H. FRIEDLEIN.

APPARATUS FOR PRINTING AND REGISTERING TICKETS.

APPLICATION FILED FEB. 1, 1912.

1,091,498.

Patented Mar. 31, 1914.

9 SHEETS—SHEET 1.

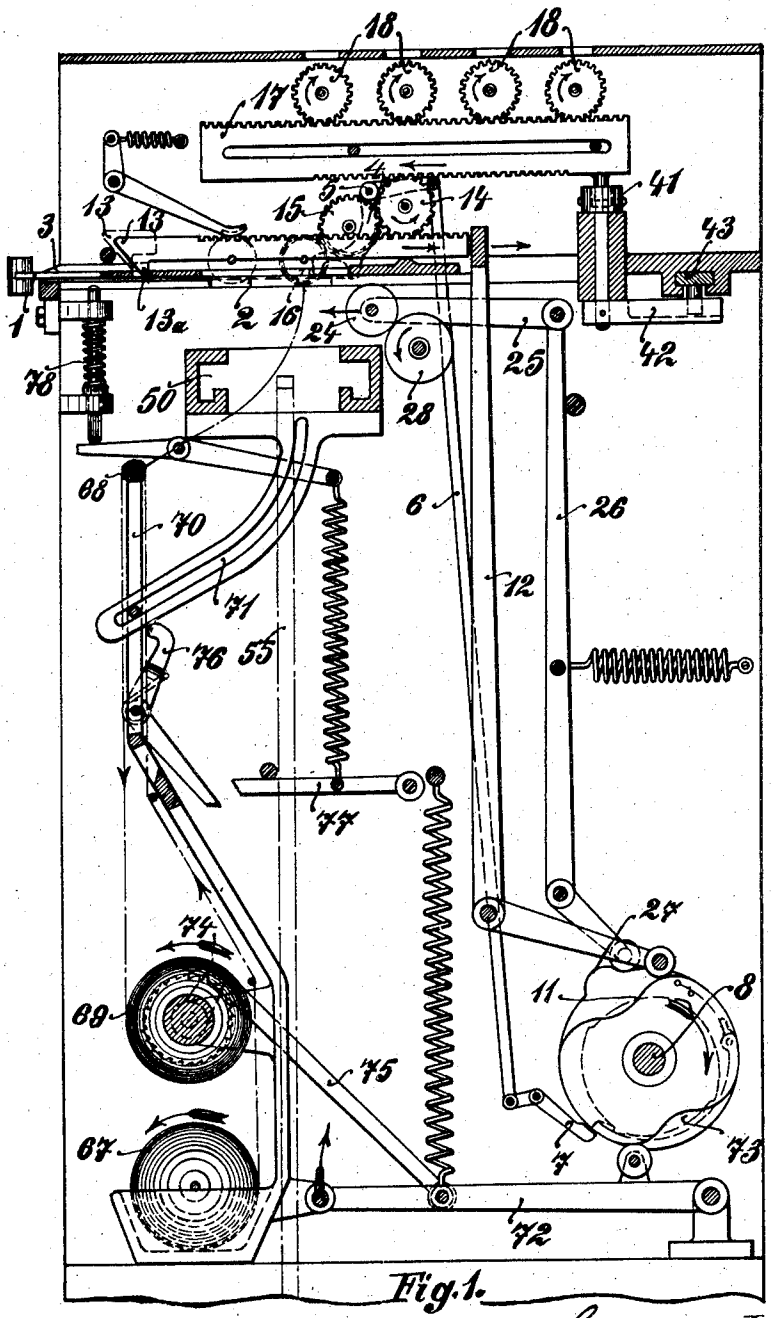



Fig. 1.

Witnesses:
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9 SHEETS—SHEET 2.

Fig. 3.

