

(No Model.)

2 Sheets—Sheet 1.

W. J. ROBINSON.

MACHINE FOR ORNAMMENTING WOOD.

No. 283,664.

Patented Aug. 21, 1883.

Fig. 1.

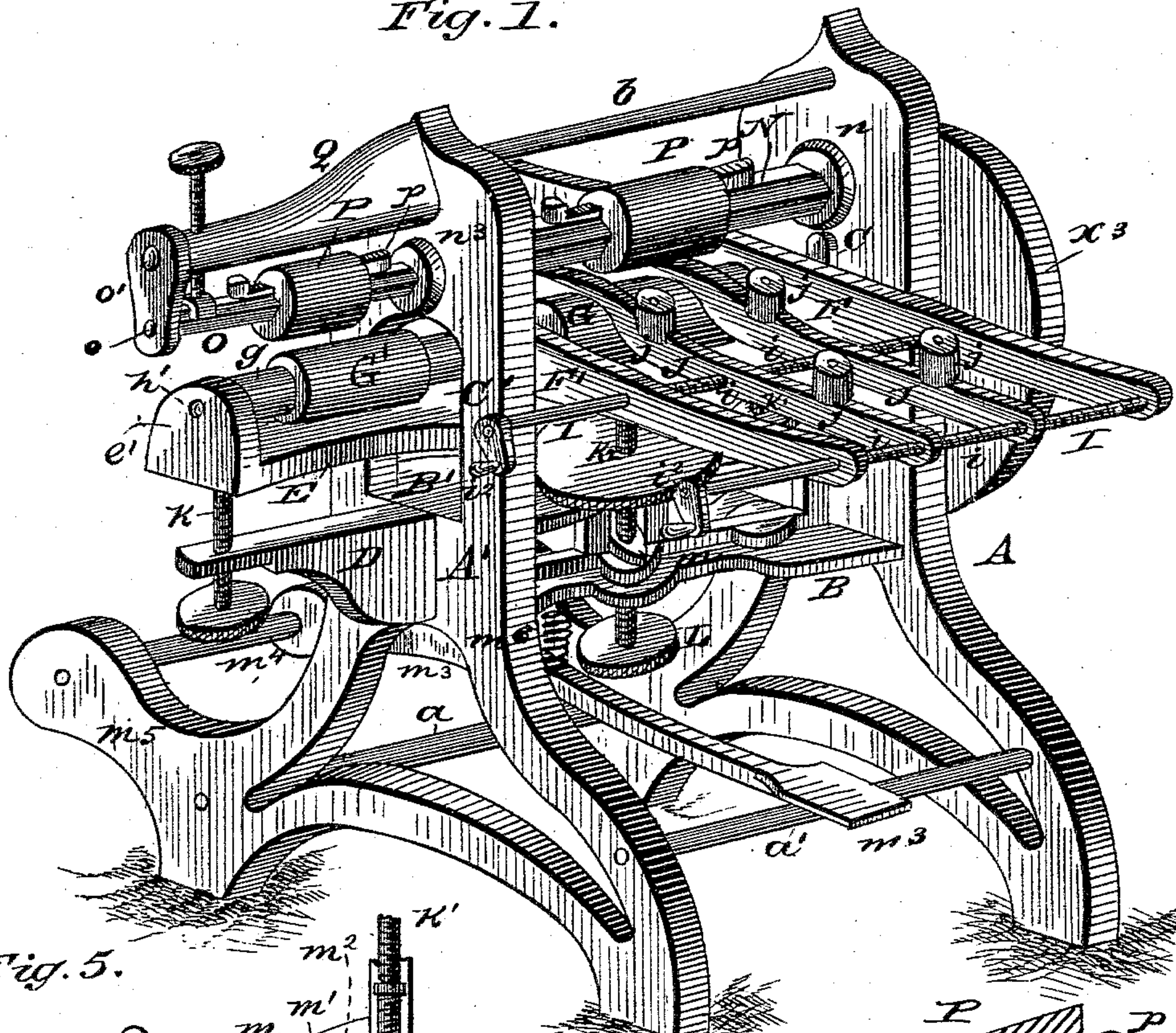


Fig. 5.

