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PROVISIONAL SPECIFICATION.

Improvements in Vending Apparatus for Postage Stamps, Tickets and other Articles.

I, MAX SIELAFF, of 23 Spener Strasse, Berlin, Kingdom of Prussia, German Empire, Manufacturer do hereby declare the nature of this invention to be as follows:—

5 My invention relates to coin-controlled vending devices, especially those used for selling postage stamps, tickets and other articles, which are taken off from a strip and its object is to avoid the incorrect action of the apparatus hitherto used. The parts of such strips of postage stamps or tickets are not correctly of the same length and therefore it is difficult to move the strips automatically so exactly as is necessary for a good working of the apparatus.

10 The invention is illustrated in the accompanying drawings in several modifications.

Figures 1—6 show side views of the principal arrangement of the device in different positions of working.

15 Figure 1 shows the paper-strip in the original position, and Figures 2, 3, 4, 5, 6 several other positions of the paper strip, to explain the working of the apparatus.

In Figures 7—10 a modification of the device is similarly illustrated in different side views.

20 Figure 11 shows a plan view of the transport roller of a third modification, and

Figure 12 shows a side and front view of a mechanism for holding the paper strip.

In Figures 13, 14, 15, 16 17, 18 are illustrated different positions of the third modification of the invention.

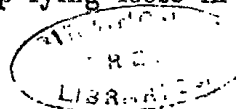
25 My invention consists principally in moving the paper strip more than the length of the ticket or stamp, which is to be delivered and then, after having separated the ticket from the strip, to control and to regulate the position of the paper strip, so that it gets its normal position.

30 The chief arrangement of the device illustrated in Figs. 1—3 is the following: The ticket- or stamp-strip $s^1 s^2 s^3$ is perforated at $s^4 s^4$ in the well known manner; each part between two perforations or several parts is to be correctly delivered by the apparatus to the customer.

35 $a a^1$ are two rollers, a^1 having two recesses $c c$. $b b^1$ are two rollers arranged beneath the rollers $a a^1$. d is an arm attached to a lever e at the point d ; the lever e being allowed to swing round a spindle e^1 . e^2 is a spring pressing the lever e to the right side against the cam g , a pin e^3 on lever e leaning against the cam g .

The working of the device as illustrated in the Figures 1—4 is as follows: the stamp-strip end, being in the position Figure 1 rests on the arm d and thereby a distinct position of the strip is secured, the strip lying loose in the

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recess c between the rollers $a a^1$. When the rollers $a a^1$, $b b^1$ are moved in the direction of the arrows $r r^1$, they come in the position illustrated in Figure 2 and the paper strip begins to be transported by $a a^1$. At this moment, when the transporting operation begins, the arm d is drawn back by the rotating cam g by means of the pin e^2 on the lever e , and the paper strip gets the positions Figure 3 and then Figure 4. In position Figure 4 the paper strip is grasped by the rotating rollers $b b^1$ and drawn downwards.

It is supposed that the rollers $b b^1$ revolve more quickly than the rollers $a a^1$ and it is clear that, as soon as the rollers $b b^1$ have firmly grasped the strip part s^1 , and the perforated part s^4 being free from the rollers $a a^1$ (Figure 4) the strip must be divided and a separate part s^1 is formed. To support the dividing action the arm d may be pushed forward by the spring e^3 against the strip s^1 as shown in Figure 5, the cam g having left free the pin e^2 .

It is obvious that the dividing operation can be brought into effect by one of these devices or by both.

The separated part s^1 of the strip is further transported by the rollers $b b^1$, thrown out and delivered to the customer. The part s^2 of the strip is held between and by the rollers $a a^1$ and it is of importance to secure now the exact normal position of the strip, so that its end gains the position shown in Figure 1 and that is secured by the arm d , which is already in the position Figure 5; the recess c has released the strip from the influence of the rollers $a a^1$. As seen in Figure 6 the rollers $a a^1$ have left free the remaining paper strip $s^2 s^3$, and the end of the paper strip touches the arm d and rests on it in the same manner as seen in Figure 1.

In this way always a correct normal position of the end of the ticket strip or stamp strip is secured and the differences and the surplus in the transport of the strip by the rollers $a a^1$ is eliminated, according to the effect of the supporting arm d and of the recess c . The chief point of the strip is always in a distinct position secured by the arm d .

It is obvious that it is possible to transport, and to deliver always two or three parts of the strip in the same manner as described, furthermore it is obvious, that instead of the rollers $a a^1$ tongs may be employed which move the strip and are opened when the end of the strip rests on the arm d . Instead of the recesses c on the roller a^1 a pair of rollers may be employed which are not in a fixed position one to another but may be removed one from another a short time, so that the end of the strip may gain its original position, supported by the arm d .

Naturally the arm d can hold the paper strip at any point desired, and it is not necessary that the paper strip is held at its end.

It has been supposed that the paper strip is always transported with a certain surplus and the arrangement of the described device (Figures 1—6) is such that the faults arising from this surplus of transport are eliminated. But it is possible, that the transport of the paper strip is smaller than necessary and to compensate this a further invention is to be employed, which is now to be described and which is illustrated in Figures 7—10.

The arrangement of the rollers is the same as in Figs. 1—6 and the same letters are employed for the same mechanism.

The arm d which has the purpose to support the end of the paper strip is provided with a projection d^2 and above the arm d is arranged a second arm e^4 with a projection e^5 . The arm e^4 is bent at its end at a right angle and forms the projection e^6 ; the projection e^6 and the projection d^2 of the arm d form a tong, and the arm e^4 rests by means of the projection e^5 on the arm d . The lever e which is moved in the already described manner by the two cams g and f is illustrated in its original position in Figure 7. In this position the tong $d^2 e^6$ has grasped the end of the paper strip and holds

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it fast in its correct position. If the rollers a a^1 , b b^1 are moved in the direction of the arrows r r^1 , the paper strip s^1 is moved downwards by the rollers a a^1 and in the same moment the arm d is moved back by the action of the cam f . The end of the paper strip is free and is brought between the rollers b b^1 in the manner described by Figures 3, 4, 5, and the last part of the strip s^1 s^2 s^3 is separated in the manner illustrated in Figure 5.

The arm d is now released from the cam f and has got the position Figure 9, that is to say the most exterior part of the arm stands beneath the end of the paper strip s^2 .

It is clear that when the paper strip has not been transported enough, there will be a free space between the most exterior part of the arm d and between the end of the strip s^2 . It is clear that this is not a correct position of the end of the strip and to bring this end of the strip into the position shown in Figure 7, it is necessary to grasp the end of the strip and to transport it downwards, and this is effected by the nose or projection d^3 of the arm d and by the projection e^6 of the arm e^4 in the following manner:—

The arm d has been raised by the action of the cam f and brought into the position shown in Figure 10 and the arm e^4 being supported by the arm d by means of the projection e^5 is raised in the same manner so that the two projections d^3 and e^6 stand in the position Figure 10. They form opened tongs and these tongs are closed by means of the cam g , as clearly shown in Figure 7, so that the end of the paper strip is grasped, and when the arm d has become free of the action of the cam f , both arms d and e^4 sink down by their own weight and transport the paper strip in the correct position, Figure 7.

It is obvious that the raising and the lowering of the arms d and e^4 with tongs d^3 and e^6 must be chosen so that the greatest differences which may occur in the transporting of the paper strip are eliminated and regulated by these elements and movements.—Instead of moving the paper strip by this described arrangement of an arm or tongs it is possible to chose another arrangement and modification, which is illustrated in Fig. 11—18, and which gives utmost security concerning the correct transport of the paper strip.

