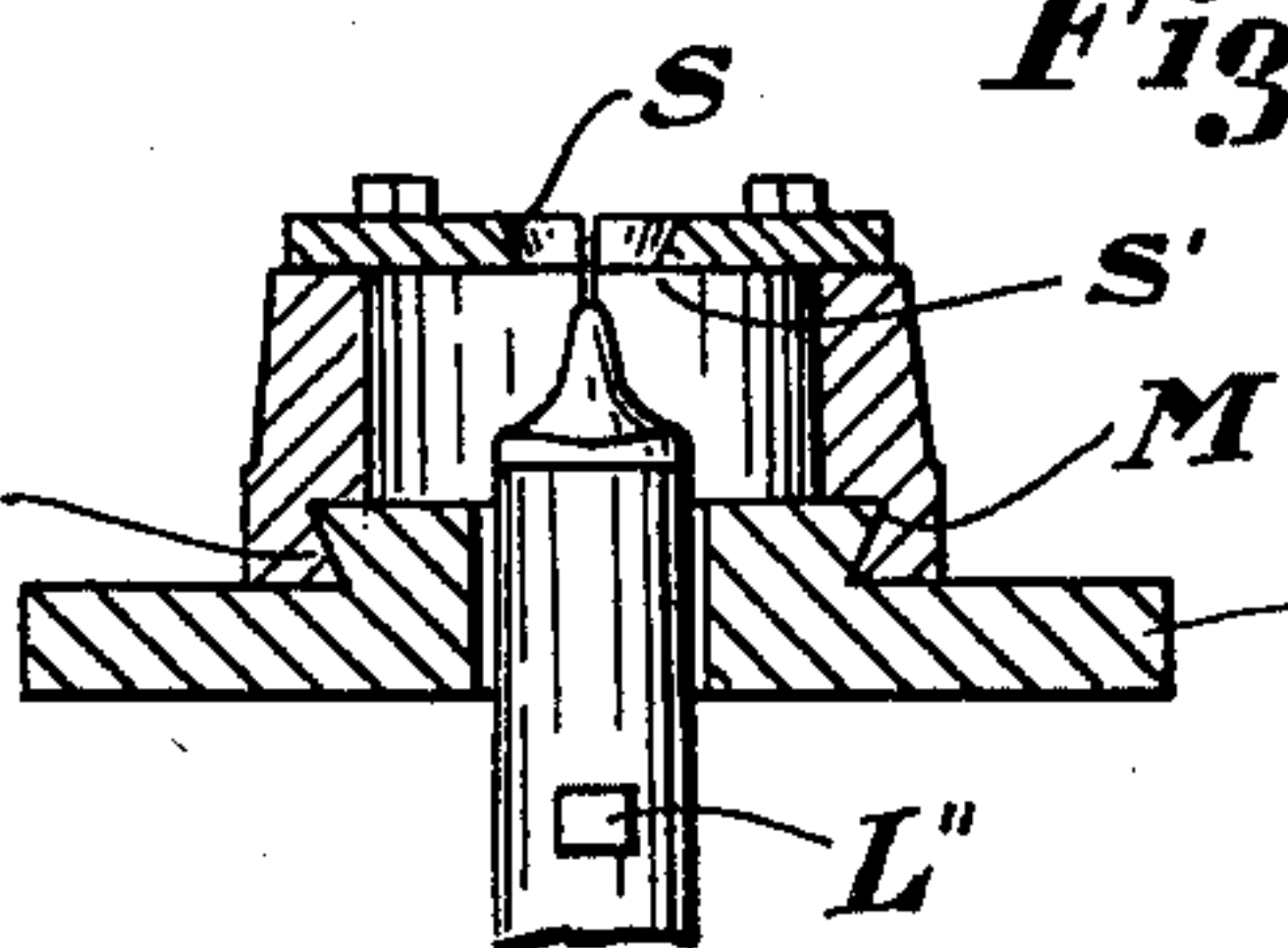
*Fig. 7.*



*Fig. 5.*



*Fig. 6.*



WITNESSES,  
Thomas L. Ryant  
John M. & Phee.

INVENTOR,  
William Stewart

By *W. A. Brown*  
ATTORNEY.



# UNITED STATES PATENT OFFICE.

WILLIAM STEWART, OF MOUNDSVILLE, WEST VIRGINIA, ASSIGNOR OF ONE-HALF TO WILLIAM P. CLARK, OF MUNCIE, INDIANA.

## GLASS-SHEARING MACHINE.

SPECIFICATION forming part of Letters Patent No. 737,791, dated September 1, 1903.

Application filed May 18, 1903. Serial No. 157,515. (No model.)

*To all whom it may concern:*

Be it known that I, WILLIAM STEWART, a citizen of the United States, residing at Moundsville, in the county of Marshall and State of West Virginia, have invented a new and useful Glass-Shearing Machine, of which the following is a specification.

This invention relates to a finishing-machine for forming the neck and opening of a glass jar or jug or pitcher wherein the opening is formed with a lip or some kind of fanciful design—such, for instance, as a vinegar-cruet with a small opening, or a water-jug with a large opening, or a vase which might have any kind of an ornamental opening.

These and other objects not hereinbefore mentioned are accomplished by the construction illustrated in the accompanying drawings, wherein like letters of reference indicate corresponding parts in the several views, and in which—

Figure 1 is a side elevation of the machine, parts being shown in dotted lines. Fig. 2 is a top plan view of the same. Fig. 3 is a detail view of a portion of the lever which surrounds the shaft. Fig. 4 is a top plan view of the die detached from the plate. Fig. 5 is a side elevation of the same. Fig. 6 is a sectional view through the die and the plate, showing how the die is secured to the plate. Fig. 7 is a detail view of the former detached from the shaft.