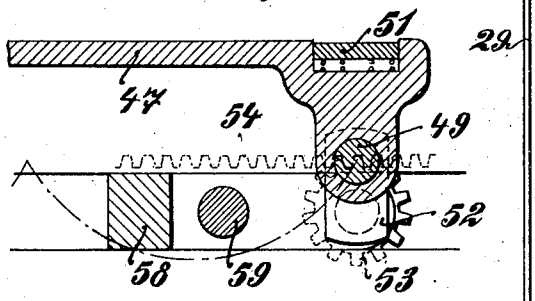
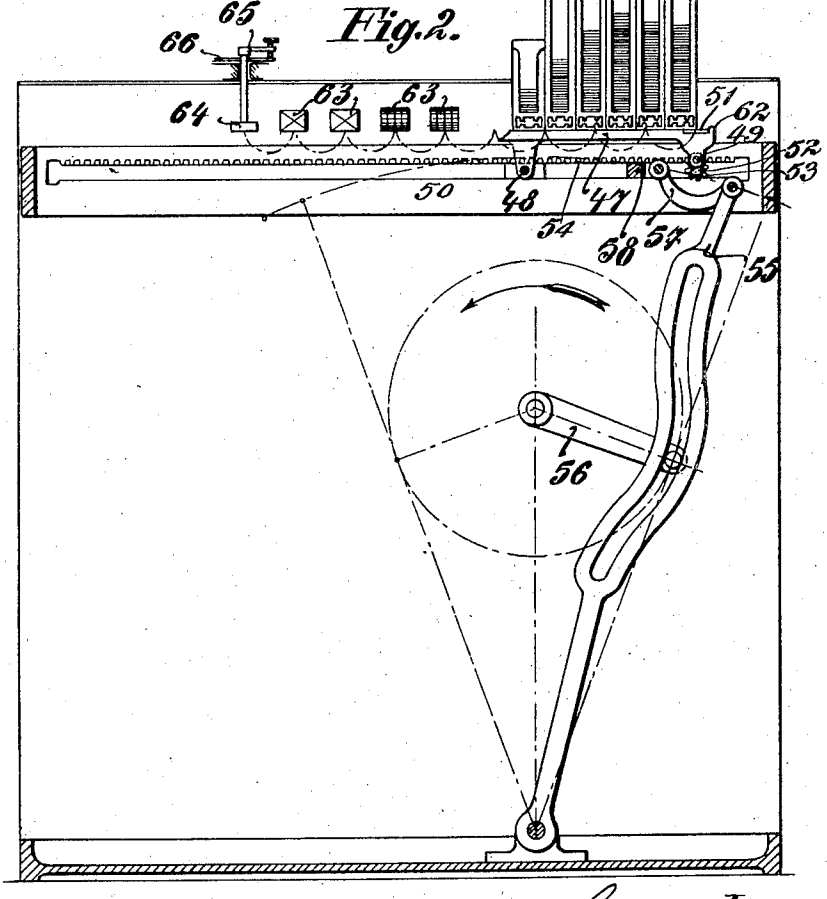



Fig. 2.




Witnesses;
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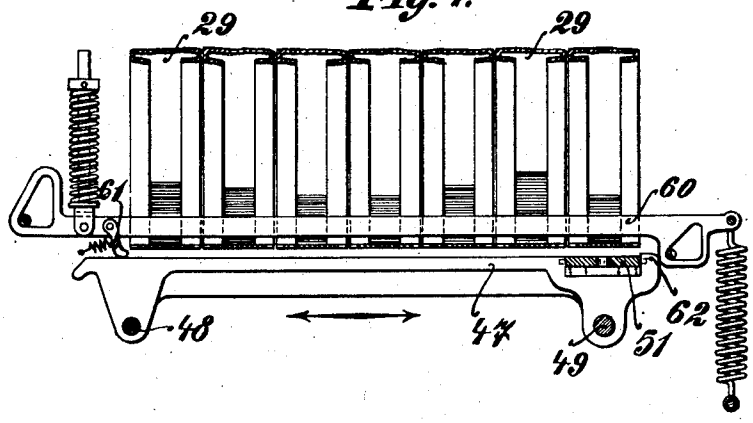
APPLICATION FILED FEB. 1, 1912.

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Patented Mar. 31, 1914.

9 SHEETS—SHEET 3.

*Fig. 4.*



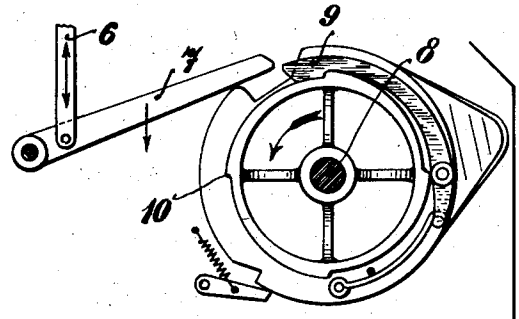
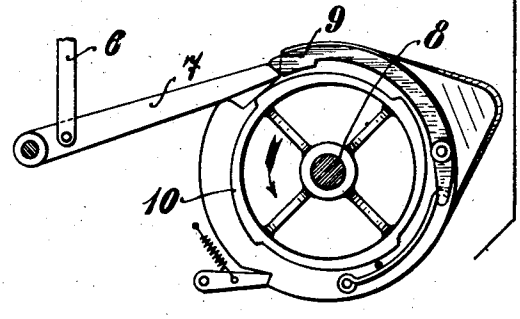




*Fig. 9.*




*Witnesses:*
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APPARATUS FOR PRINTING AND REGISTERING TICKETS.