The arrangement of the rollers a a^1 b b^1 is the same as in the already described modification, and as seen in Fig. 11 there are employed one pair of rollers a a^1 arranged on the axles c^3 c^3 and one pair of rollers b b^1 arranged on the axles c^4 c^4 . Furthermore are arranged on the axles c^3 two pairs of rollers g^1 g^1 at both sides of the pair of rollers a a^1 . d^6 d^6 is a grasping mechanism to hold the strip of paper. Both tongs of the grasping mechanism d^6 d^6 are on the spindle d^7 a^7 and are closed by the effect of the spring f^2 . e^7 is the supporting frame of the grasping mechanism. h h^1 (Fig. 18) are two stop pins to limit the movement of the grasping mechanism. The rollers a a^1 rotate in the direction of the arrows r , the rollers g^1 g^1 rotate in opposite direction, arrow r^2 .

The rollers b b^1 rotate in the same direction as already described in the first and second modification. The working of the device is as follows:

It is supposed that always two parts of the paper strip shall be separated. In Fig. 13 is illustrated the original position of the paper strip. As clearly to be seen, the part s^1 of the paper strip is held by the tongs d^6 d^6 and is grasped in this position by the rollers a a^1 . The rollers g^1 g^1 moving in the opposite direction, begin to let the paper strip pass, as seen in Fig. 13. below. When the rollers a a^1 have turned 90 degrees they have got the position, Fig. 14, and the paper strip is transported as seen in such a manner that it nearly enters the rollers b b^1 . Also in this position the rollers g^1 g^1 let pass the paper strip. When the rollers have furthermore turned 90 degrees, the position illustrated in Fig. 15 is obtained. The paper strip has been seized by the rollers g^1 g^1 and the rollers a a^1 have such a position that they are upon the point to release the paper strip. Also in this position the rollers g^1 g^1

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let the paper strip pass, and the paper strip is only transported by the rollers b b^1 until it has reached the position Fig. 16 (after having turned 90 degrees). In this position, Fig. 16, the paper strip 2 is seized by the revolving rollers g g^1 and the perforation between the respective parts of the paper strip is broken. The remaining part of the paper strip is transported upwards, as clearly 5 seen in Fig. 17 and gets such a position that the end of that part of the paper strip is at the same height as the spindle c^3 of the roller g^1 .

In Fig. 18 the position of the paper strip is the same as that of Fig. 13. I shall now describe the effect of the tongs d^6 . The tongs d^6 which have seized the remaining part of the paper strip make only very small movements 10 between the stop pins h h^1 and the tongs have only the purpose to bring the end of the paper strip in such a position that it can be seized by the rollers a a^1 . It is obvious that if the rollers g^1 g^1 have transported the strip upwards to the position, Fig. 18, the paper strip is released and is free so that it would be possible that it could sink and thereby interfere with the action 15 of the device, but the tongs prevent this.

Then the tongs grasp the end of the paper strip and the latter can only sink the little distance which is allowed for the movement of the tongs between the stops h h^1 .

It is obvious that the tongs may hold fast the paper strip the whole time 20 when the device is working, but it is better to open the tongs by mechanisms not shown in the drawing as long as the action of the tongs on the paper strip is not necessary.

By the action of these tongs the paper strip is held fast when all the rollers 25 are without action on the paper strip and they move the paper strip a short way downwards so that it can be surely caught afterwards by the revolving rollers a a^1 .

Dated this 16th day of August 1904.

JENSEN & SON,
77, Chancery Lane, London, W.C., 30
Chartered Patent Agents.

COMPLETE SPECIFICATION.

Improvements in Vending Apparatus for Postage Stamps, Tickets and other Articles

I, MAX SIELAFF, of 23 Spener Strasse, Berlin, Kingdom of Prussia, German 35 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:—

My invention relates to coin-controlled vending devices, especially those used for selling postage stamps, tickets and other articles, which are taken off from 40 a strip and its object is to avoid the incorrect action of the apparatus hitherto used. The parts of such strips of postage stamps or tickets are not exactly of the same length and therefore it is difficult to move the strips automatically so exactly as is necessary for a good or proper working of the apparatus.

Several modifications of the invention are illustrated in the drawings filed 45 with the Provisional Specification of which

Figures 1—6 are side-views showing the principal arrangement of the device in different positions of working. Of these figures,

Figure 1 shows the paper-strip being in the original position, and

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Figures 2, 3, 4, 5 and 6 illustrate several other positions of the paper strip to show the working of the apparatus,

In Figures 7—10 a side view of a constructional form of the device is similarly illustrated showing the component parts in different positions

5 Figure 11 shows a plan view of another constructional form of the vending apparatus,

Figure 12 shows a side and front view of a mechanism for feeding the paper strip.

10 In Figures 13—18 are illustrated different positions of a third constructional form of the invention. Figures 13—18 are to be understood as double figures, the upper part being a section on line A—B of Figure 11, the lower part on line C—D of Figure 11.

My invention consists principally in moving the paper strip more than the length of the ticket or stamp, which is to be delivered and then, after having separated the ticket from the strip, to control and regulate the position of the paper strip, so that it returns to its normal position. All the different means shown in the constructional form have only for the purpose to adjust the paper strip when the separation has taken place in a correct end position, so that the apparatus may always act properly without regard to the nature of the paper strip.

20 The principal arrangement of the device illustrated in Figures 1 to 3 is the following:

The ticket- or stamp-strip $s^1 s^2 s^3$ is perforated at $s^4 s^4$ in the well known manner and it is intended that each part between two perforations or several parts is to be correctly delivered by the apparatus to the customer.

25 $a a^1$ are two rollers, a^1 having two recesses $c c$. $b b^1$ are two rollers arranged beneath the rollers $a a^1$ and d is an arm attached to a lever e at the point d , the lever e being allowed to swing around a spindle e^1 . e^3 is a spring pressing the lever e to the right side towards the cam g whereby the pin e^2 on the said lever e is forced against the cam g . The lever d rests upon the cam f and is governed, that is to say moved, up and down by it when it revolves.

30 The working of the device as illustrated in the Figures 1 to 4 is as follows: The stamp strip end being in the position Figure 1, its end rests on the arm d and thereby a definite position of the strip is secured, the strip being and lying loose in the recess c between the rollers a, a^1 . When the rollers $a a^1, b b^1$ are moved in the direction of the arrows $r r^1$, they come into the position illustrated in Figure 2 and the paper strip begins to be fed by the rollers $a a^1$. At this moment, when the feeding operation begins, the arm d is drawn back by the rotating cam g by means of the pin e^2 on the lever e ; and the paper strip assumes the positions shown in Figure 3 and then in Figure 4. In the position Figure 4 the paper strip is grasped by the rotating rollers $b b^1$ and drawn downwards.

45 The rollers $b b^1$ are arranged to revolve more quickly than the rollers $a a^1$ and it is clear that as soon as the rollers $b b^1$ have firmly grasped the strip part s^1 , and the perforated part s^4 is free from the rollers $a a^1$ (Figure 4), the strip must be divided and a separate part s^1 is formed. To assist the tearing or dividing action the arm d may be pushed forward by the spring e^3 against the strip s^1 which is then separated from the part s^2 as shown in Figure 5, the cam g having allowed the pin e^2 to move to the right and with it the lever e .

50 It is obvious that the dividing operation may be effected by one of these devices or by both.

55 The separated part s^1 of the strip is further fed by the rollers $b b^1$, thrown out and delivered to the customer. The part s^2 of the strip is held between and by the rollers $a a^1$ and it is now of importance to secure the exact normal position of the strip, so that its end attains the position shown in Figure 1. This is accomplished by the arm d , which is already in the position shown in

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Figure 5 as the recess *c* has released the strip from the influence of the rollers *a a*¹. As seen in Figure 6 the rollers *a a*¹ have liberated the remaining paper strip *s*² *s*³, and the end of the paper strip touches the arm *d* and rests on it in the same manner as seen in Figure 1.

