

3 Sheets—Sheet 1.

No. 410,464.

Patented Sept. 3, 1889.

Fig. 1.

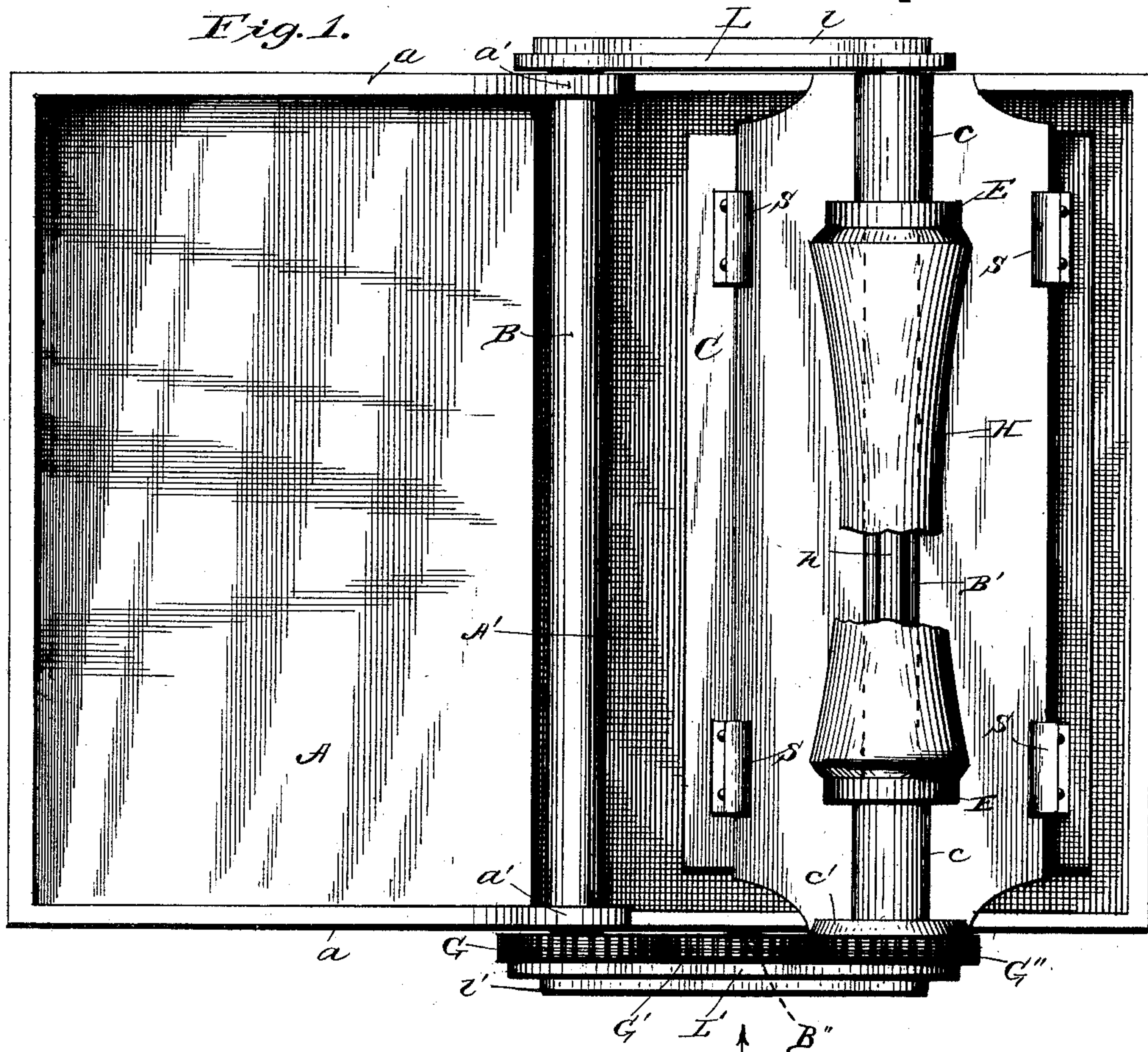
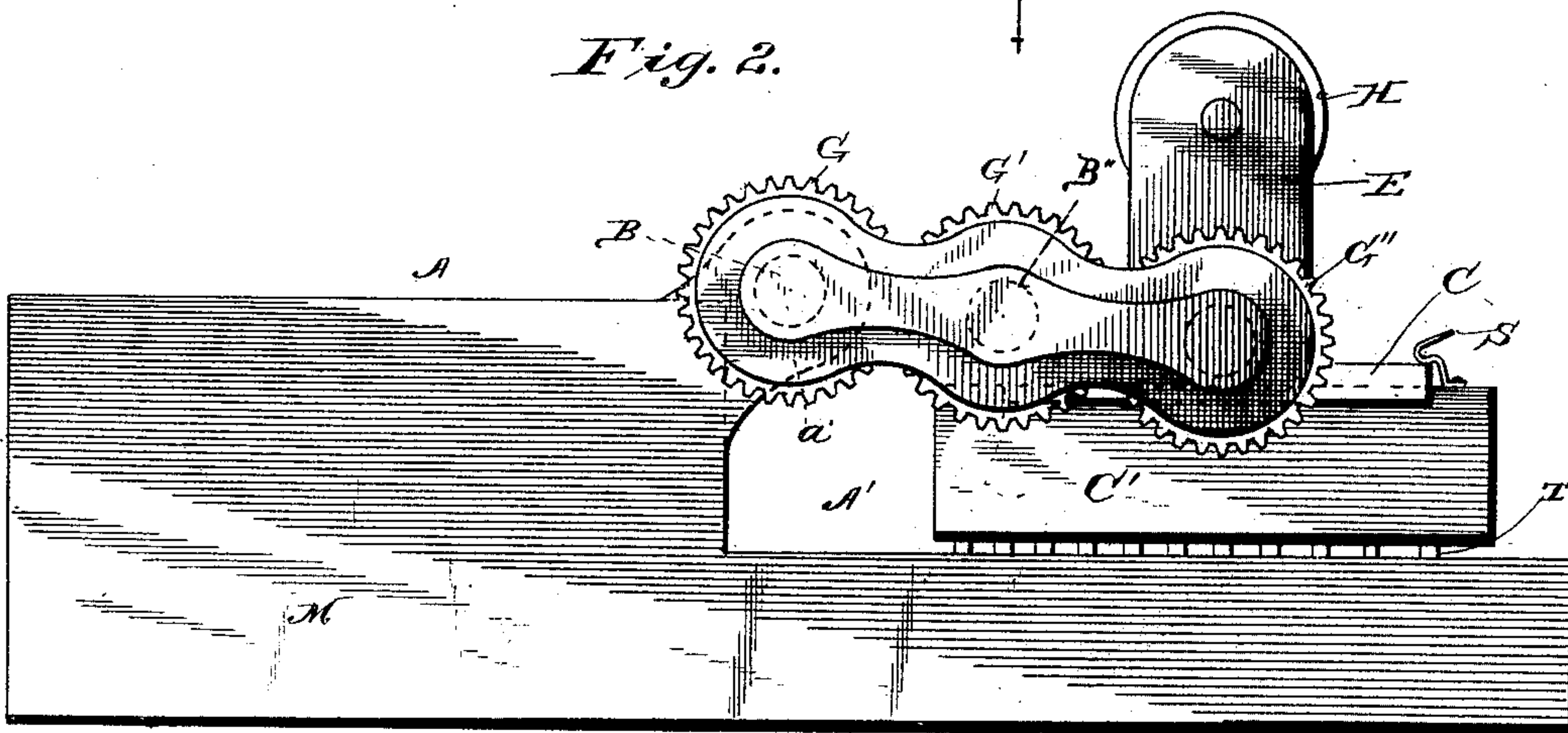