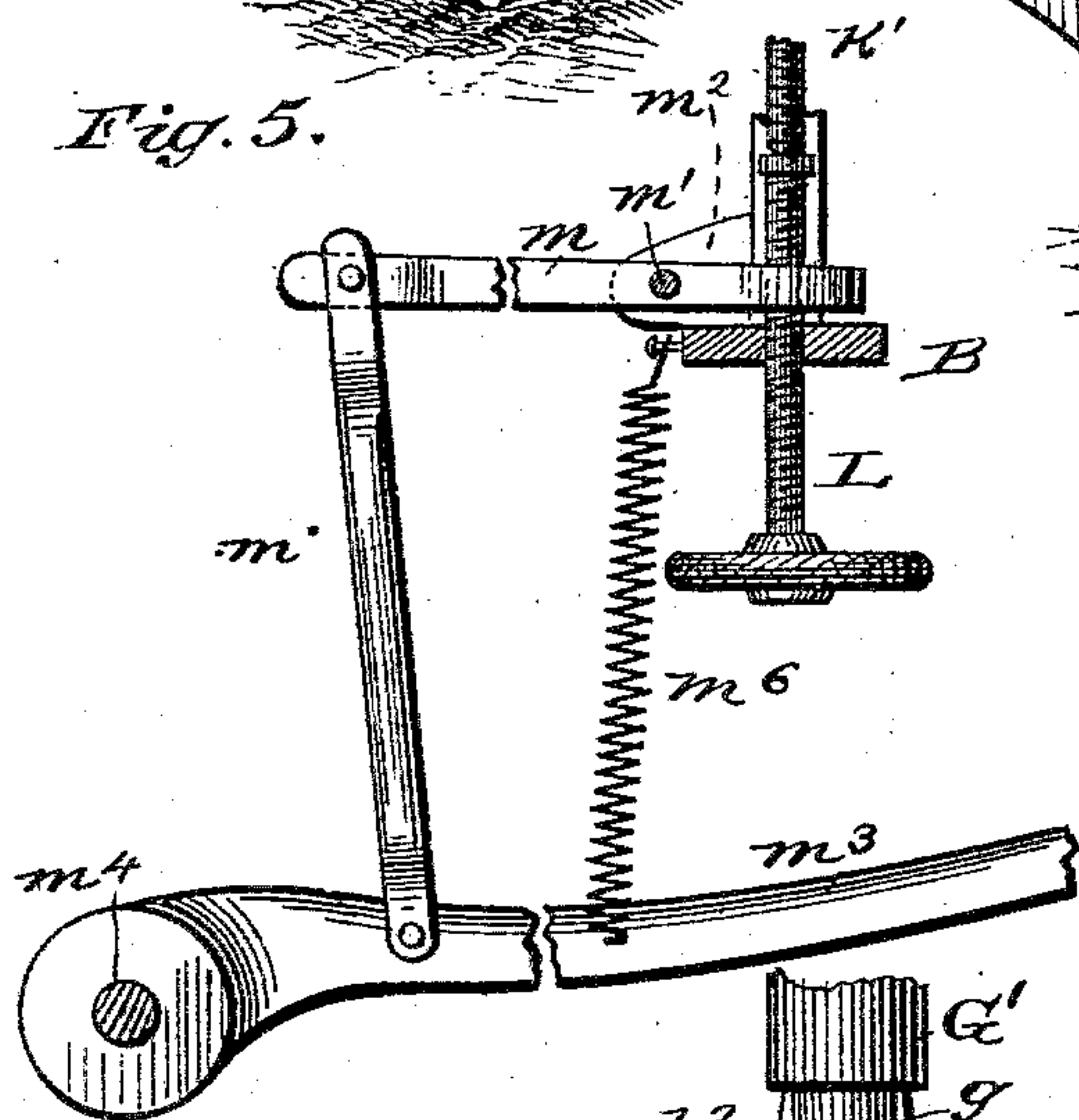


Fig. 4.