In this way, a correct normal position of the end of the ticket strip or stamp strip is always secured and the differences and the surplus in the transport of the strip by the rollers *a a*¹ is eliminated, according to the effect of the supporting arm *d* and of the recess *c*. The chief point is that the end of the strip or a predetermined point of the strip is always in a distinct or definite position which is secured by the arm *d*. 5 10

It is obvious that it is always possible to transport and to deliver two or three parts of the strip in the same manner as described, furthermore it is obvious, that instead of the rollers *a a*¹, tongs may be employed, which move the strip and are opened when the end of the strip rests on the arm *d*. Instead of the recesses *c* on the roller *a*¹ a pair of rollers may be employed which are not in a fixed position with regard to each other but may be removed from each other for a short time so that the end of the strip may attain its original position, supported by the arm *d*. 15

Naturally the arm or lever *d* may hold the paper strip at any point desired, and it is not necessary that the paper strip be held at its end. 20

It has been supposed that the paper strip is always fed forward farther than necessary in the arrangement of the described device (Figures 1 to 6) and the construction is such that the faults arising from this overfeeding are eliminated. But it is possible that the paper strip is not fed forward or not as far forward as necessary and to compensate this, the following device is provided which is now to be described and which is illustrated in Figures 7 to 10. 25

The arrangement of the rollers is the same as in Figures 1 to 6 and the same letters are employed for like parts.

The arm *d* which supports the end of the paper strip is provided with a projection *d*² and above the arm *d* is arranged a second arm or lever *e*⁴ with a projection *e*⁵. The arm *e*⁴, which is indicated by dotted lines is bent near its end at a right angle and forms the projection *e*⁶, the projection *e*⁶ and the projection *d*² of the arm *d* form tongs, and the arm *e*⁴ rests by means of the projection *e*⁵ on the arm *d*. The levers *e* and *d* which are moved in the manner already described by the two cams *g* and *f* are illustrated in their original position in Figure 7. In this position the tongs *d*² *e*⁶ have grasped the end of the paper strip and hold it fast in its correct position. If the rollers *a a*¹ *b b*¹ are moved in the direction of the arrows *r r*¹ the paper strip *s*¹ is moved downwards by the rollers *a a*¹ and at the same moment the arm *d* is moved back by the action of the cam *f*. The end of the paper strip is free and is brought between the rollers *b b*¹ in the manner as described with reference to Figures 3, 4 and 5, and the lowest part of the strip *s*¹ *s*² *s*³ is separated in the manner as illustrated in Figure 5. 30 35 40

The arm *d* is now released from the cam *f* and has attained the position shown in Figure 9, that is to say, the end of the said arm stands beneath the end of the paper strip *s*². It is clear that when the paper strip has not been fed far enough there will be a space between the end of the arm *d* and between the end of the strip *s*². It is clear that this is not a correct position for the end of the strip and to bring this end of the strip into the position as shown in Figure 7, it is necessary to grasp the end of the strip and to feed it downwards and this is effected by the nose or projection *d*² of the arm *d* and by the projection *e*⁶ of the arm *e*⁴ in the following manner: 45 50

The arm *d* has been raised by the action of the cam *f* and brought into the position shown in Figure 10 and the arm *e*⁴ being supported by the arm *d* by means of the projection *e*⁵ is raised in the same manner so that the two projections *d*² and *e*⁶ are in the position shown in Figure 10. They form an opened 55

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pair of tongs or jaws and these tongs are closed by means of the spring e^3 , Figure 1, and the cam g , as clearly shewn in Figure 7, so that the end of the paper strip is grasped, and when the arm d has become free from the action of the cam f , both arms d and e^4 sink down by their own weight and

5 transport the paper strip in the correct position shewn in Figure 7.
It is obvious that the raising and the lowering of the arms or levers d and e^4 with the tongs or jaws d^2 and e^6 must be so arranged that the greatest differences which may occur in the feeding of the paper strip are eliminated and regulated by these devices and movements. Instead of moving the paper strip

10 by this described arrangement of an arm or a pair of tongs other arrangements may be employed and the modification, which is illustrated in Figures 11 to 18, gives the utmost security for the correct feeding of the paper strip.
The arrangement of the rollers a a^1 b b^1 is the same as already described and as seen in Figure 11, two pairs of rollers a a^1 are used for obtaining an exact symmetrical action. The rollers a a^1 are mounted on the spindles c^3 c^3 and the other pair of rollers b b^1 are mounted on the axles e^4 e^4 . Furthermore there are arranged on the axles c^3 two pairs of rollers g^1 g^1 outside of the rollers a a^1 . The rollers g^1 g^1 are freely mounted upon the spindles c^3 c^3 and are driven in any convenient manner, for example by tooth wheels arranged upon another shaft but

20 the means for operating the said rollers g^1 g^1 is not shewn in the drawings: The upper and lower parts of the double Figure 13 represent respectively the rollers a a^1 and g^1 g^1 in corresponding positions, that is to say, when the rollers a a^1 are in the position illustrated in the upper part of the figure, the rollers g^1 g^1 have gained at the same time the position shewn in the lower part of the figure. The same statements also refer to the following figures. d^6 d^6 , see also Figure 12, is a gripping device to hold the strip of paper. Both tongs or jaws of this gripping or grasping device d^6 d^6 are mounted on pins or spindles d^7 d^7 and are closed by the spring f^2 . e^7 is the supporting frame of the grasping mechanism. h h^1 (Figure 18) are two stop pins to limit the movement of the grasping mechanism. The rollers a a^1 rotate in the direction of the arrows r , the rollers g^1 g^1 rotate in opposite direction as shewn by the arrow r^2 .

25 The rollers b b^1 rotate in the same direction as already described in the first and second constructional forms.

35 The device operates as follows:—

It is supposed that two portions of the paper strip are always to be separated. In Figure 13 is illustrated the original position of the paper strip.

40 As clearly seen, the part s^1 of the paper strip is held by the tongs d^6 d^6 and is grasped in this position, by the rollers a a^1 . The rollers g^1 g^1 moving in the opposite direction, begin to let the paper strip pass, as seen in Figure 13, below. If the rollers a a^1 have turned 90 degrees they have attained the position shewn in Figure 14 and the paper strip is fed as to be seen in such a manner that it nearly reaches the rollers b b^1 . Also in this position the

45 rollers g^1 g^1 let the paper strip pass. If the rollers have furthermore turned 90 degrees, the position illustrated in Figure 15 is reached. The paper strip has been seized by the rollers b b^1 and the rollers a a^1 have such a position that they are upon the point of releasing the paper strip. In this position the rollers g^1 g^1 also allow the paper strip to pass, and the latter is only fed

50 by the rollers b b^1 until it has reached the position shewn in Figure 16 (after having turned 90 degrees). In this position Figure 16, the two portions s^1 s^2 of the strip having passed through the portion s^3 of the paper strip is seized by the revolving rollers g^1 g^1 and the perforated part of the paper strip between s^2 and s^3 is broken at s^4 . The remaining part of the paper strip is fed upwards,

55 as clearly to be seen in Figure 17 and attains such a position that the end of that part of the paper strip is at the same height as the spindles c^3 of the rollers g^1 .

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In Figure 18 the position of the paper strip is the same as that of Figure 13. The action of the tongs *d*⁶ will now be described.

The tongs *d*⁶ which have seized the remaining part of the paper strip only make very small movements between the stop pins *h h*¹, and the tongs are only for the purpose of bringing the end of the paper strip into such a position that it can be seized by the rollers *a a*¹. It is obvious that if the rollers *g*¹ *g*¹ have transported the strip upwards to the position Figure 18, the paper strip is released and is free so that it would be possible for it to descend whereby the action of the device would be interfered with, but the tongs prevent this, they also perform the function of giving the paper strip a good start between the rollers *a a*¹ which it might not get, under certain circumstances, if the tongs were not used.

