

N^o 21,670



A.D. 1911

(Under International Convention.)

Date claimed for Patent under Patents and Designs Act, 1907, being date of first Foreign Application (in Germany), } 14th Oct., 1910

Date of Application (in the United Kingdom), 2nd Oct., 1911

At the expiration of twelve months from the date of the first Foreign Application, the provision of Section 91 (3) (a) of the Patents and Designs Act, 1907, as to inspection of Specification, became operative

Accepted, 23rd May, 1912

COMPLETE SPECIFICATION.

Machine for Vending Postage Stamps.

I, MAX SIELAFF, of 23, Spener Strasse, Berlin, German Empire, Manufacturer, do hereby declare the nature of this invention and in what manner the same is to be performed, to be particularly described and ascertained in and by the following statement:—

5 This invention relates to vending machines and is particularly adapted for machines for vending postage stamps and the like. The invention has for its object to provide an improved device for delivering the strip of stamps.

10 In machines of this class it has heretofore been proposed to feed the paper strip by means of a pair of rollers adapted to effect the rough adjustment of the strip, and to provide a second pair of rollers, if desired, nearer the end of the strip, the fine adjustment of the strip into severing and delivering position being effected by means of prongs, dogs, or like reciprocated feeding devices. Such mechanism is however frequently inefficient in operation, as the rollers effecting the rough adjustment must be brought to bear with considerable pressure on the 15 paper strip so that the gummed side of the latter easily sticks to the rollers.

20 In carrying out the invention I employ a machine of the type having a pair of rotatable rollers between which the strip passes and which press only lightly thereon and a reciprocatory feed device, such as prongs, clips or the like for feeding the strip forwardly, but, according to the present invention, I arrange said rollers near the end of the strip and provide a retarding device such as clips or their equivalent for holding the strip in position. Furthermore I provide means for intermittently rotating said rollers in one direction only so that they roll on the strip during the movement of said feed device in one direction and remain stationary during its movement in the opposite direction.

25 In order that the invention may be more clearly understood, reference is made to the accompanying drawings, which diagrammatically illustrate various methods of carrying out the invention, such parts of the feeding device being shown as are necessary for the invention to be clearly understood.

30 Figures 1, 2, 3 and 4 illustrate one form of my invention and show the different positions assumed during the feeding operation.

Figure 5 is a plan view showing the mechanism for rotating the rollers.

[Price 8d.]



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Figure 6 is a view corresponding to Figure 3 showing a slightly modified form of my invention.

Figures 7 and 8 are views corresponding to Fig. 6 showing further modifications of my invention.

Throughout the drawings *s* designates the strip of stamps and *s*¹ *s*² *s*³ *s*⁴ *s*⁵ the individual stamps. *a* designates prongs or the like engaging perforations in the stamps and adapted to feed the strip of stamps forwardly, the strip of stamps being supported on the side opposite the prongs *a* by means of a suitable support *b*. *c c* designate the rollers arranged in proximity to the end of the strip and adapted to hold the strip of stamps firmly in position. *d* is a reciprocatory frame which may be provided with suitable guides (not shown) for guiding the strip of stamps to the knives *g* and *g*¹. *e* is a clip or like retarding device adapted to press the strip of paper *s* against a support *f* under the action of a spring *e*¹. 5 10

Referring to Figures 1 to 4 of the drawings: in this case the prongs *a* and rollers *c* are each carried by the reciprocatory frame *d* whilst the retarding device *e* is arranged above the latter. 15

Figure 1 shows the position the parts assume immediately after the severing of a stamp. On the next operation of the machine the frame *d* is raised into the position shown in Figure 2 a distance somewhat more than the normal length of a stamp in order to allow for irregularities in the length of the stamps. During this upward movement the prongs *a* and counter-support *b* ride over the strip of stamps and crumpling of the strip of stamps during this movement is prevented by means of the rollers *c* which roll upon the stamps during the upward movement of the frame *d* and thus maintain the strip of stamps rigidly in position. The rollers *c* are so arranged as to press only very lightly on the strip of stamps and are adapted to rotate only in the direction indicated by the arrows by any suitable mechanical means. As shown in Figure 5 the rollers may be driven in opposite directions by means of gear wheels *h* meshing with one another, the shaft of one roller *c* being provided with a loose gear-wheel *i* adapted to engage a fixed toothed rack *k*. The loose gear wheel *i* is connected with a ratchet wheel *i*¹ concentric therewith and adapted to be engaged by means of a pawl *i*² carried by an arm *i*³ fixed on the shaft of the roller *c*, so that on the rack *k* moving downwardly relatively to the rollers *c* the gear wheel *i* and ratchet wheel *i*¹ will be rotated and through the pawl *i*² and arm *i*³ one of the rollers *c* will be rotated in the direction indicated by the arrows, whilst on the rack *k* moving upwardly relatively to the rollers *c* the ratchet wheel *i*¹ will ride over the pawl *i*² and the roller *c* will thus remain stationary. 20 25 30 35