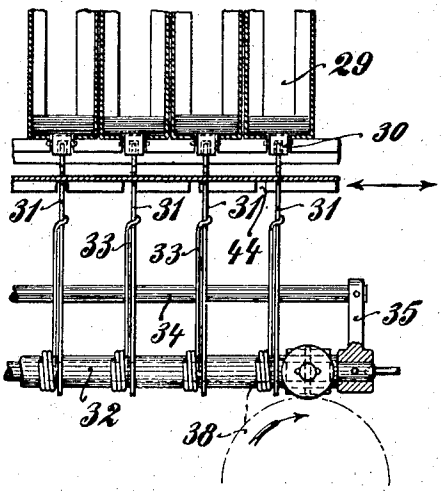
APPLICATION FILED FEB. 1, 1912.

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Patented Mar. 31, 1914.

9 SHEETS—SHEET 4.

Fig. 5.



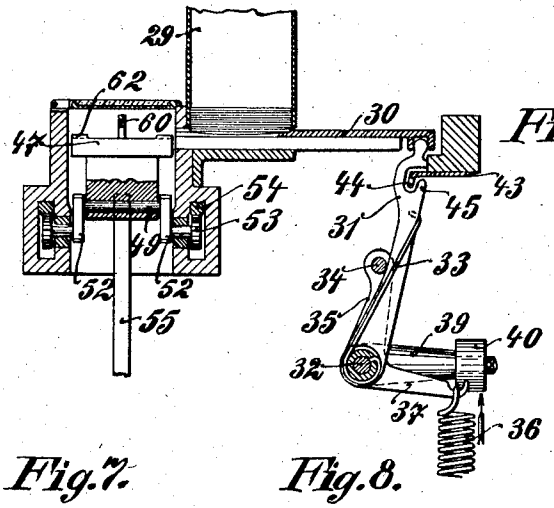




Fig. 6.

Fig. 7.

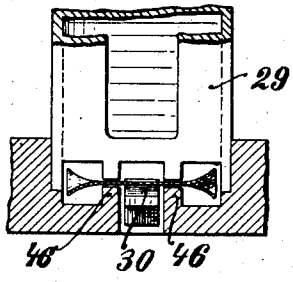
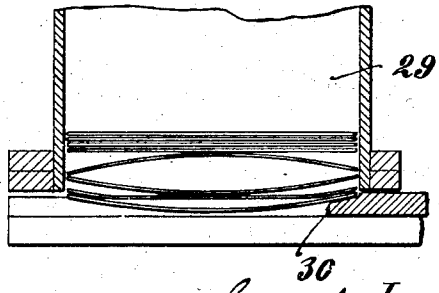



Fig. 8.




Witnesses:

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**1,091,498.**

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9 SHEETS—SHEET 5.

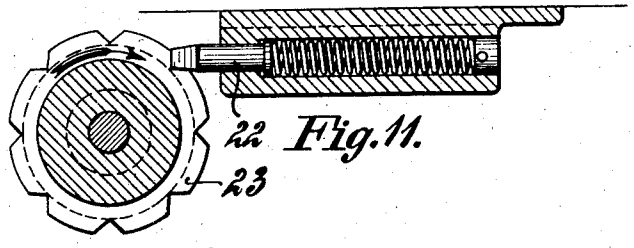



Fig. 11.