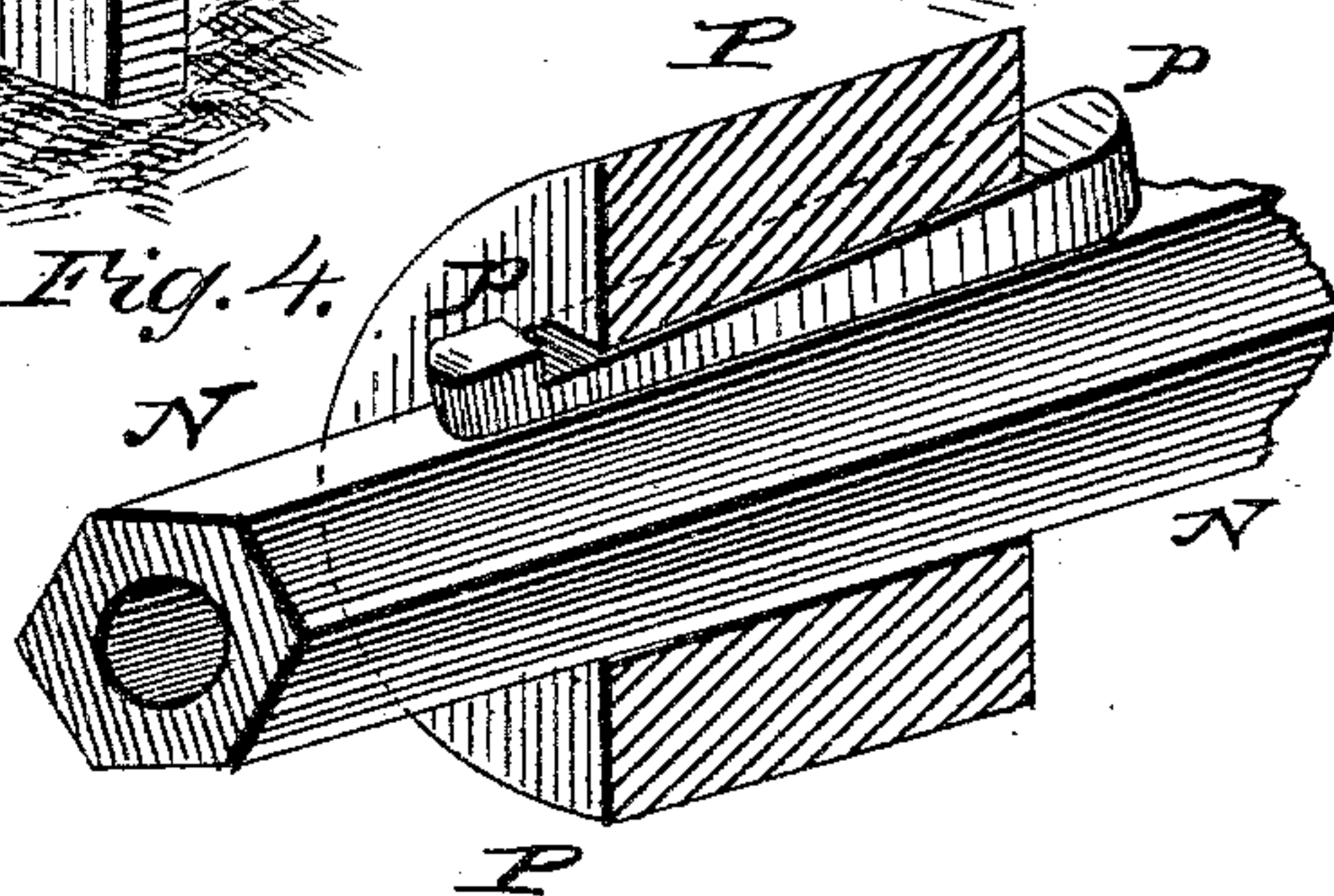


Fig. 6