Fig. 2.



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(No Model.)

3 Sheets—Sheet 2.

D. C. STOVER.
HAND STAMP.

No. 410,464.

Patented Sept. 3, 1889.

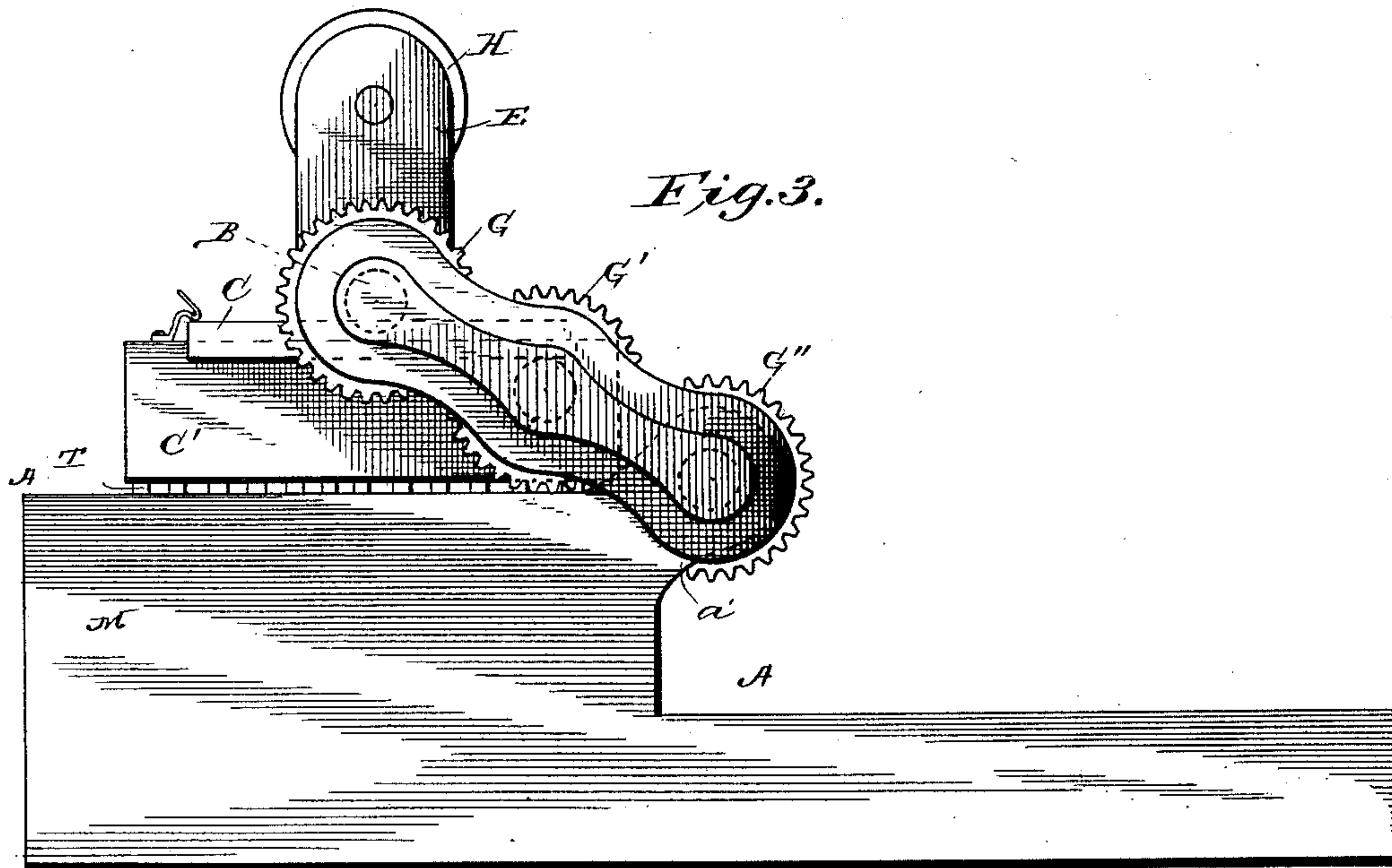


Fig. 4.