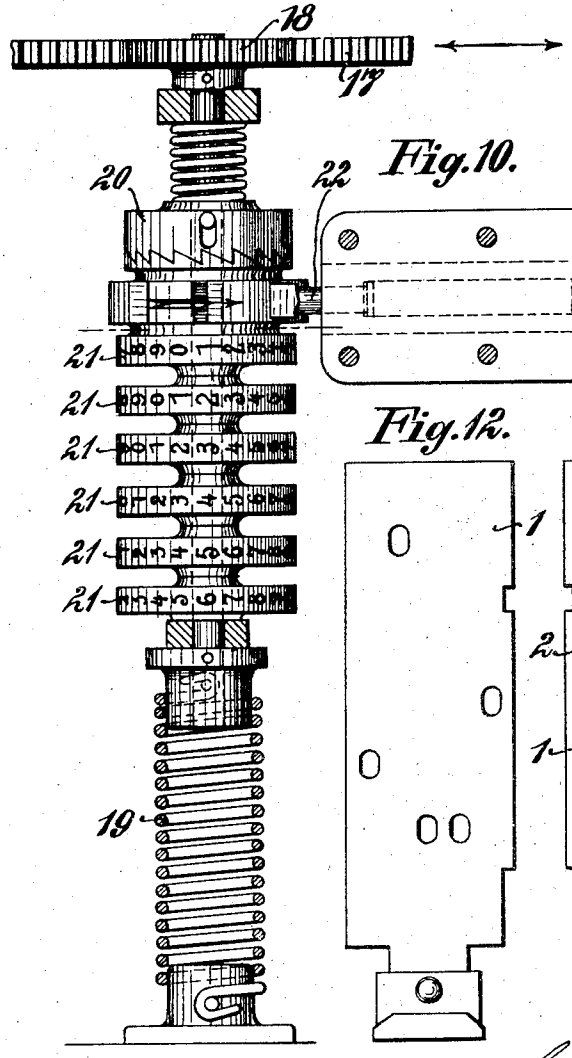



Fig. 10.




Fig. 12.

Fig. 13.

Witnesses:
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APPARATUS FOR PRINTING AND REGISTERING TICKETS.

APPLICATION FILED FEB. 1, 1912.

**1,091,498.**

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9 SHEETS—SHEET 6.

*Fig.14.*

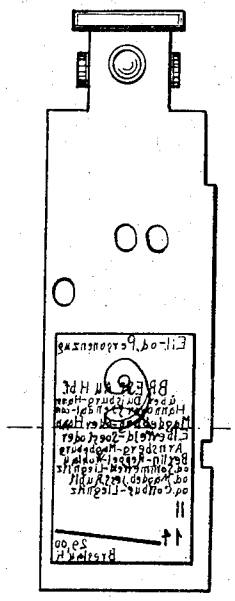


*Fig.15.*

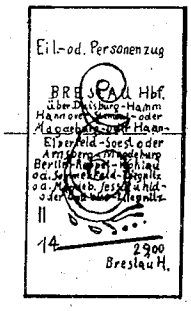



*Fig.16.*

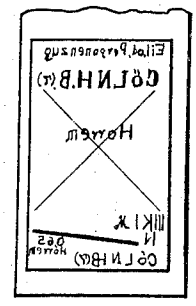
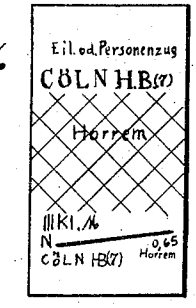


*Fig.17.*




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1,091,498. Patented Mar. 31, 1914.

9 SHEETS—SHEET 7.

Fig. 18.