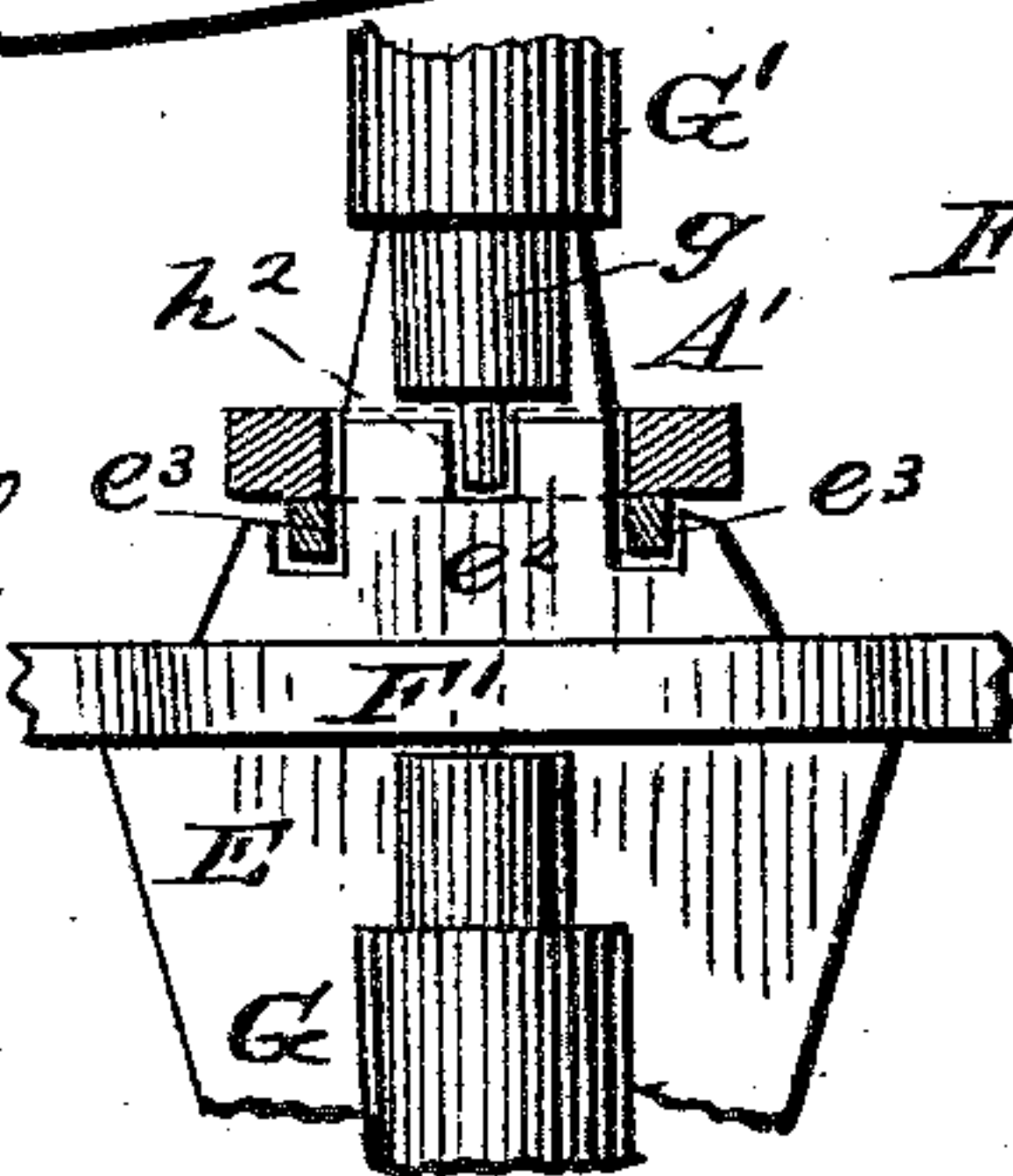
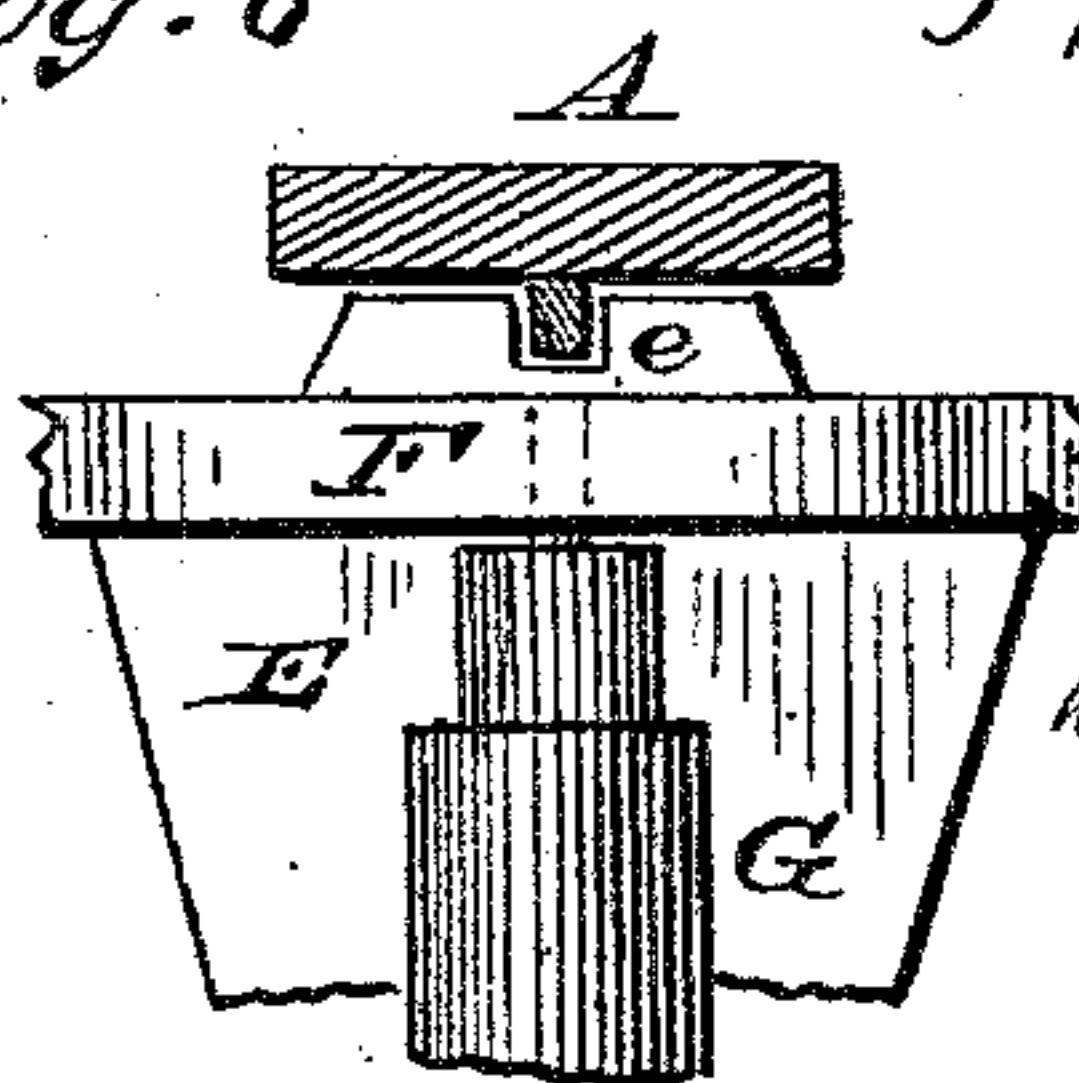