It will thus be seen that on raising the frame *d* from the position indicated in Figure 1 to that shown in Figure 2 the rollers *c* will roll on the strip of stamps and maintain it rigidly in position without moving it from its initial position and at the same time prevent it being taken upwardly by the prongs *a*. 40

As only slight power is required to drive the rollers *c* owing to the fact that the latter do not bear with any considerable pressure on the strip of stamps, the frame *d* may be readily actuated by means of springs whilst at the same time the possibility of the stamps sticking to the rollers *c* is minimized. 45

On the parts assuming the position indicated in Figure 2 the frame *d* commences its return movement until, when in the position indicated in Figure 3, the prongs *a* engage the perforations between the stamps *s*⁴ and *s*⁵. During the movement of the parts from the position illustrated in Figure 2 to that of Figure 3, the prongs *a* ride over the stamp *s*⁵, the possibility of the prongs taking the stamp *s*⁵ with them being prevented on the one hand by the retarding device *e* and on the other hand by the resistance of the paper strip supply roll, this resistance being however overcome when the prongs *a* engage the perforations in the strip. During this downward movement the rollers *c* glide over the paper strip in consequence of the light pressure of the rollers thereon. Should the pressure of the rollers *c* on the paper strip be sufficient to cause the rollers *c* 55

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to take the paper strip with them when moving from the position shown in Figure 2 to that shown in Fig. 3, provision is made for enabling the rollers *c* to move backwardly in a direction opposite to that indicated by the arrows and if desired this movement may be braked in any desired manner. The backward
5 movement of the rollers *c* is enabled in the construction illustrated in Figure 5 by the pawl *v*³ riding on the ratchet wheel *v*¹ whilst the necessary braking effect is obtained by the friction of the parts.

On the further downward movement of the frame *d* into the position illustrated in Figure 4 the strip *s* is fed downwardly by the prongs *a*, the rollers *c* remaining stationary during this movement. The rollers *c* are arranged in such
10 a position on the frame *d* as to engage the second stamp *s*² during the feeding movement, as shown in Figures 2, 3 and 4, and may be arranged close up to the knives *g* and *g*¹, so that the perforations between the stamps *s*¹ *s*² may be properly positioned relatively to the knives. During the downward movement
15 of the frame *d* the movable knife *g* is actuated by any suitable means (not shown) so as to gradually move towards the strip and to cut off the stamps *s*¹ at the end of the downward movement. The arrangement of the knives *g* and *g*¹ on the frame *d* thus enables a very gradual movement of the knife *g* to be effected and thus necessitates less driving power than is required for a rapid movement of the
20 knife.

It will of course be readily understood that if desired the retarding device *e* instead of being arranged above the reciprocatory frame *d*, as illustrated in Figures 1 to 4, may be arranged between the prongs *a* and rollers *c*, as illustrated in Figure 6, the retarding device *e* and counter-support *f* being supported
25 in any suitable manner from the casing of the machine or other fixed part. It will of course be understood that in this case the resistance of the supply roll must be sufficient to prevent the strip being taken by the prongs *a* during the movement corresponding to that shown at Figures 2 & 3.

In the modification shown in Figure 7 the prongs *a* and counter-support *b* are
30 shown as supported by any fixed part in the machine whilst the retarding device *e* and counter-support *f* is mounted on the reciprocatory frame *d*, the prongs *a* in this case being arranged between the retarding device *e* and the rollers *c*, as in Figures 1 to 4. In this modification the clips *e* act as the feeding device and during the downward movement the strip must be moved to such an
35 extent that the corresponding perforations are engaged by the prongs *a* on the next upward movement of the frame *d* with the strip, so as to allow for irregularities in the length of the stamps. The rollers *c* in this case operate in a similar manner to that described with reference to Figures 1 to 4, but glide on the paper strip during the first part of the upward movement until the prongs *a*
40 engage the perforations between the stamps *s*² *s*³ whereupon the rollers *c* roll over the paper strip as in Figures 1 & 2. The rollers *c* in this case must be so located that the perforations between the stamps *s*¹ *s*² are positioned clear below the rollers *c* when the frame *d* assumes its highest position. It will of course be understood that the clip *e* in this case must grip the paper strip sufficiently to
45 take the strip therewith during the commencement of the upward movement of the frame *d* and prevent the paper strip being drawn through by the rollers *c*.