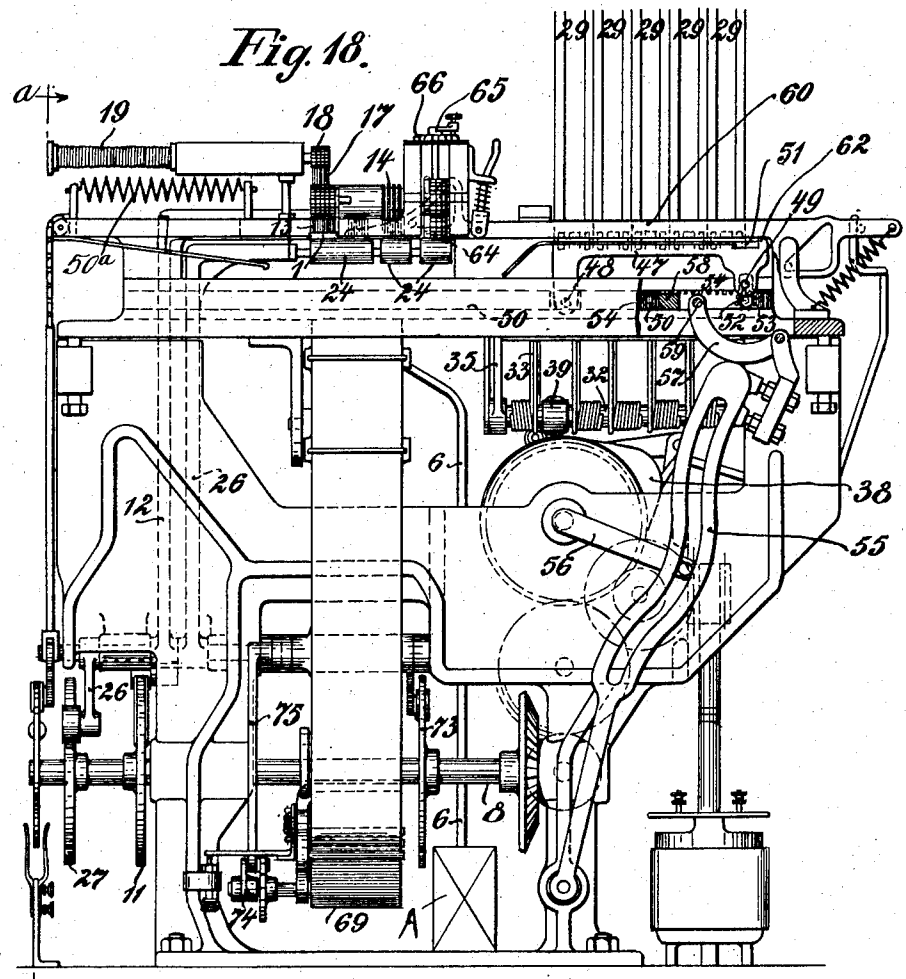



Fig. 19.

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APPARATUS FOR PRINTING AND REGISTERING TICKETS.

APPLICATION FILED FEB. 1, 1912.

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Patented Mar. 31, 1914.

9 SHEETS—SHEET 8.

Fig. 20.

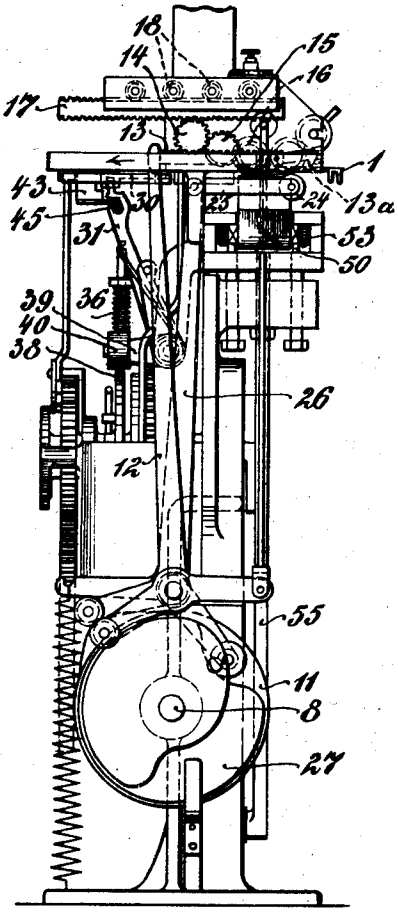
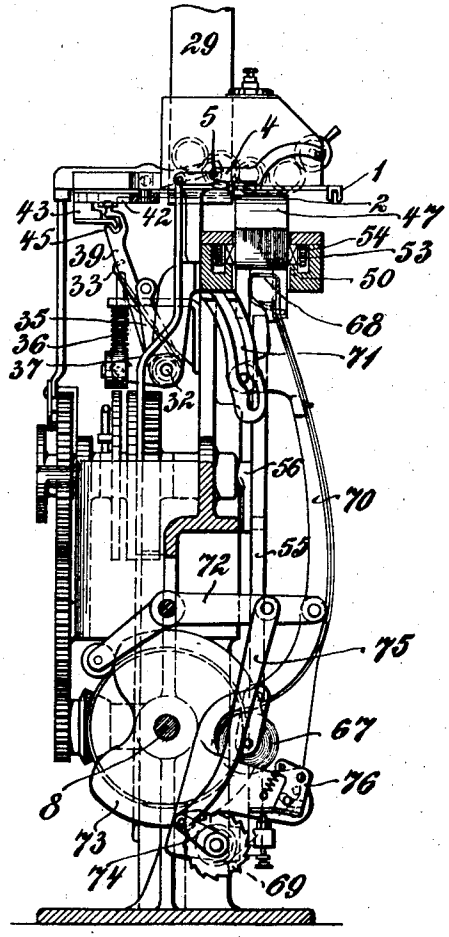



Fig. 21.