Fig. 7.



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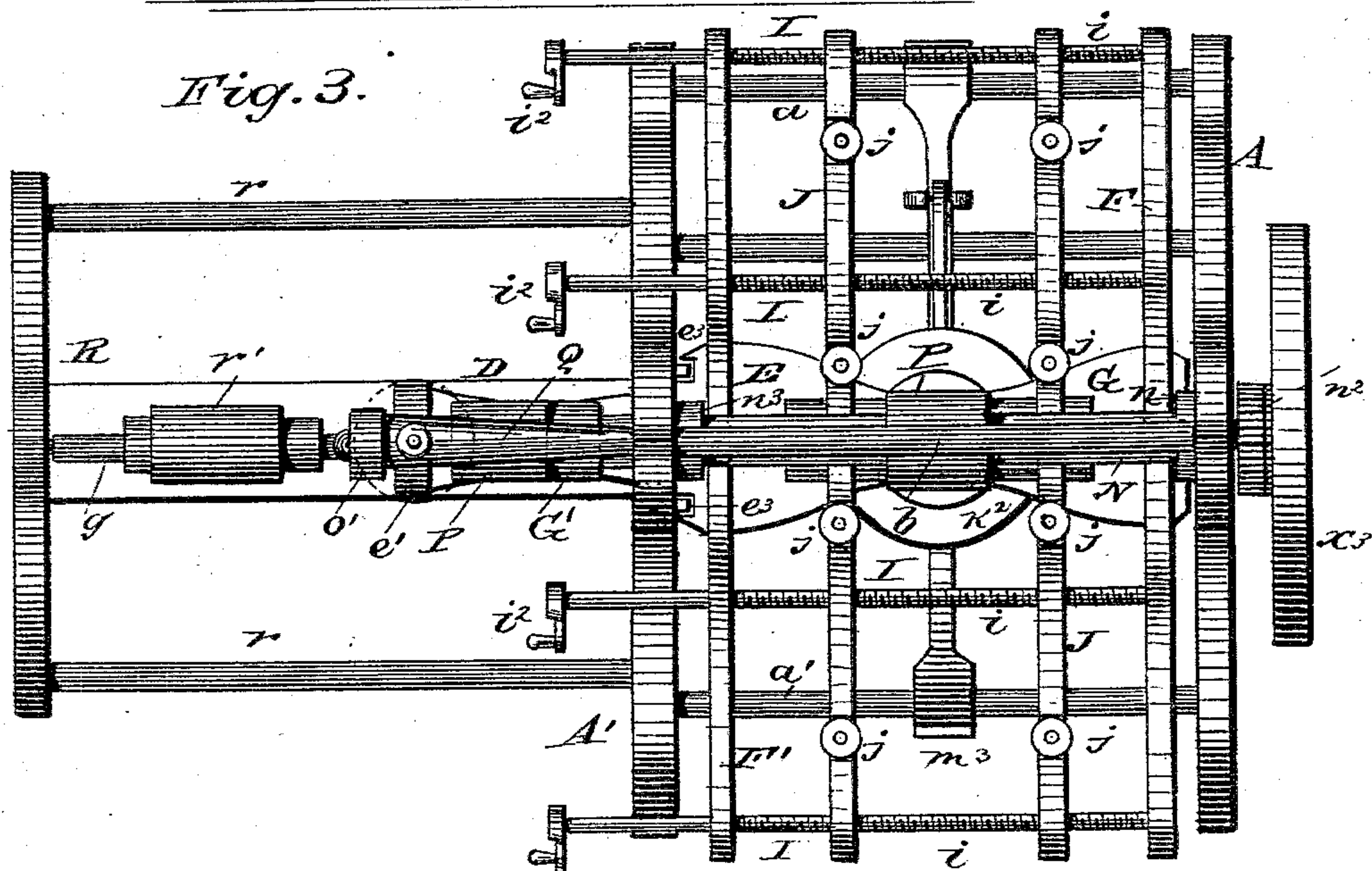