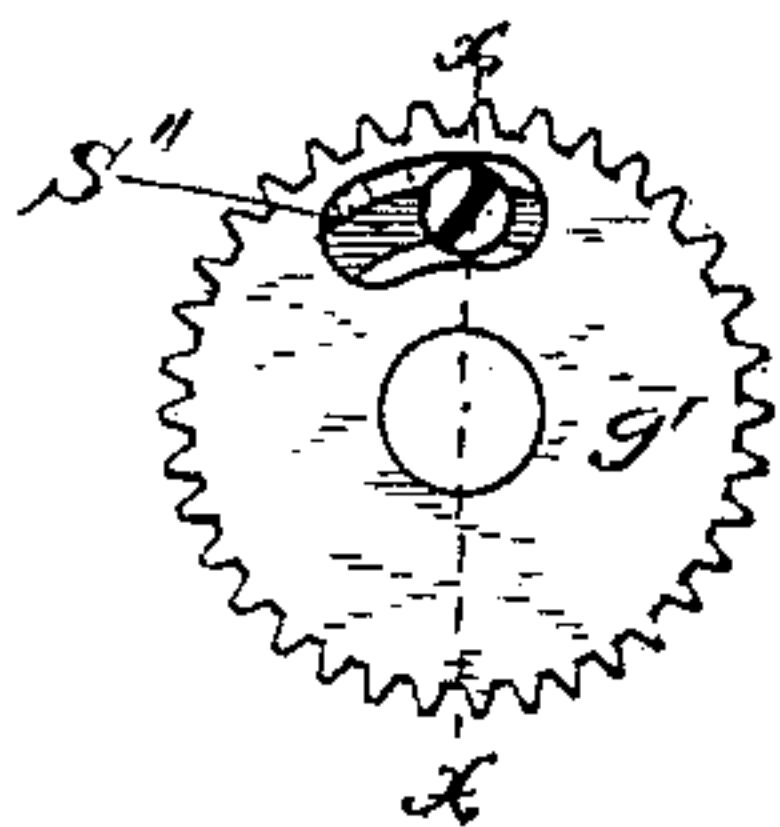
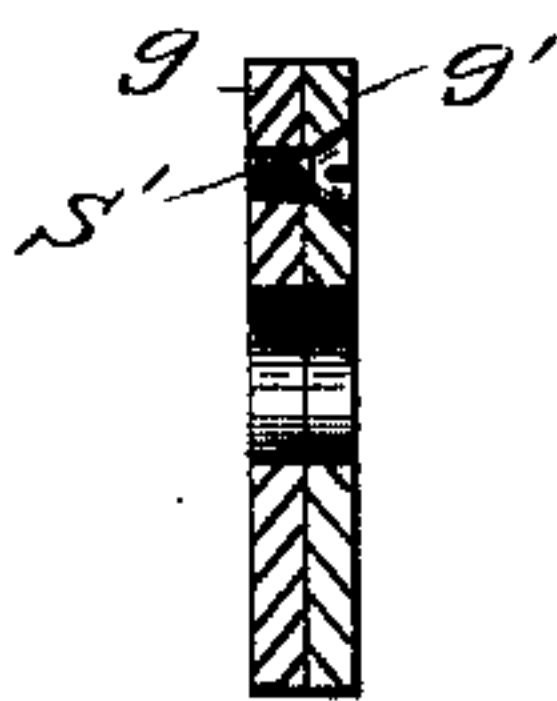


Fig. 5.