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APPARATUS FOR PRINTING AND REGISTERING TICKETS.

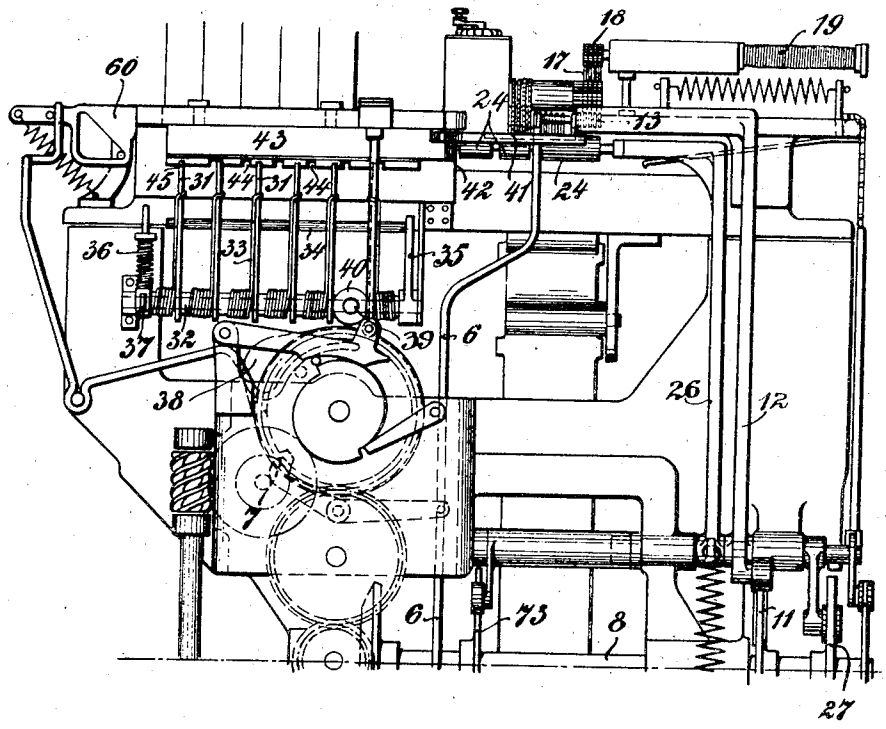
APPLICATION FILED FEB. 1, 1912.

**1,091,498.**

Patented Mar. 31, 1914.

9 SHEETS—SHEET 9.

*Fig. 22.*




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# UNITED STATES PATENT OFFICE.

HEINRICH FRIEDLEIN, OF COLOGNE-DEUTZ, GERMANY, ASSIGNOR TO THE FIRM OF KONTROLLDRUCK-AUTOMATEN-GESELLSCHAFT M. B. H., OF COLOGNE, GERMANY.

## APPARATUS FOR PRINTING AND REGISTERING TICKETS.

1,091,498. Specification of Letters Patent. Patented Mar. 31, 1914.

Application filed February 1, 1912. Serial No. 674,737.

*To all whom it may concern:*

Be it known that I, HEINRICH FRIEDLEIN, a subject of the King of Prussia, German Emperor, residing at Cologne-Deutz, in the Province of the Rhine, Kingdom of Prussia, German Empire, have invented certain new and useful Apparatus for Printing and Registering Tickets, of which the following is a specification.

The invention has reference to an apparatus for printing, registering and issuing tickets of any desired kind, preferably railway tickets.

Apparatus serving the same purpose are already known, but they possess numerous faults which have been avoided in the present invention.

The most essential requirement with such an apparatus is that tickets, with any desired printing, should be produced with the same apparatus without previously adjusting the internal mechanism at all, of course, always taking into consideration the existing conditions, and that the number of tickets which are to be issued should not be limited in any way. This object is only attainable when the different printing blocks (Clichés) for each ticket are not arranged in the interior of the apparatus, and when it is not necessary to previously set the particular printing block for each ticket to be issued, but when all printing blocks are kept from the very beginning on the outside of the apparatus, and when the block necessary for printing the desired ticket can be introduced into the apparatus. In this manner alone can an apparatus be obtained having small dimensions. The number and size of the printing blocks necessary for one station do not need to be large, as only one printing block is to be taken into consideration for each fundamental impression, while the varying additions, for example, the fare, date, class, running number and controlling sign are printed by the apparatus itself.