Then the tongs grasp the end of the paper strip and the latter can only descend the short distance which is allowed for the movement of the tongs between the stops *h h*¹.

It is obvious that the tongs may hold the paper strip fast the whole time when the device is working, but it is better to open the tongs by mechanisms not shewn in the drawing as long as the action of the tongs on the paper strip is not necessary.

By the action of these tongs, the paper strip is held fast when none of the rollers are acting on the paper strip and it moves the paper strip a short way downwards so that it can be afterwards caught for certain by the revolving rollers *a a*¹.

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. Vending apparatus for stamps, tickets and other paper strips which are to be separated, consisting of means for feeding the paper strip to a second feeding device, means for separating a part of the paper strip and means for adjusting that part of the paper strip which remains when the separating has taken place in a correct end position, substantially as described.

2. Vending apparatus for stamps, tickets and other paper strips which are to be separated, consisting of two rollers (*a a*¹) for feeding the paper strip to a second feeding device, consisting of two rollers (*b b*¹) rotating in the same direction as the rollers (*a a*¹) means for separating a part of the paper strip and means for adjusting that part of the paper strip which remains when the separating has taken place in a correct end position, substantially as described.

3. Vending apparatus for stamps, tickets and other paper strips which are to be separated, consisting of two rollers (*a a*¹) for feeding the paper strip to a second feeding device, consisting of two rollers (*b b*¹) rotating in the same direction as the rollers (*a a*¹) and somewhat more quickly, thus separating a part of the paper strip, and means for adjusting the remaining paper strip in a correct end position, substantially as described.

4. Vending apparatus for stamps, tickets and other paper strips which are to be separated, consisting of two rollers (*a a*¹) for feeding the paper strip to a second feeding device, consisting of two rollers (*b b*¹) rotating in the same direction and somewhat more quickly than the rollers (*a a*¹) thus separating a part of the paper strip, in combination with two levers (*d e*) having an alternating motion and operated by two cams (*g f*) to assist the dividing of the paper strip, and means for adjusting the remaining paper strip in a correct end position, substantially as described.

5. Vending apparatus for stamps, tickets and other paper strips which are to be separated, consisting of two rollers (*a a*¹) having recesses (*c*) and of two rollers (*b b*¹) in combination with two levers (*d e*) having an alternating

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movement and operated by two cams (*g f*) and to a third lever (*e⁴*) operated by the lever (*d*) which lever (*e⁴*) together with the recesses (*e*) serve for adjusting the remaining paper strip in a correct end position, substantially as described.

5 6. Vending apparatus for stamps, tickets and other paper strips which are to be separated, consisting of means for feeding the paper strip to a second feeding device, means for separating a part of the paper strip, in combination with a third double pair of rollers (*g g¹*) loosely arranged upon the same
10 spindles (*e³ e³*) as the rollers (*a a¹*) and rotating in opposite direction to the latter, for adjusting the remaining paper strip in a correct end position, substantially as described.

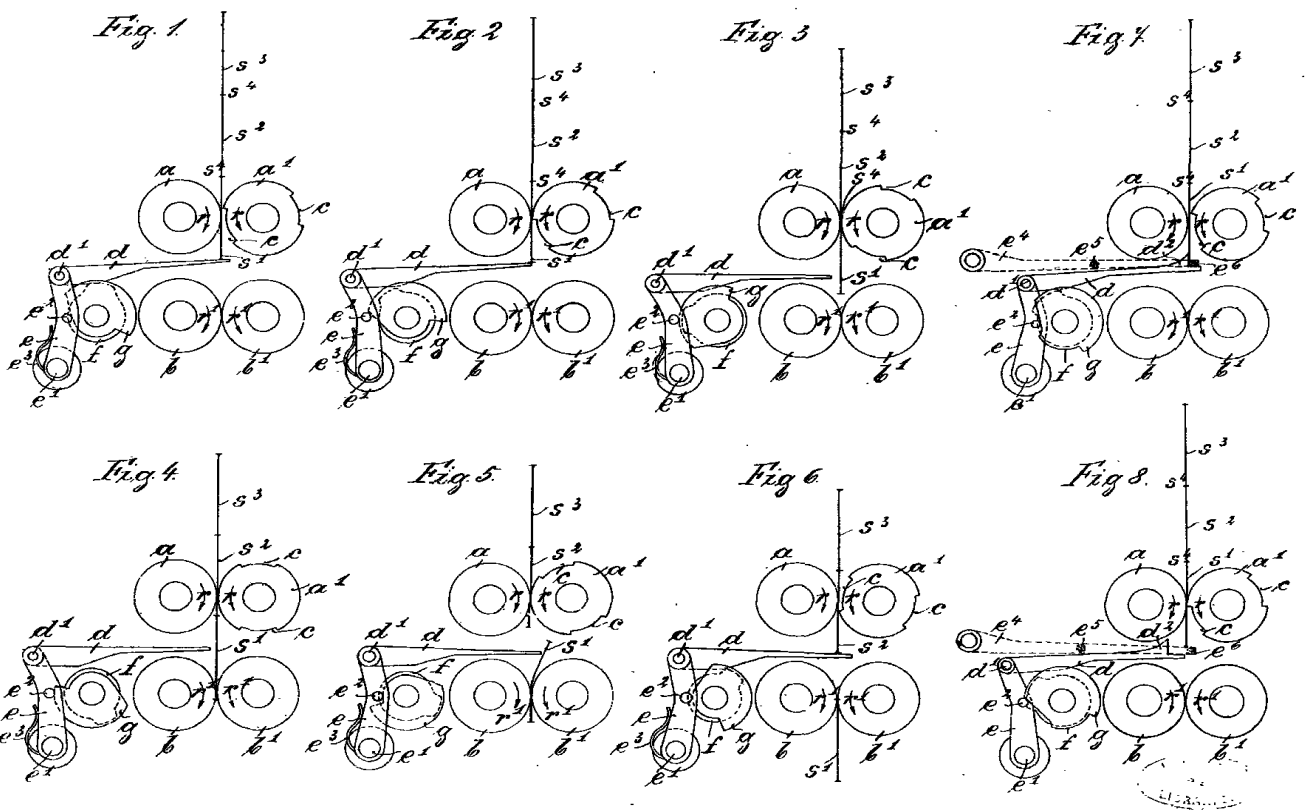
7. Vending apparatus for stamps, tickets and other paper strips which are to be separated, consisting of means for feeding the paper strip to a second feeding device, means for separating a part of the paper strip, in combination
15 with a third pair of rollers (*g g¹*) loosely arranged upon the same axles (*e³ e³*) as the rollers (*a a¹*) and rotating in opposite direction with the latter, and with a pair of tongs with stops (*h h¹*) for leading the paper strip, the rollers (*g g¹*) and the tongs serving for adjusting the remaining paper strip when the separation has taken place in a correct end position, substantially as described.

20 8. The constructions of apparatus for separating stamps, tickets and other paper strips as shown on the drawings

Dated this 26th day of May 1905.

JENSEN & SON
77 Chancery Lane London W C
Chartered Patent Agents.