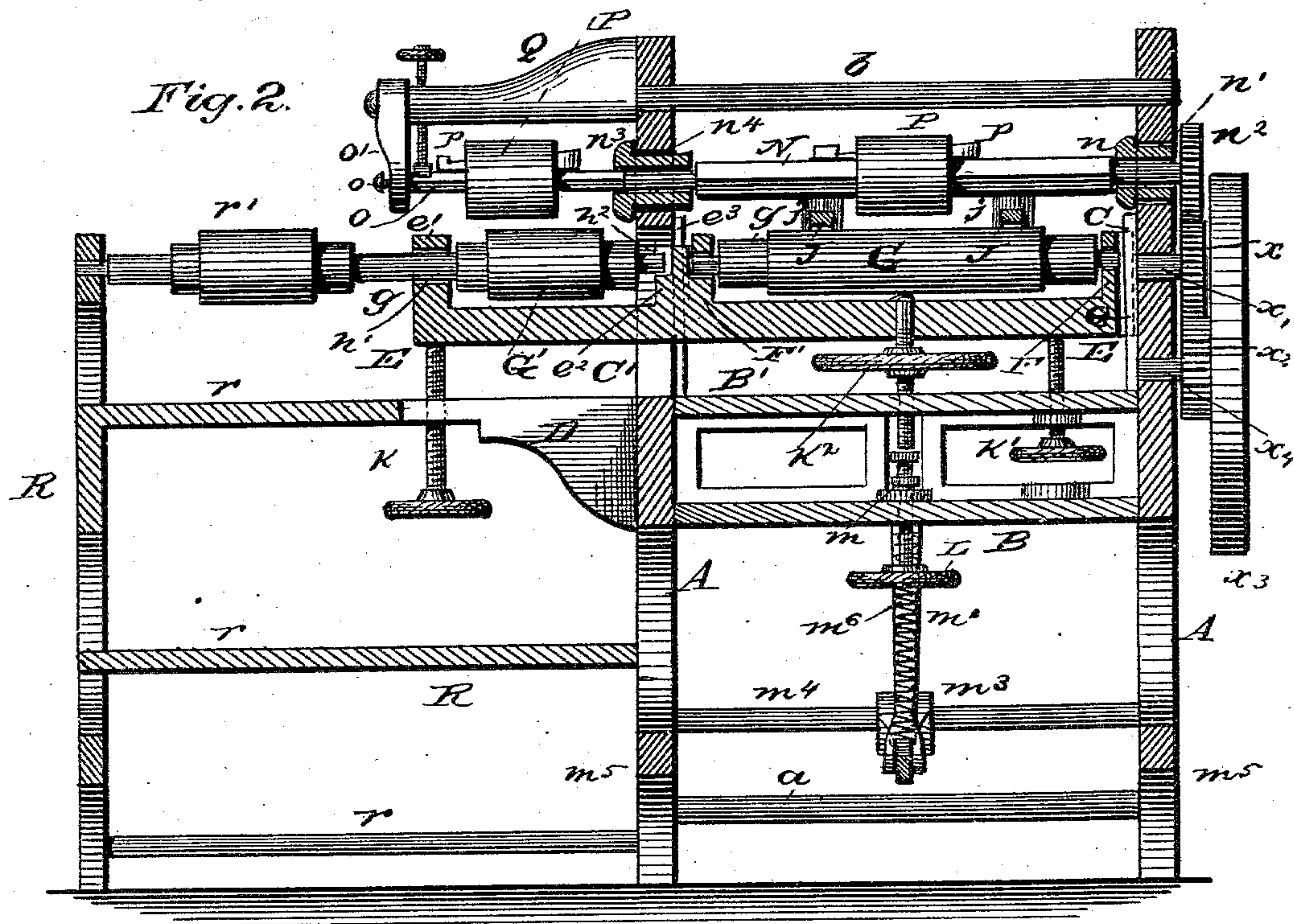
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WITNESSES