The most important component part of the apparatus is consequently the arrangement for setting the varying additions to the fundamental impression. These different additions are printed by means of a corresponding number of printing dies which are mounted one after the other in a row in the interior of the apparatus. The ticket is then guided against these different dies, one after another. This offers also the advantage that no limit is put upon the number of the varying additions, as any desired number of dies can be easily mounted on this apparatus, without the apparatus consequently becoming inconvenient. But for railway tickets the number of dies is generally limited to 4 or 5, for example, the fundamental impression (which, as a rule indicates the station of departure) the date, running number, fare and class and finally the station of destination.

The setting of the different dies is accomplished by means of stops, holes, projections or such like, whose positions are of great importance when setting them. The setting, itself, is caused by means of a number of transmission pieces, corresponding to the stops, which pieces are held fast by the stops when passing over the plate. Further, each transmission piece has for the accompanying die, always that value that corresponds to the stop by which the piece in question is held fast. The stops arranged on one plate in a particular position consequently belong to a definite printing block. The plates are firmly connected with the printing blocks belonging to the same. The printing plate provided with the stops is now pressed into the apparatus through an aperture and thus causes of itself the immediate movement of the whole mechanism as well as the automatic production and issue of the tickets. The tickets also pass automatically from a magazine into the mechanism. In addition, a number of different kinds of tickets can be employed; for example, tickets of different colors or provided with stripes. It is simply necessary in this case to provide the printing plate with an additional stop and the appertaining transmission piece controls the introduction of the ticket in question from the magazine belonging to the same.

The fares are automatically registered and added. Incorrect additions are entirely obviated. For this purpose one and the same intermediate piece operates the setting of the fare dies as well as of the adding mechanism in such a way that both always work in accord.

The tickets are taken out of the magazines by means of a feed slide and deposited on a printing table and guided to each printing die one after the other. For this pur-

pose the printing table moves in a cycloidal or undulatory path, in such a manner that the impression of the die takes place at the contact point of two cycloids.

For supervision, a strip of paper is moved against the fare die, and, when necessary, against the die of the station of destination at every working cycle of the apparatus.

The other arrangements of the apparatus are of less importance and serve mostly for transmitting the movements. They may be understood from the accompanying drawings in connection with the description of the whole apparatus.

Figure 1 represents a vertical section through the apparatus with the principal parts. Figs. 2 and 3 demonstrate the cycloidal movement of the printing table. Figs. 4 to 8 show the devices for taking the tickets out of the magazines and for conveying them to the printing dies by means of the printing table. Fig. 9 shows the means for unlocking the mechanism. Figs. 10 and 11 show the adding mechanism with arresting device and driving spring for putting the appertaining transmission piece in motion. Figs. 12 and 13 show the combined printing and setting plates with the stops seen from below and above. In Figs. 14 to 17 special printing blocks with two different control signs are illustrated. Fig. 18 is a front elevation of the whole apparatus. Fig. 19 is a plan view thereof. Fig. 20 is a side elevation of Fig. 18. Fig. 21 is a vertical section on the line *a—b* of Fig. 18. Fig. 22 is the back view of the upper part of the whole apparatus.

Plate 1, shown in Figs. 12 and 13, bears on its lower part the printing block 2, having the fundamental data. Plate 1, on its upper side, is provided with stops, here with holes, which have a different and definite position for each plate. The plate is introduced with the holes upward, into the apparatus through an aperture 3 (Fig. 1) and completely pressed in. Thus the end of the plate comes into contact with the lever 4, hinged at 5, which sets connecting rod 6 in motion. This rod operates by means of pawl 7 to release the main driving shaft 8 having a series of cam disks which set the different devices of the apparatus in motion by means of wheels and levers adapted for this purpose. The rod 6 may also lead to a starting box (designated A in Fig. 18) for switching on the motor.

A cycle of work is accomplished by a single turn of shaft 8 and the different cams. The motor rotates the shaft 8 by means of cog wheel transmission. The locking and release device can be seen in Fig. 9. The pawl 7, which may have one (Fig. 9) or two arms (Fig. 1) holds motionless a spring locking pawl 9 from the ratchet wheel 10, which is firmly connected with shaft 8 and possesses only a few (in the illustration, four) catch teeth. If rod 6 be pulled, pawl 7 loosens pawl 9 and as a result the motor is first set running by closing a suitable switch, and simultaneously a coupling of the different cam disks with the driving shaft 8 takes place. Pawl 7 again falls into the ratchet after a complete revolution of the shaft and thus the motor is switched off. Should a great number of similar tickets be printed successively, plate 1, and consequently pawl 7 are held firmly by any desired device so that the motor continues to run.