The knife *g* is in this case caused to come into operation to cut off the stamp, as soon as the strip is arrested in its upward movement by the prongs *a*.

Figure 8 illustrates a modification in which the rollers may be fixed in the
50 casing of the machine instead of on the frame *d* in which case the rack *k* actuating the rollers *c* must be connected with the frame *d*, so that the rollers roll on the strip during the downward movement of the frame *b* and strip *s* and remain stationary during the upward movement of the frame *d*.

If desired the whole of the parts may be arranged to swing so that the movable
55 parts acting on the strip are caused to move in a curve. In this case the frame *d* may be of curved form in side view and oscillate about the centre point of the curve.

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In cases where the paper strip *s* is not perforated but is impressed or provided with notched edges or the like dividing it into suitable portions, the prongs *e* may be replaced by any other suitable device.

Having now particularly described and ascertained the nature of my said invention, and in what manner the same is to be performed, I declare that what I claim is:—

1. In combination with a machine for vending postage stamps and the like from a strip of the type having a pair of rotatable rollers between which the strip passes and pressing only lightly thereon, and a reciprocatory feed device such as prongs, clips or the like for feeding the strip forwardly; a retarding device such as clips or their equivalent for holding the strip in position, and means for intermittently rotating said rollers in one direction only so that they roll on the strip during the movement of said feed device in one direction and remain stationary during its movement in the opposite direction, said rollers being arranged nearer the end of the strip than said feed device. 10

2. A machine as claimed in Claim 1, in which the feed device and the rollers are mounted on a common reciprocatory frame, substantially as described. 15

3. A machine as claimed in Claims 1 or 2 in which the rollers are rotated by a toothed rack and gearing on the movement of the feed device in one direction and prevented from rotation by friction or by a catch or its equivalent on the movement of the feed device in the opposite direction, substantially as described. 20

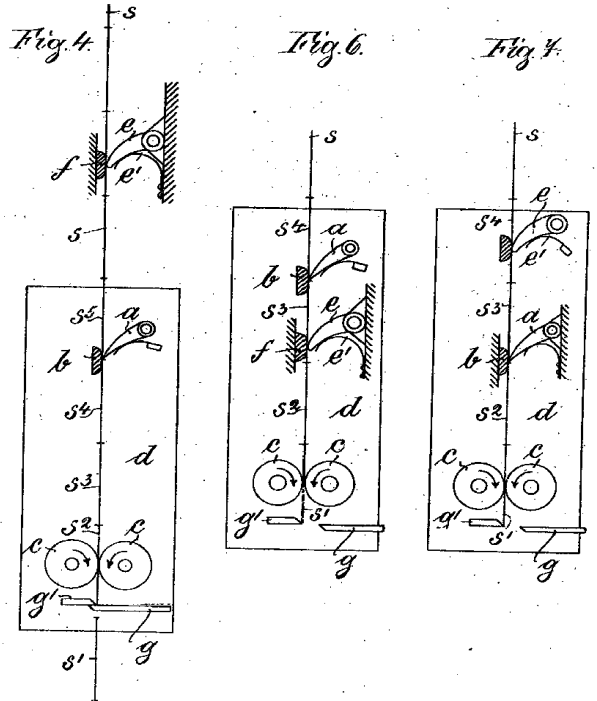
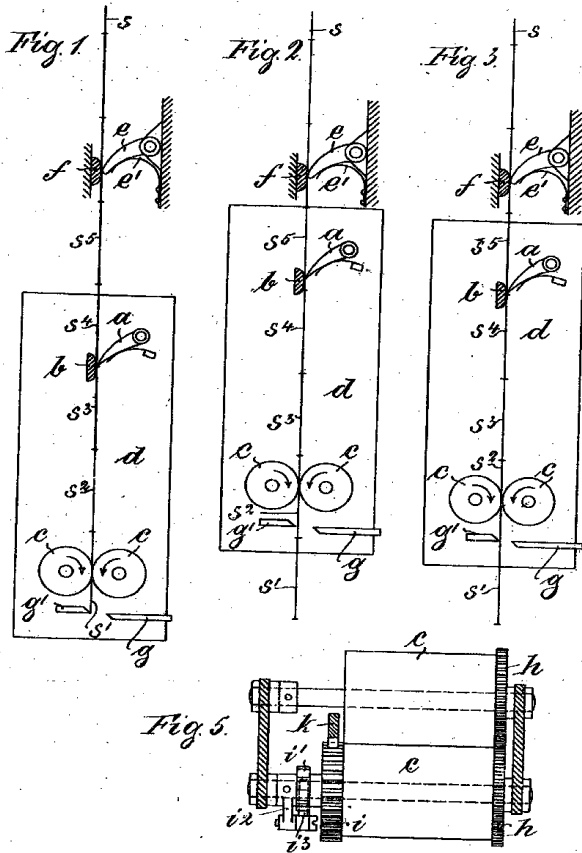
4. A machine as claimed in Claims 1, 2 or 3, in which the severing device or knife is mounted on the frame carrying the feed device, so that the knife may be moved during the feed of the strip, substantially as described.