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[This Drawing is a reproduction of the Original on a reduced scale]

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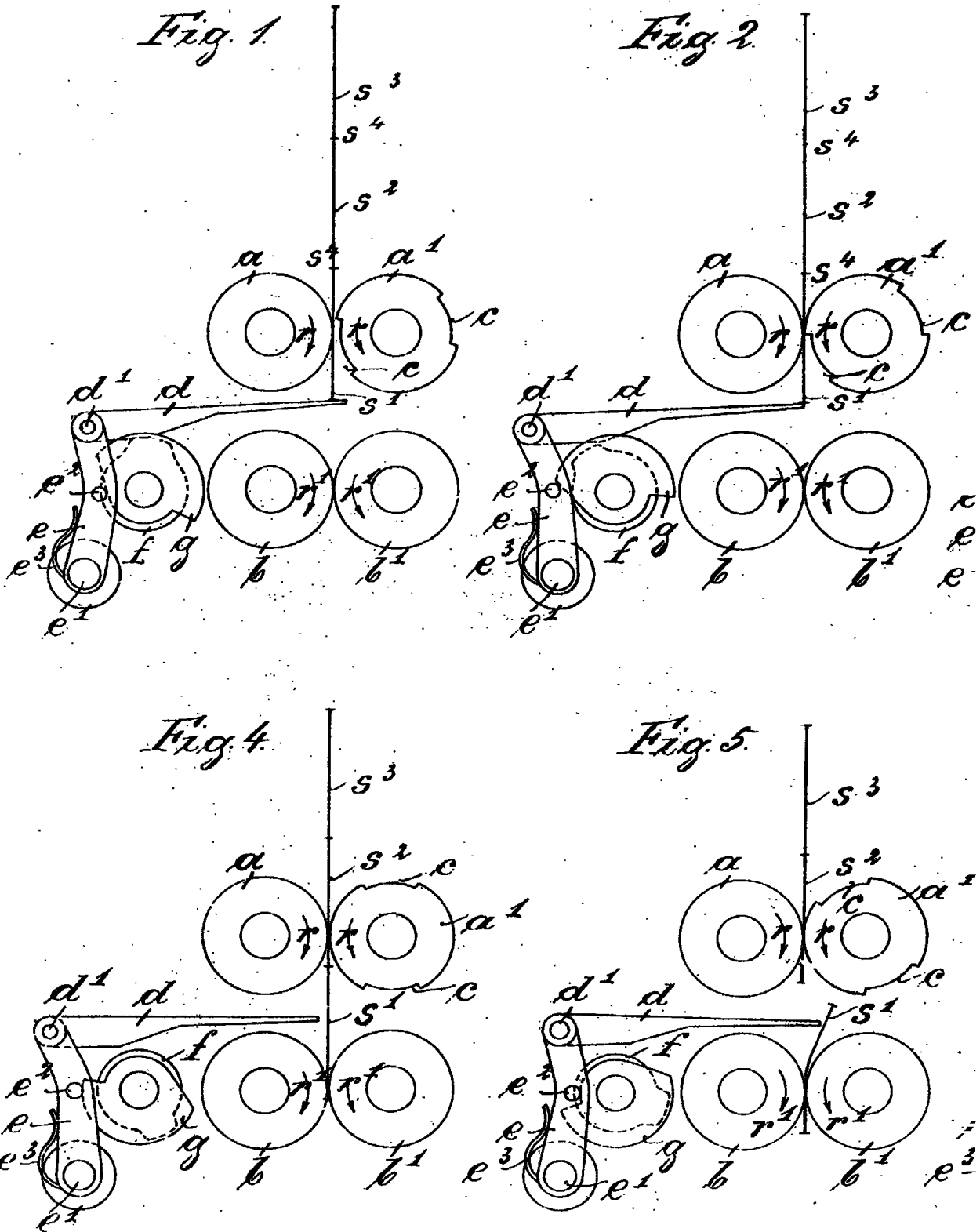


Fig 3.

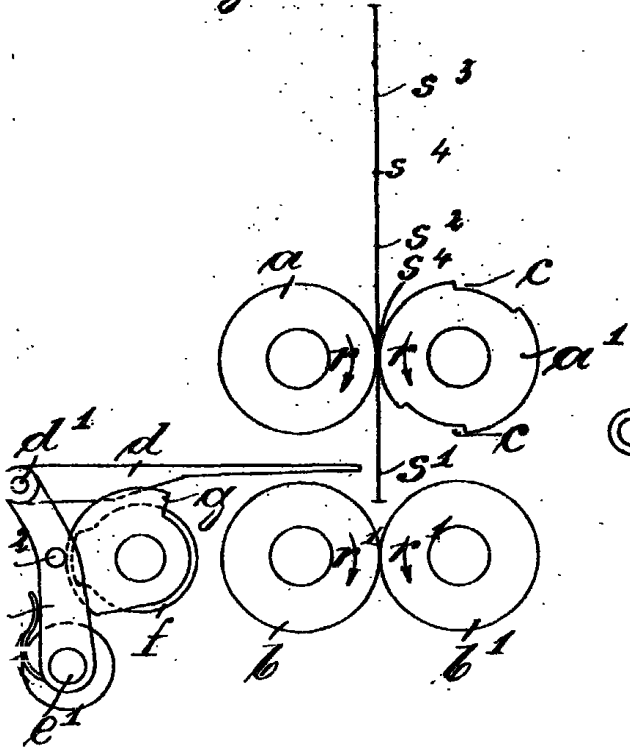


Fig 4.

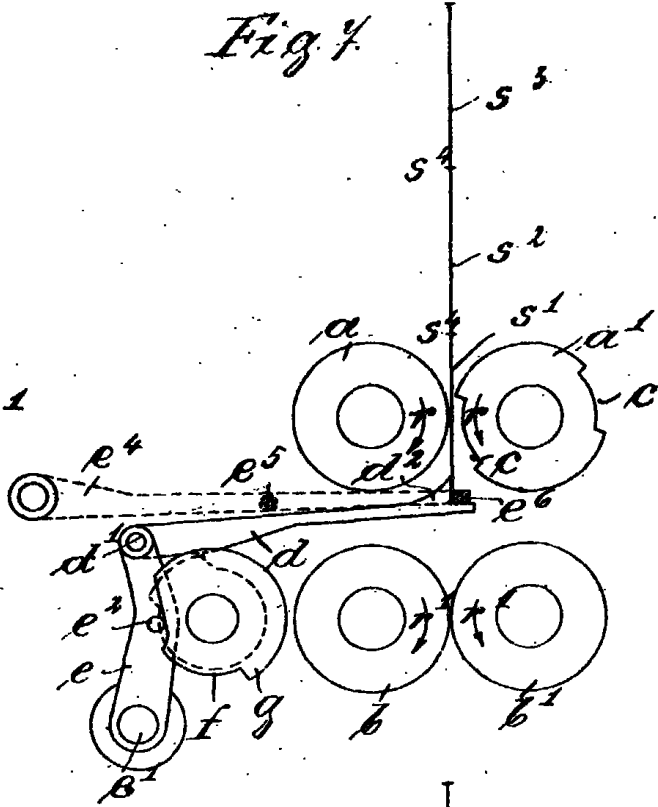


Fig 6.