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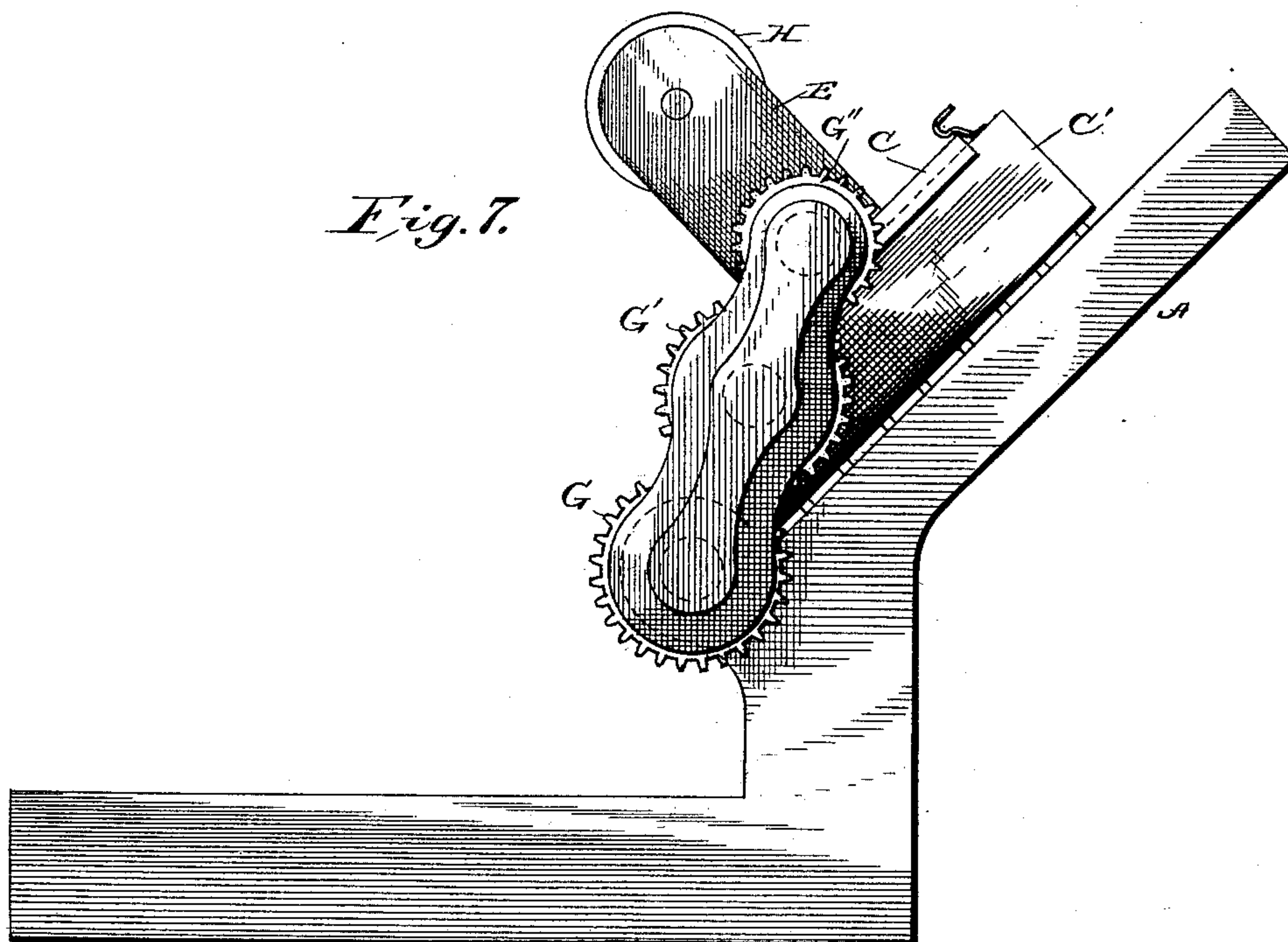
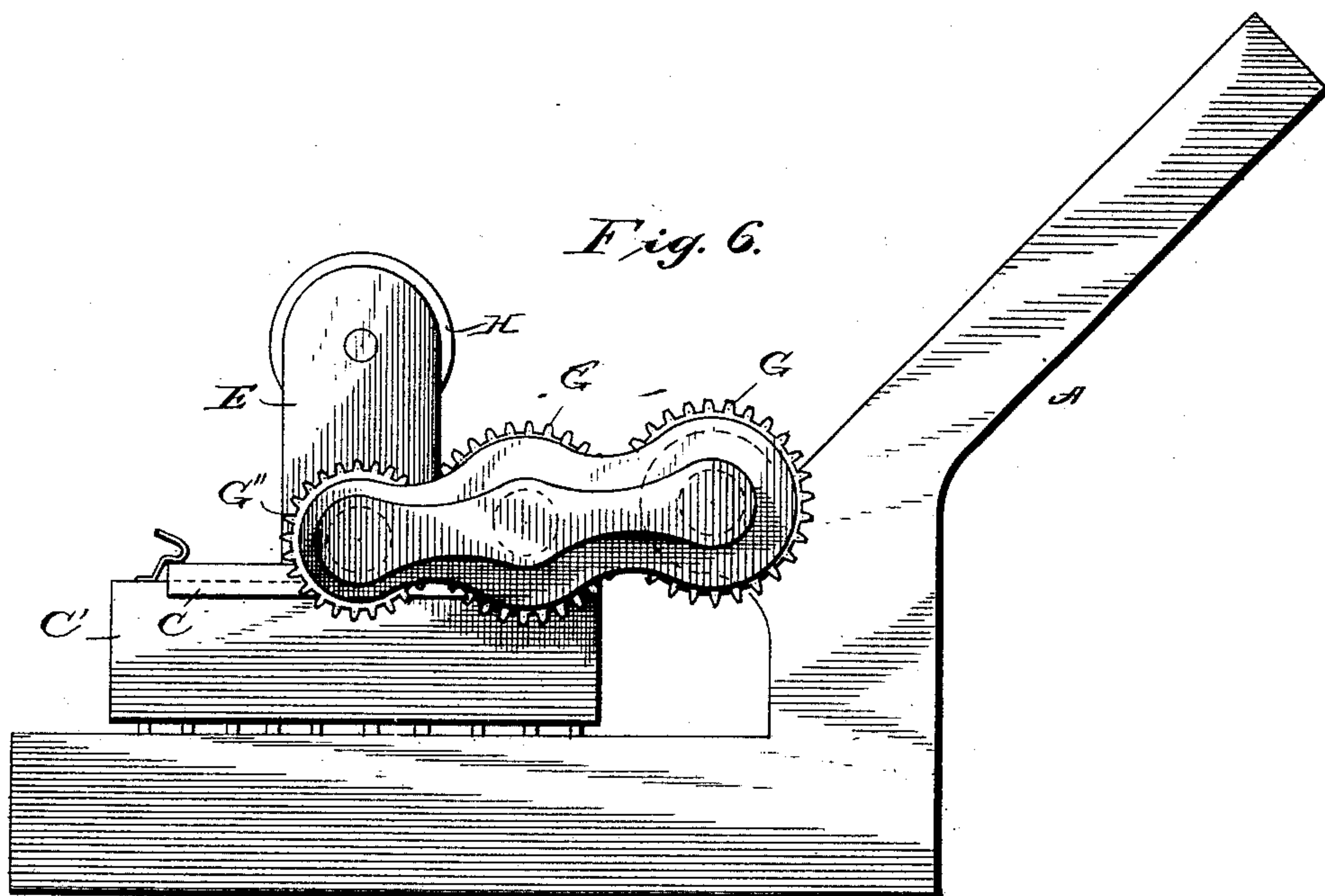
(No Model.)