5. In a machine for vending strips of postage stamps or the like, means for delivering the stamps or the like, substantially as herein described with reference to the accompanying drawings. 25

Dated this 2nd day of October, 1911.

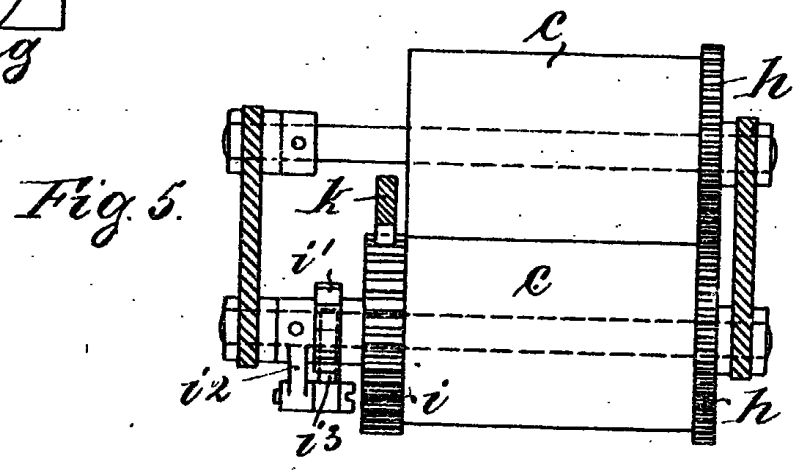
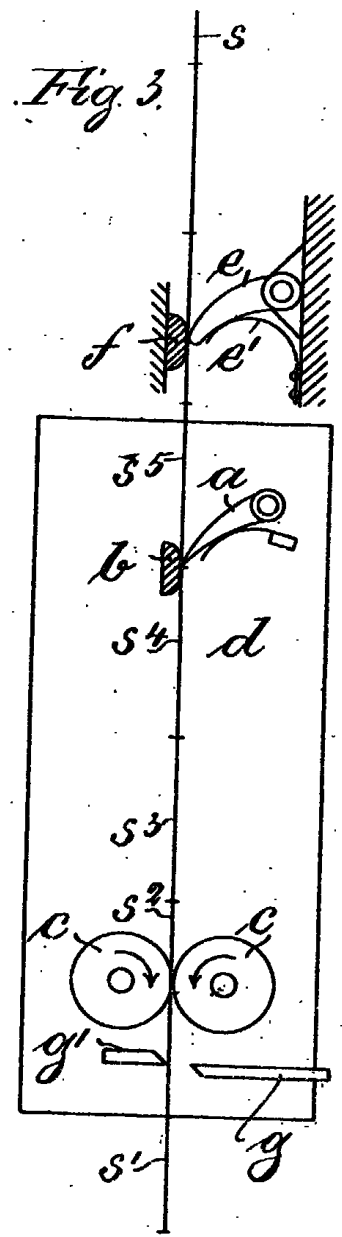
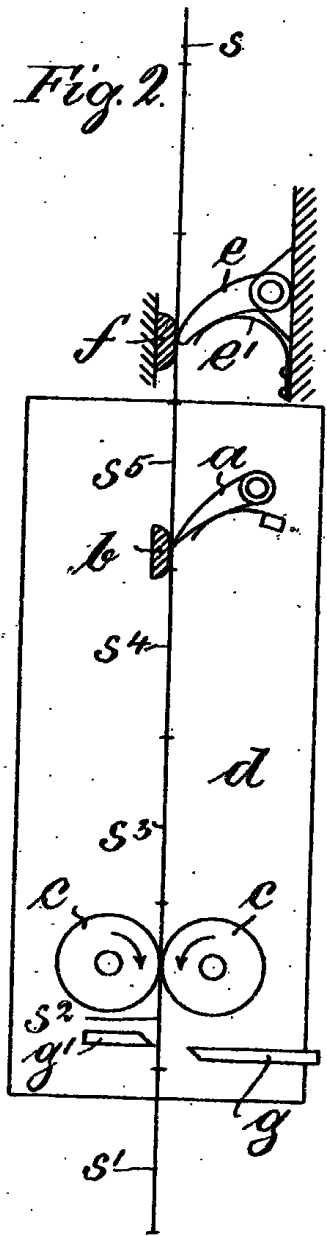
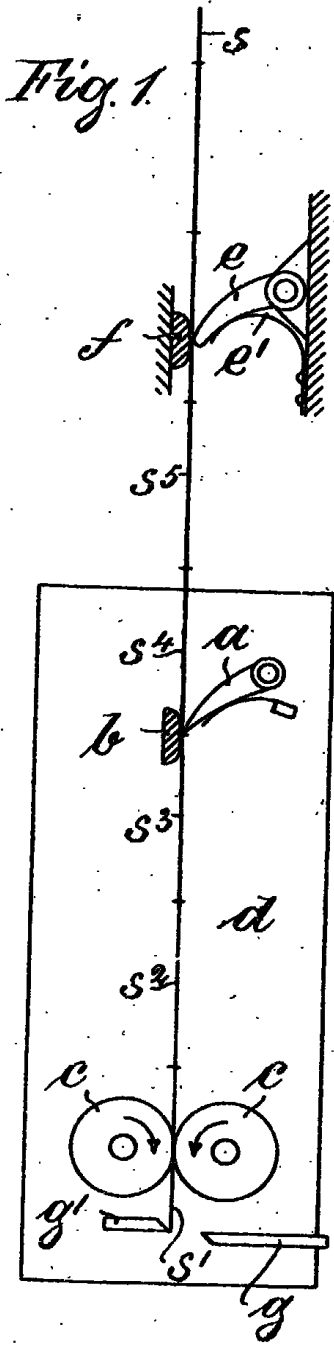
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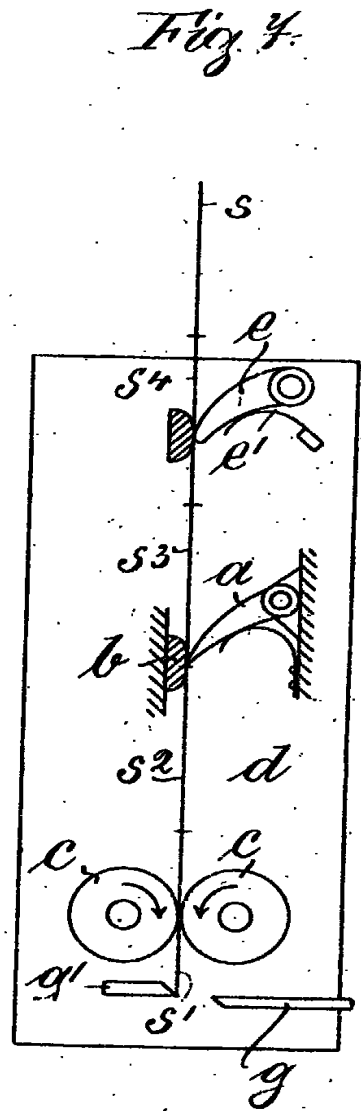