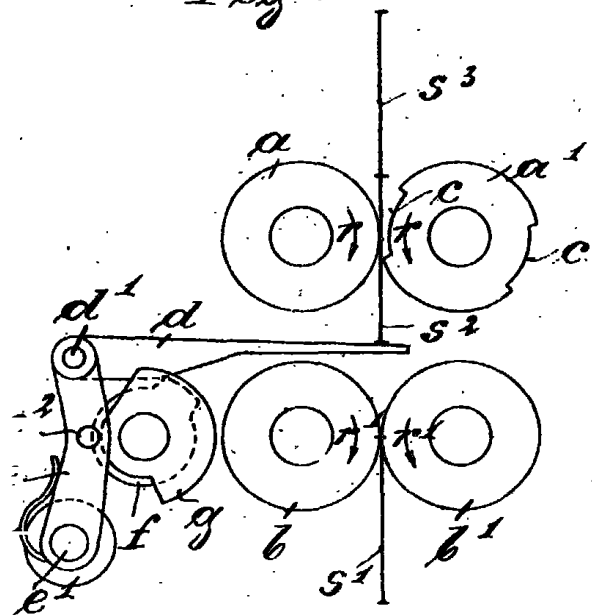
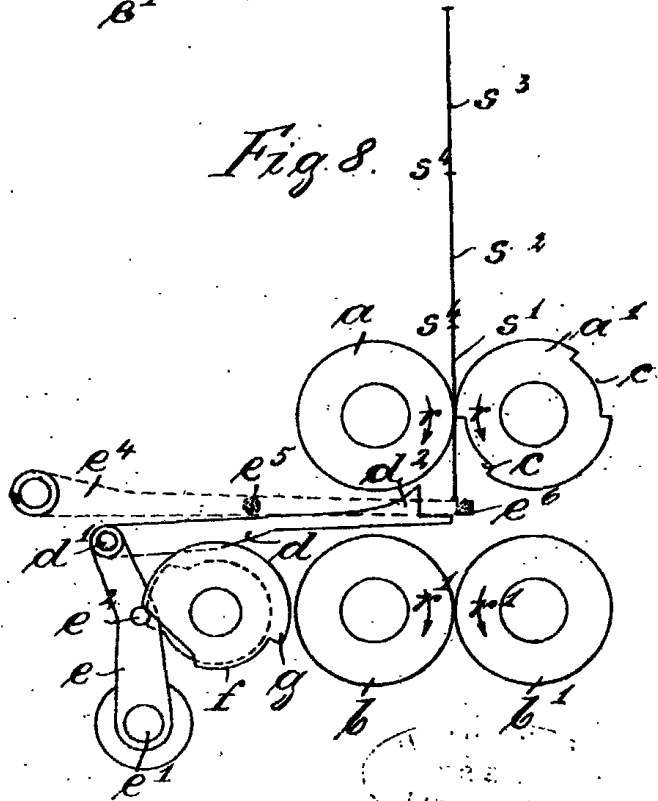


Fig 8.



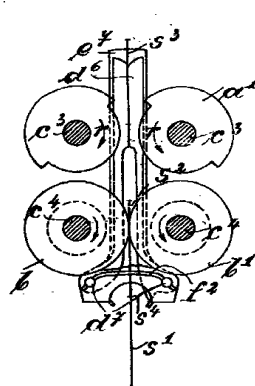
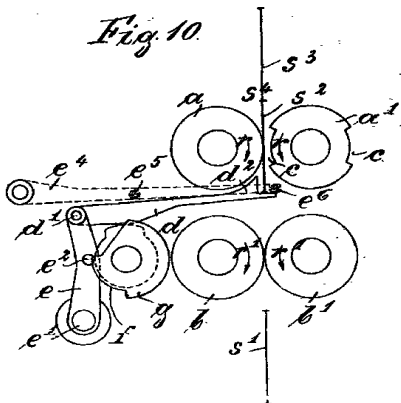
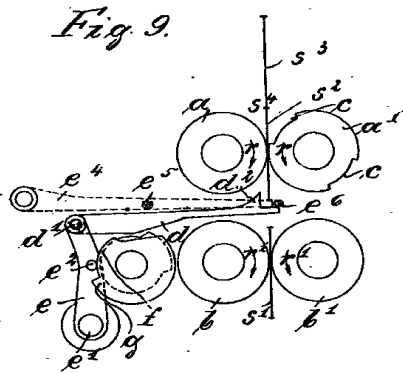


Fig. 17.

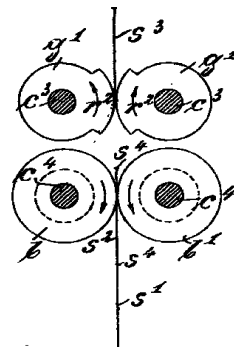
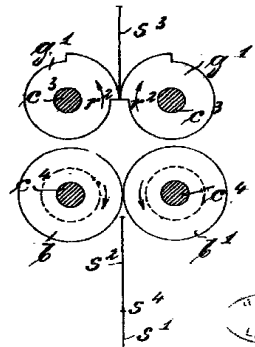


Fig. 18.



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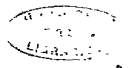


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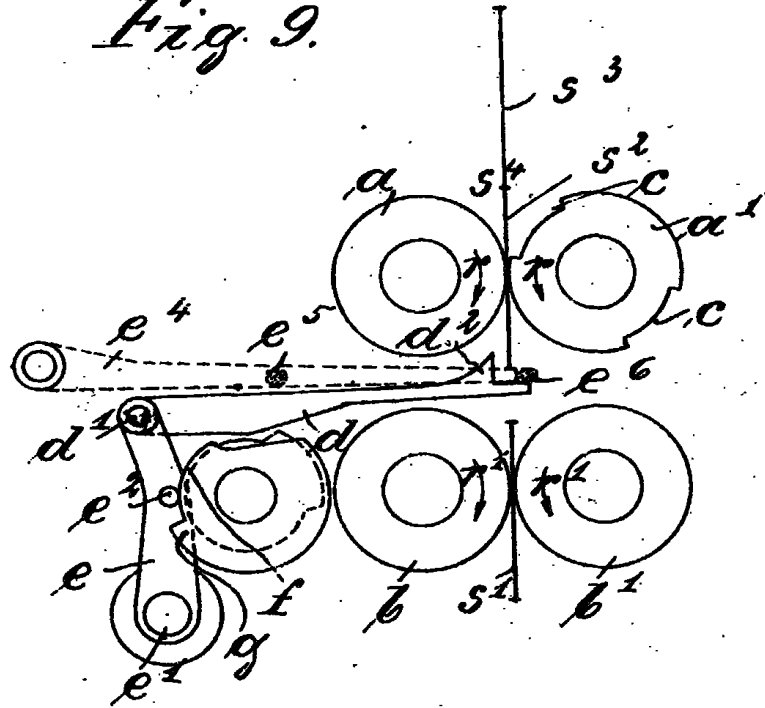
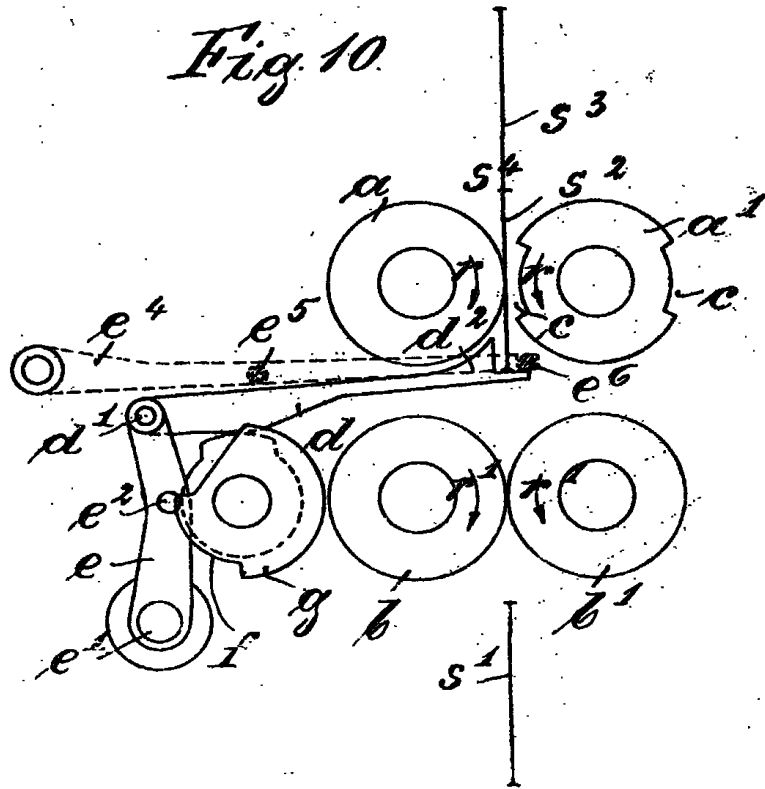


Fig. 10.