3 Sheets—Sheet 3.

D. C. STOVER.
HAND STAMP.

No. 410,464.

Patented Sept. 3, 1889.



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UNITED STATES PATENT OFFICE.

DANIEL C. STOVER, OF FREEPORT, ILLINOIS.

HAND-STAMP.

SPECIFICATION forming part of Letters Patent No. 410,464, dated September 3, 1889.

Application filed March 5, 1889. Serial No. 302,011. (No model.)

To all whom it may concern:

Be it known that I, DANIEL C. STOVER, a resident of Freeport, in the county of Stephenson and State of Illinois, have invented certain new and useful Improvements in Hand-Stamps; 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 improvements in hand-stamps of that class in which the stamp proper is so connected with a suitable base as to oscillate within certain limits, striking an inking-pad when at one limit of its oscillation and a paper-supporting bed when at the other limit.

The invention is fully described and explained in this specification and shown in the accompanying drawings, in which—

Figure 1 is a plan of my improved stamp. Fig. 2 is a side elevation thereof, looking in the direction indicated by the arrow in Fig. 1, the stamp being on paper bed. Fig. 3 is a similar view, the stamp being on the inking-pad. Figs. 4 and 5 are details showing preferred construction of the loose gear G' . Figs. 6 and 7 illustrate a slight modification in construction.

In these views, M is the bed or base of the machine, a portion A of its upper surface being covered with an inking-pad and the remainder thereof constituting a paper-supporting table, preferably in a lower horizontal plane than the inking-pad. The pad is provided with side pieces a , preferably of metal, and on these side pieces are formed ears a' , in which is journaled a transverse shaft B . On the outer ends of the shaft B are rigidly fastened parallel links $L L'$, preferably formed with strengthening-webs $l l'$, and a second shaft B' , parallel with the shaft B , connects the free ends of the links $L L'$. A plate C is hung upon the shaft B' by means of bearings c , journaled on the shaft, and is provided with a handle H , mounted on a rod h , which is supported by ears E , fastened to the plate. A block C' may be detachably secured to the plate C by means of spring-clasps S , or in any other desired manner. On the lower face of each of the blocks may be

arranged type T , either set up in a form or cast together as a stereotype or rubber plate. It is evident that the block may be swung bodily about the axis of the shaft B and that its lower face may be alternately brought in contact with the inking-pad A and the upper surface of the paper-support A' or a paper resting thereon, and that the type may thus alternately receive ink from the pad and transfer it to the paper. The efficiency of the device depends greatly, however, upon the perfect contact of the type with the inking-pad and the paper, and one essential element of a structure of this kind is some means for automatically regulating the position of the block with reference to the inking-pad and the paper-support at the instant of contact of the block with each of them.