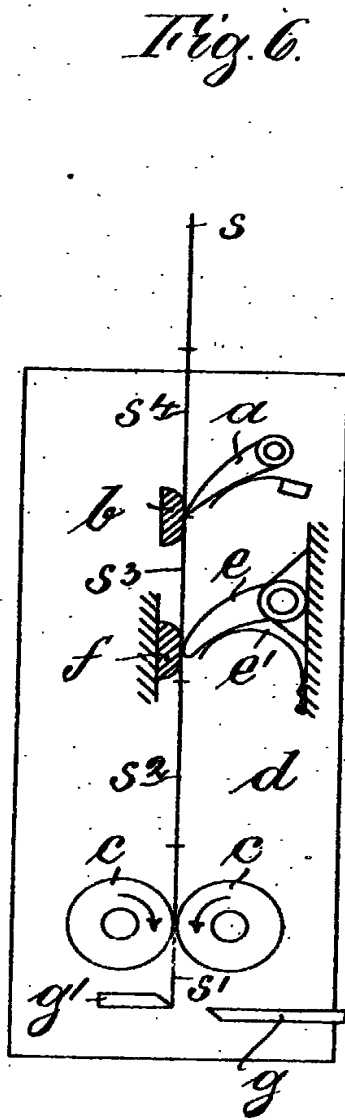
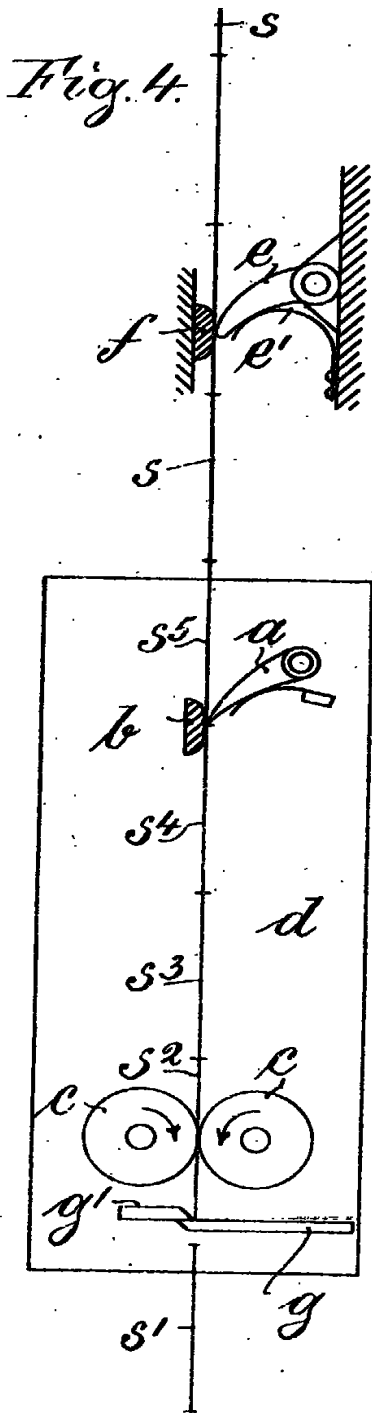
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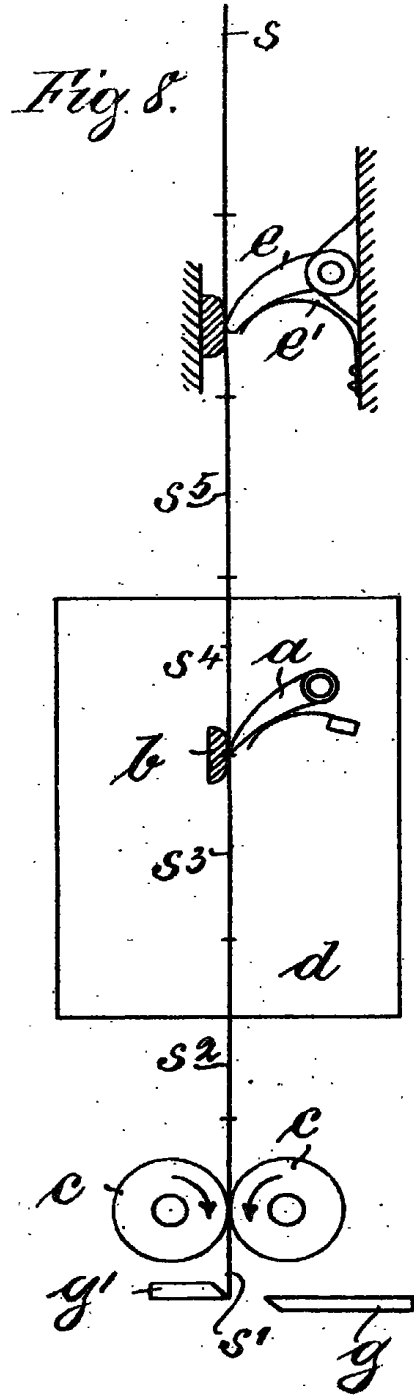
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