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MACHINE FOR ORNAMENTING WOOD.

SPECIFICATION forming part of Letters Patent No. 283,664, dated August 21, 1883.

Application filed April 30, 1883. (No model.)

To all whom it may concern:

Be it known that I, WILLIAM J. ROBINSON, of Boston, in the county of Suffolk and State of Massachusetts, have invented certain new and useful Improvements in Machines for Embossing or Ornamenting Wood; 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 pertains to make and use the same.

My invention relates to machines for embossing or otherwise ornamenting wood or other material in imitation of the surface engraving, carving, and other ornamentation performed by hand.

The object of my improvement is to provide a machine of this character adapted to operate upon pieces of wood of different widths, whereby the largest desk and table tops may be ornamented, as well as narrow strips of wood designed for other uses.

A further object of the invention is to provide a machine so constructed as to adapt it to withstand great pressure in operation.

A further object of the invention is to facilitate the removal and adjustment of the impression die or dies upon their shaft, and to securely retain them in position thereon.

A further object of the invention is to improve the details of construction of machines of this character, to facilitate their operation, and to reduce to the minimum the liability of their parts to breakage and disarrangement.

With these objects in view the invention consists in the various features of construction and combinations of parts, hereinafter fully described, and pointed out in the claims.

In the drawings, Figure 1 represents a perspective view of my improved machine. Fig. 2 is a vertical longitudinal section of the same. Fig. 3 is a plan view, and Figs. 4, 5, 6, and 7 illustrate parts in detail.

A A' represent the supporting standards or frame of the machine, connected at their lower ends by cross-rods a and a' , at about their centers by parallel bars B B', and at their upper ends by a cross-rod, b . The standard A is provided on its inner side, above the bar B', with a central longitudinal rib or way, C, for a purpose which will be explained. The other stand-

ard, A', is formed with an opening, C', above said bar B', and with parallel ribs $e^3 e^3$, adapted to enter corresponding grooves of a table, E.

D represents an arm or bracket projecting from the outer side of the standard A', and so arranged that its upper side will be on a line with the cross-bar B'.

E represents a vertically-movable table, formed at one end with a slot or recess, e , adapted to receive the rib or way C of the standard A. The other end of the table extends through the opening of the standard A' and terminates in an upwardly-projecting bracket, i . On the inner side of the standard A' the table is formed with a vertical block, e^2 , having guides $e^3 e^3$, adapted to bear within the opening C', and upon the standard A' on each side of said opening, to securely hold the table against lateral movement.

The table E is provided with two parallel bars, F and F', the latter being secured to the slotted end of the table, while the bar F is secured to the inner side of the vertical block e^2 , adjacent to the standard A'.

G represents a roller, whose shaft g is journaled in bearings $h' h^2$, formed respectively in the bracket e' of the table and the vertical block e^2 thereof.

I represents a series of transverse adjusting-rods, formed with screw-threads, as shown at i , and provided with handles or cranks i^2 . These rods project through the bars F F', as shown, and upon said rods and between the bars F F' are supported guide-bars J J, provided with vertical guide-rollers j . These bars J J are provided with interiorly-threaded perforations to receive the rods I, and said bars are centrally recessed or hollowed out to allow the roller G, over which they pass, to revolve freely.

The table E is supported at one end by an adjusting-screw, k , passing up through the arm D of the standard A', and at its opposite end by a similar screw, k' , passing up through the cross-bar B'. A screw, l^2 , is passed centrally through the table, and through the cross-bar B', to receive the upward thrust of a screw, L, passing through the cross-bar B, and through the inner end of a lever, m , fulcrumed on a pin, m' , bearing in perforated ears $m^2 m^2$, pro-

jecting rearwardly from said bar B. The outer end of this lever m is pivoted to the upper end of an upright link, m' , whose lower end is pivotally secured to a foot-lever, m^3 , fulcrumed to a rear cross-bar, m^4 , secured to the rear extensions, m^5 m^5 , of the standards. This foot-lever m^3 is connected to the cross-bar B by a retracting-spring m^6 . These several adjusting and supporting screws are each provided with suitable hand wheels or disks, as shown, to admit of their being turned.