When the inking-pad and paper-support are in parallel planes, as shown in the drawings, it is preferable to so construct the swinging block and its connections with the base that the face of the type shall in either position lie in a plane parallel with the planes of the inking-pad and paper-support, and the most important feature of my improved mechanism is that by which the desired movement of the stamp is secured. The means referred to consist of three gears $G G' G''$, of equal diameter, the gear G being centered on the shaft B and rigidly fastened to the ear a' of one of the side pieces of the bed, the gear G'' being centered on the shaft B' and rigidly fastened to an ear c' , formed on the plate C , and the gear G' being journaled on a pivot B'' , set in the link L' at a point midway between the shafts $B B'$. The loose gear G' engages the fixed gears $G G''$, and it is evident that if the stamp C' be swung about the axis of the shaft B as a center through any angle whatever the successive positions assumed by its lower face or by the working-surface of the type thereon must necessarily be planes parallel to each other and to the surface of the inking-pad and paper-support. The position of the stamp C' with reference to its own axis of rotation B' being thus automatically governed and the perfect contact of the type with the inking and printing surfaces being thus secured, the machine may be operated

speedily and accurately, the feeding of paper to be printed being the only part of the operation requiring time or care.

The loose gear G' may be made in a single piece in the ordinary manner; but I prefer to make it of two pieces g g' , connected by a set-screw S' , passing through a slot S'' in the part g' and engaging a screw-threaded opening in the part g . The object of this construction is to provide for slight rotary movement of the parts with reference to each other, in order to take up any lost motion consequent on the wear of the teeth of any of the gears.

When the gears G G' G'' are of the same diameter, as shown in the drawings and herebefore described, the successive planes of position of the stamp are all parallel; and this is the preferable construction, since it renders it possible to print in any plane parallel to the paper-support, and thus permits the use of a tablet of paper, the sheets of which may be successively printed and removed. It is evident, however, that the machine may be constructed with the inking-pad and paper-support in planes not parallel to each other, and such a construction is shown in Figs. 6 and 7. In such a case a suitable change in the relative diameters of the gears G G' G'' varies the movement of the stamp upon its axis of rotation, so as to bring it into perfect contact at its opposite limit of motion with the inking-pad and surface to be printed.

The device shown and described herein as an embodiment of my invention is of such size and construction as to be suitable for use only as a hand-stamp; but the movements of the type-carrying block and the means for automatically controlling its position with reference to its axis of rotation may be equally well applied to any printing-machine whatever, and I desire, therefore, not to limit the invention to its application to printing devices operated by hand in the manner shown and described.

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

1. In a machine of the class described, the

combination, with a suitable support and an inking-surface, and a paper-support stationary with reference thereto, of a type-carrying block, links connecting said block with said support, two gears rigidly fastened to said block and said support, respectively, and a third gear loosely journaled to one of said links and engaging and connecting said fixed gears, said gears being adapted to automatically govern the position of said block upon its axis, substantially as and for the purpose set forth.

2. In a machine of the class described, the combination, with a suitable bed provided with inking and paper-supporting surfaces lying in parallel planes to a type-carrying block connected with said bed by links permitting oscillation of the block about the axis of connection of the links with the bed and rotation of the block about the axis of connection of the links with the block, of gears of equal diameter lying in the same plane and rigidly attached to said bed and block, respectively, and a third gear journaled to one of said links at a point intermediate between the centers of said stationary gears, said third gear being of the same diameter as the other two and in engagement with them both, whereby the successive planes of position of the working-surface of the block shall be parallel to each other, substantially as and for the purpose set forth.

3. The combination, with the bed having an inking-surface A and a paper-supporting surface A' , of a shaft B , journaled in the bed, the shaft B' and links L L' , connecting it with the shaft B , the plate C , hung upon the shaft B' , the gears G G'' , centered on the shafts B B' , respectively, and rigidly fastened to the bed and the plate C , respectively, and the intermediate gear G' , journaled to the link L' and connecting the fixed gears G G'' , substantially as and for the purpose set forth.

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

DANIEL C. STOVER.

Witnesses:

R. H. WILES,

W. C. FERGUSON.