In the drawings, A designates the wheels upon which the platform B is mounted. Extending up from the platform are four posts C, C', C'', and C''', respectively. Slidingly secured on these posts are two plates D and D', which are connected by the uprights D'''. These plates and uprights form a vertically-movable frame on the posts C, C', C'', and C'''. This frame is yieldingly supported in its uppermost position by means of the coil-springs E, which surround the posts, as plainly shown in Fig. 1.

F designates an upright shaft which extends from the platform B. This shaft is centrally disposed in relation to the posts and extends upwardly through the plates D and D'.

G designates a foot-lever. One end of this lever is pivoted to a standard H on the platform and the opposite end extends beyond the

platform, so that the lever can be operated by means of the foot. This lever is provided with an enlargement and opening G', which surrounds the shaft F.

I designates a pair of lugs depending from the lower plate D' on opposite sides of the shaft F.

K designates a pair of links which have their upper ends pivoted to the lugs by means of the pins K' and their lower ends pivoted to the opposite sides of the enlargement G' on the shaft by means of the pins K''.

The upper end of the shaft F is provided with a vertical aperture.

L designates the former. This former is provided with a shank L', which fits into the aperture in the shaft and is detachably secured in place by means of the set-screw L''. The former shown in the drawings is for forming the opening and lip of a cruet and similar articles. If it is desired to form the opening of other styles of glassware, it is only necessary to remove this former by unscrewing the set screw L'' and inserting another style of former in the upper end of the shaft.

On top of the upper plate D is a circular dovetail projection M. This projection is centrally disposed on the plate and surrounds the former.

N designates the die-holder. This holder is formed in two parts, hinged together at N', and is also provided with handles N'' for opening and closing the same.

N''' designates a latch for holding the die-holder in its closed position. The lower edge of the die-holder is provided with a dovetail O, which fits closely the dovetail projection M when the die-holder is in position on the top of the plate D and is closed. By this construction the holder is drawn into position by the closing of the same and is firmly held in place. If thought desirable, a pin P can project up from the top of the plate D, which will engage grooves P' in the die-holder to further prevent the slipping of the holder when closed.

R designates the die. This die is formed in two parts and is detachably secured to the top of the die-holder by means of the bolts R'. When the dies are closed, there will be formed an egg-shaped opening for making cruets and the like. The inner edge of the die is formed



with a bevel S, forming a cutting edge S', as shown in Fig. 6. In making other styles of glass articles another form of former is used, as before described, and also other shaped dies can be substituted by removing the die shown in the drawings from the die-holder and substituting a die of the required shape.

I am aware that many minor changes can be made in the construction and arrangement of parts without in the least departing from the nature and principles of my invention.

The operation of the device is as follows: After the cruet is blown or otherwise formed the lip will have a rough ragged edge. The punty is then secured to the bottom of the cruet in the usual manner. The neck and lip are then heated and the cruet inverted and the lip and neck placed over the former. This will open up the neck and make the inside of the neck smooth. The foot-lever is then lowered, carrying down the frame carrying the die-holder and dies, which have been closed after the neck and lip of the cruet have been placed on the former. By this operation the cutting edge of the die will cut off the ragged edges of the lip, and the cruet is ready for completion. The cruet is completed by rounding the edges of the lips and removing the punty, all in the usual and well-known manner. When the foot-lever is released, the pressure of the springs will force the frame upwardly, releasing the cutting edge of the die from the edge of the lip. The dies are then open, allowing the removal of the cruet from the former.

If thought desirable, I can place another finishing-machine on the platform B for making other styles of glass articles.

I am aware that many minor changes can be made in the construction and arrangement of parts without in the least departing from the nature and principles of my invention.

Having thus described my invention, what I claim as new, and desire to secure by Letters Patent, is—

1. In a glass-shearing machine, the combination with a platform, of a shaft extending upwardly from the platform, a former on the upper end of the shaft, a vertically-movable frame on the platform, a die surrounding the former carried by the frame, and adapted to have a vertical movement in relation to

the same, and means by which the die may be opened and closed.

2. In a glass-shearing machine, the combination with a platform, of a shaft extending upwardly from the platform, a former on the upper end of the shaft, a vertically-movable frame on the platform, means for holding the frame in its uppermost position, a die surrounding the former carried by the frame, and adapted to have a vertical movement in relation to the same, and means by which the die may be opened and closed.

3. In a glass-shearing machine, the combination with a platform, of a shaft extending upwardly from the platform, a former on the upper end of the shaft, posts extending upwardly from the platform, a vertically-movable frame on the posts, springs for holding the frame in its uppermost position, a lever for lowering the frame against the tension of the springs, a die carried by the frame and surrounding the former and means by which the die may be opened and closed.

4. In a glass-shearing machine, the combination with a platform, of a shaft extending upwardly from the platform, a detachable former secured to the upper end of the shaft, a vertically-movable frame on the platform, a removable die surrounding the former and carried by the frame and adapted to have a vertical movement in relation to the same, and means by which the die may be opened and closed.

5. In a glass-shearing machine, the combination with a platform, of a shaft extending upwardly from the platform, a former secured to the upper end of the shaft, a vertically-movable frame on the platform, a dovetail projection extending upwardly from the frame and surrounding the shaft, an opening and closing die-holder provided with a dovetail adapted to engage the dovetail on the frame, a detachable die carried by the die-holder, and means for vertically moving the frame in relation to the shaft.

In testimony whereof I have hereunto affixed my signature in the presence of two witnesses.

WILLIAM STEWART.

Witnesses:

CHAS. A. SHOWACRE,  
J. C. SIMPSON.