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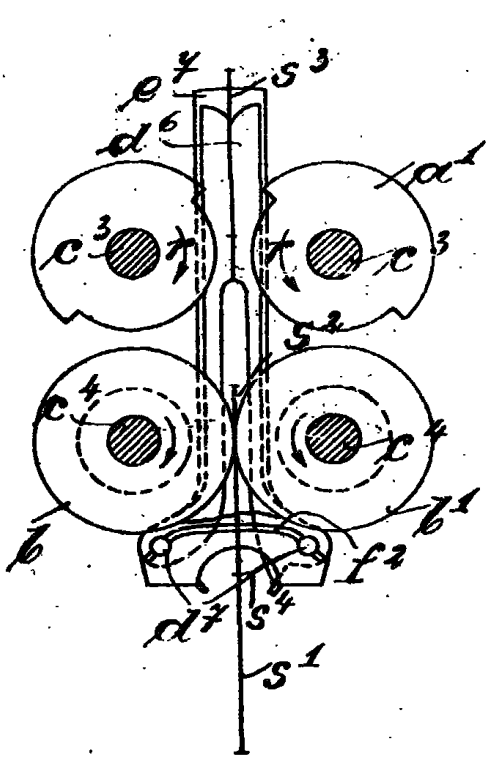


Fig. 17.

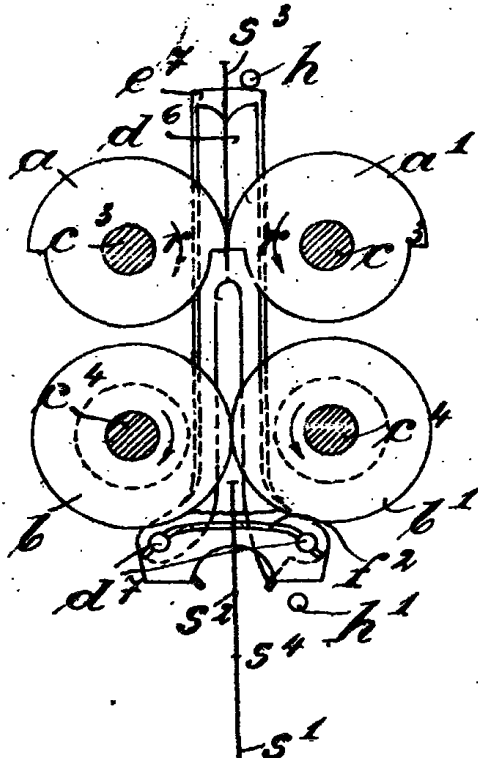
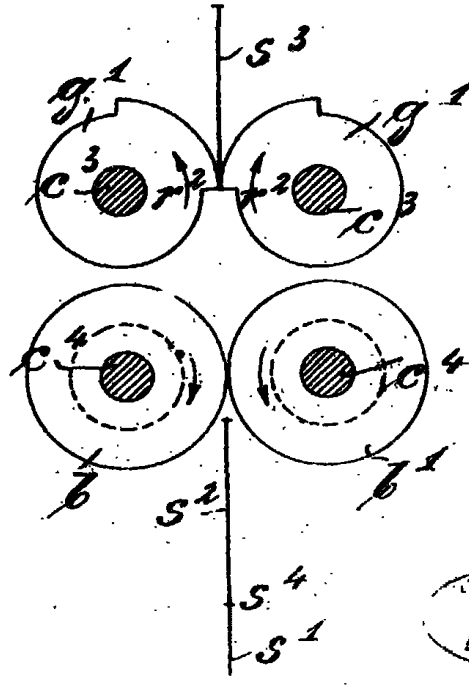
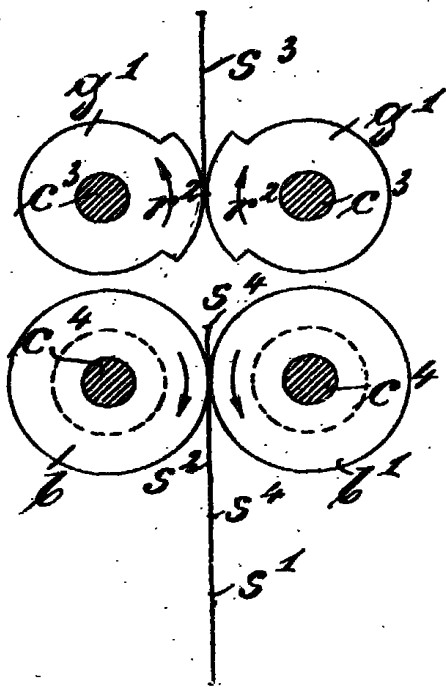
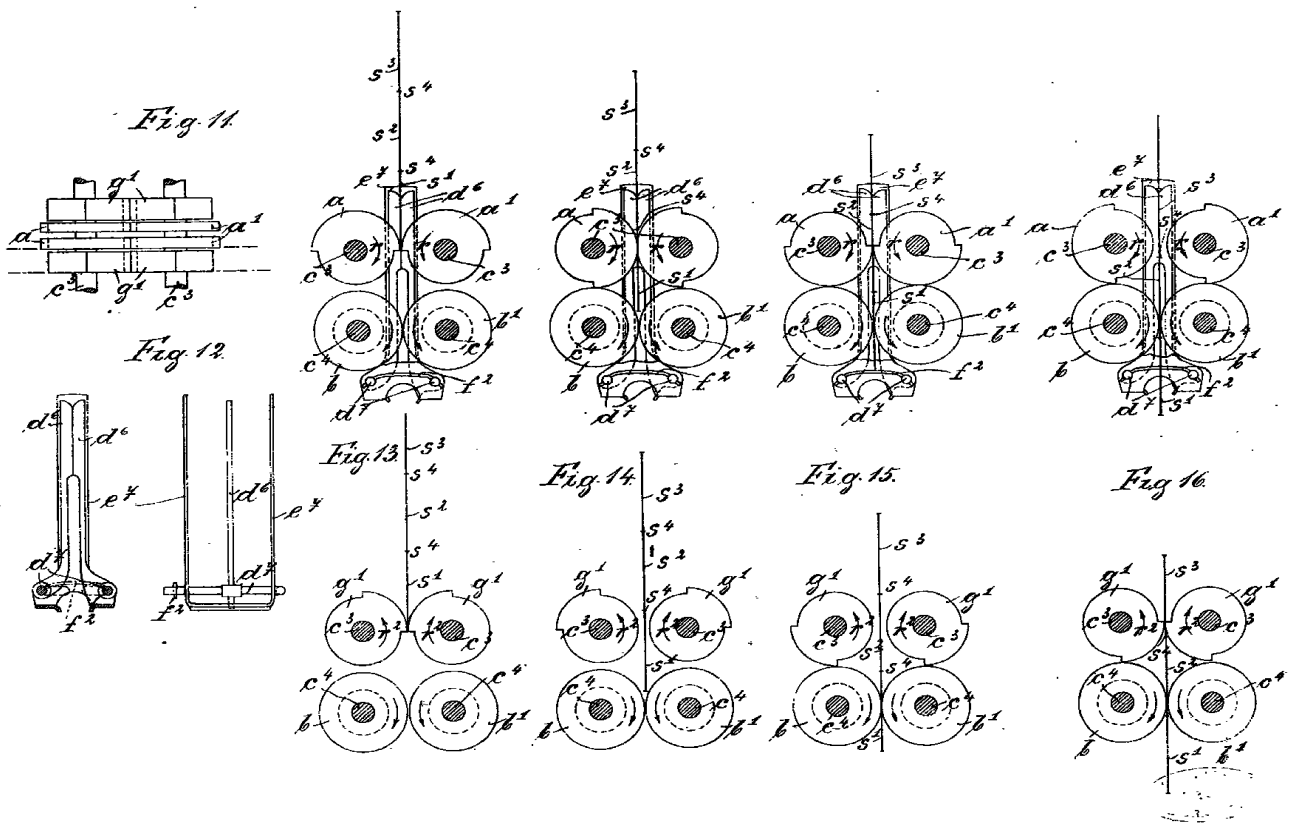


Fig. 18.