N represents a hexagonal shaft, supported at one end in a bearing-block, n , resting in a circular opening, n' , of the standard A, and provided on its outer end with a gear-wheel, n^2 . This shaft N also bears in a similar block, n^3 , supported in a circular opening, n^4 , of the standard A', and projects through said block n^3 to form an auxiliary shaft, O, arranged above the roller G. The outer end of the shaft O is recessed to receive a pivot, o , projecting through a depending bracket or hanger, o' , pivotally secured to the outer end of an arm, Q, projecting from the upper end of the standard A'. A screw, q , passing through the arm Q, serves to prevent any springing of the shaft O. Upon each of these shafts N and O is arranged a die, P, interiorly recessed to receive a wedge-key, p . The shafts N and O are preferably made hollow to admit of the passage through them of steam, gas, or other heating agent to heat the dies P. The gear-wheel n^2 meshes with a pinion, x , mounted upon a stud, x' , of the standard A, and driven by a gear-wheel, x^2 , arranged concentric with a drive-wheel, x^3 , mounted upon a spindle, x^4 , projecting from the outer side of the standard A.

R represents a supplemental leg or support adapted to be braced to the standard A' by cross-braces r . When this support is employed, the shaft h of the roller H is extended to bear in a bearing formed in the upper end of the same, as shown, and one or more additional rollers, r' , may be arranged on said shaft. It will be understood that the dies P are each provided with any preferred design to be impressed upon the wood, or with any sizing or preparation designed to be applied thereto, and that said dies are to be heated to the required temperature by any preferred means.

The operation of the machine is as follows: The wood is fed upon the table E between the vertical guiding-rollers j , (the bars J J being first adjusted to the proper relative position.) The table is adjusted by means of its supporting-screws k and k' to the position required to insure the necessary pressure. The drive-wheel x^3 is then turned toward the operator, thus revolving the shafts N and O, and carrying the board or strip being operated upon over the roller G and under the die by the frictional contact with the latter.

The table may be readily adjusted by operating the end screws, k and k' . It will be apparent that the table may also be elevated by

operating the compound-lever device m m' m^3 and forcing the screw L upward to elevate the screw k^2 , which is secured to the table.

For stock of too great a width for the table E, or of such form as not to be adapted to pass between the vertical rollers j , the die P, upon the shaft O, and the roller G are provided, and, as clearly illustrated in the drawings, the supplemental support R is arranged for large stock—such as desk and table tops—thus adapting the machine to work of all kinds.

From the construction as thus described it will be observed that the die-shaft and the rollers are strongly and firmly supported, and are not liable to be sprung or distorted out of parallelism, and it is immaterial, so far as the strength of the shaft-bearings is concerned, whether the die is set upon the center of the shaft or at one side of the center.

A further important advantage of my improvement is found in the fact that the dies are securely held upon the hexagonal shaft, thus avoiding that liability to turn upon the shaft which is an incident to the use of a cylindrical shaft.

It will be apparent that an octagonal or any other flat-surfaced shaft may be employed in lieu of the hexagonal form shown. Again, with my construction there is no difficulty in removing the dies and their shafts, it only being necessary to loosen the pivot o of the outer shaft, O, and turn the depending pivotal arm o' out of the way and then draw out the shaft.

It will be apparent that my invention is susceptible of many alterations and modifications in its details of form and construction; hence I would have it understood that I do not limit myself to the precise construction herein described and shown, but reserve to myself the right to make all such alterations in form and construction as may properly fall within the scope of my invention.

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

1. In a machine for embossing or ornamenting, the combination, with supporting-standards, of a vertically-adjustable table carrying a roller, a revolving shaft provided with a die, and means whereby the ends of said table and shaft are firmly supported to avoid the springing of the shaft, substantially as set forth.

2. In a machine for embossing or ornamenting, the combination, with supporting-standards, of a table adapted to move vertically upon said standards, and provided with supporting and adjusting devices at its ends, a shaft carrying the die or dies, and provided at its ends with means for securely holding it in parallelism with said table, substantially as set forth.

3. In a machine for embossing or ornamenting, the combination, with the supporting-standards having parallel cross-bars secured thereto, of a table adjustably secured between