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Fig. 11.

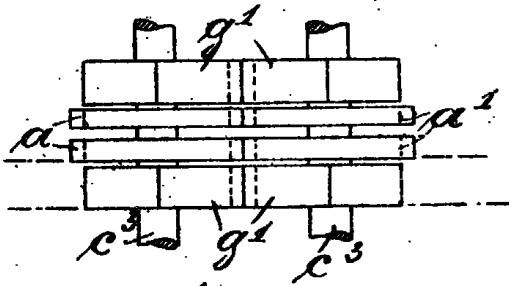


Fig. 12.

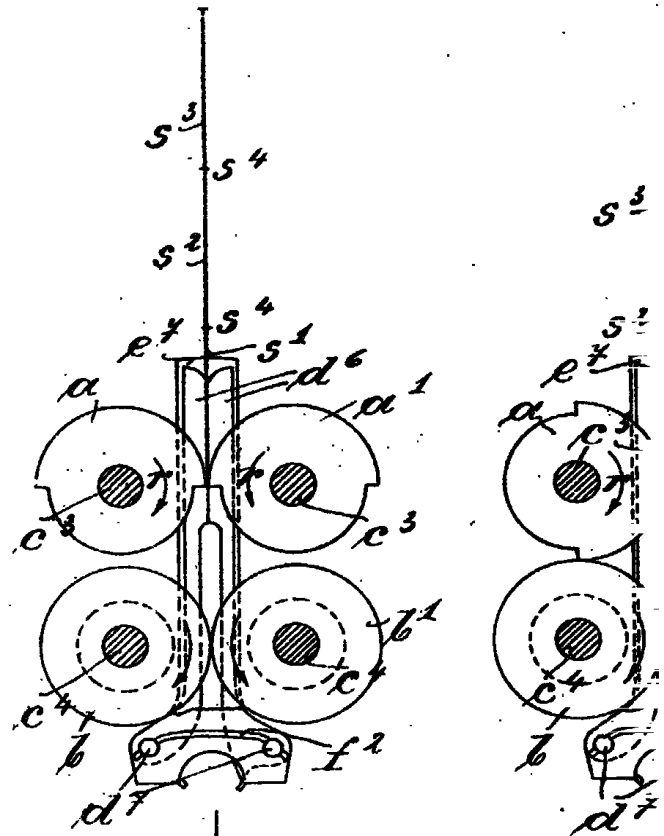
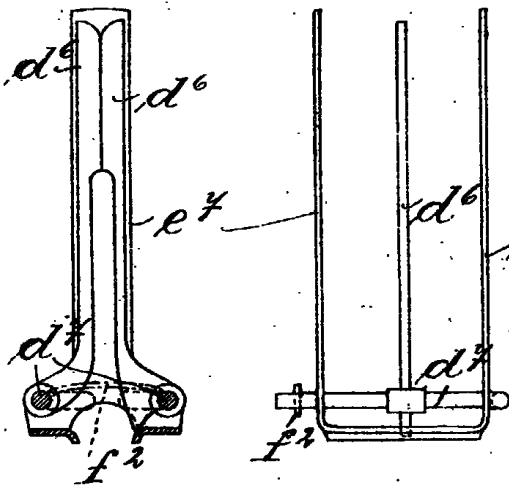
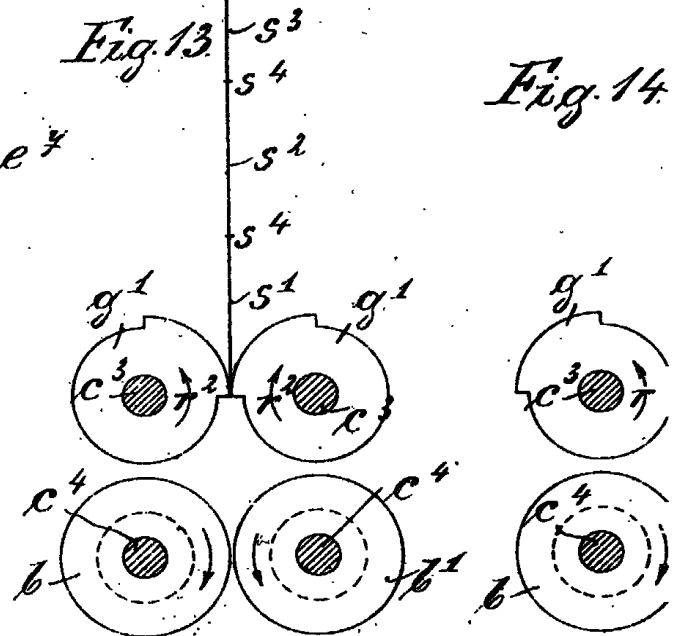


Fig. 13.

Fig. 14.



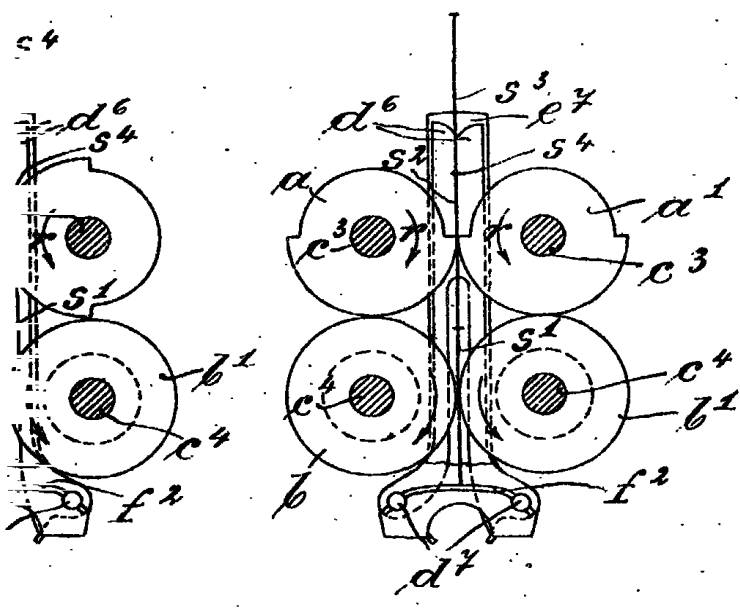


Fig. 15.

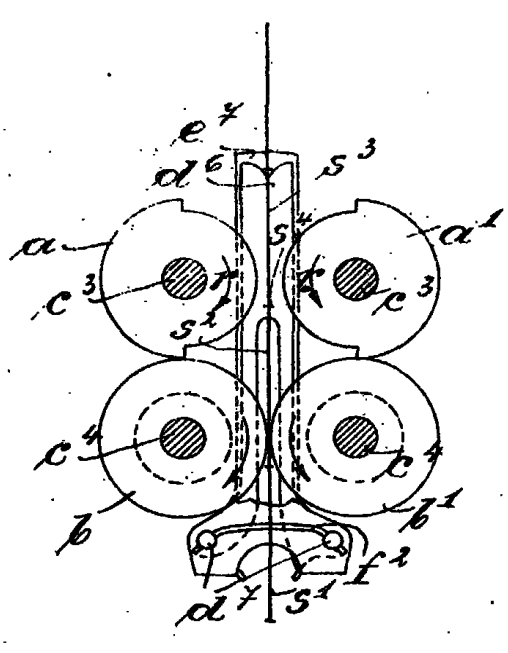


Fig. 16.