After putting the apparatus in working order the setting of the different dies follows at first automatically. The latter are in the same horizontal plane as the printing plate 2 and of course in a row one after another with the type downward. The order of the dies can be arranged as desired. If the dies have to print figures, they consist of revolving type wheels. The date die is set by hand. The die for the running number is moved one farther by each revolution of the driving shaft. Only the type wheels of the fare die need, as a rule, a special setting. This takes place in the following way: By revolving the appertaining cam disk 11, the lever 12, which lies under spring tension deviates backward with its upper end toward the arrow and consequently liberates a number of shifting racks 13, which are in position next each other upon a supporting bar. These racks, under the influence of springs 19, follow the forward movement of lever 12 until the noses $13^a$ provided on the racks are engaged in the corresponding holes of plate 1. Thus they are held fast. The racks 13 thus make varying strokes according to the position of the holes in the plate. But the holes of the plate correspond to the figures of the fare according to their position. The movement of racks 13 is transmitted to type wheels 16 of the fare die by means of gear wheels 14, 15. There are as many racks 13 and wheels 14, 15 as wheels 16 belonging to the fare die. Further, double racks 17 are engaged in the gear wheels 14. These racks transmit the set fares on to the feed wheels 18 of the adding mechanism. Each feed wheel belongs to a double rack 17. A correct addition is always assured and with certainty by the intermediate switching of rack 17.

In Figs. 10 and 11 a detail illustration of one part of the adding gearing is shown.

The movement of the whole adjusting mechanism, namely of racks 13, of gear wheels 14, 15 and of racks 17 are brought about by torsion springs 19 which tends to rotate the feed wheels 18. The motion is

transmitted by racks 17 and wheels 14 on to the accompanying racks 13. Each single feed wheel 18 revolves according to the stroke of the accompanying rack 13 and thus at a certain angle, which always agrees with the adjusted units of the fare. The wheels 18 transmit their stroke, by means of the clutch 20, to wheels 21 of the addition gearing.

A suitable transfer mechanism is provided for transferring one complete revolution of a register wheel of a lower order to the register wheel of the next highest order. This mechanism has not been illustrated as it forms no part of the present invention.

The arresting of the adding wheels is operated through the spring-pins 22, which touch the ratchet wheels 23 tangentially and engage themselves in notches so that further movement of the wheels is prevented after the forward movement of the rack 17.

After the setting of the different dies in the manner described above, the inking of the types is effected by means of the inking cylinders 24 which are set in motion by the rods 25, 26 from a cam disk 27. The ink is taken up from the cylinder 28.

An additional rack 13 with wheels and double racks 17 is destined to drive a locking device for the ticket magazines 29. One of the holes in the printing plate 1 controls this rack.

The tickets are piled in the magazines. The withdrawal of the same is operated through the feed slide 30 by means of spring arms 31. These latter are disposed loosely on a common shaft 32 and are all held back when out of operation against the tension of springs 33 through a rod 34, which is fixed on shaft 32 by means of the arms 35 which can oscillate on the axis of the shaft. The shaft 32 is maintained in tension by a spring 36, which engages with the arm 37. As soon as the cam disk 38 turns the shaft 32 a little, by means of arm 39, which carries roller 40 at its end, the rod 34 liberates all the arms 31, and thus can the arm alone, which is also liberated from the locking device, set in motion the corresponding feed slide 30 so that the latter can remove the lowest ticket from the magazine and transport it to the printing table.

The locking device operates independently of the holes in plate 1. A special hole is provided for this purpose. The corresponding rack 13 driven by intermediate pieces 14 and 17, actuates lever rods 41 and 42, which move a locking rod 43 into and out of a guide. The locking rod 43 is provided with slots 44 which allow the introduction of the prolongation 45 of each arm 31, as soon as the slot and prolongation are opposite each other. Thus a definite arm 31 is liberated each time by the corresponding hole in the setting plate, so that only the correct ticket can be removed from its magazine. The other arms 31 remain locked by the rod 43.

The magazines 29 have concave bottoms so that tickets that are not quite flat can be withdrawn with equal facility. For the same purpose the bottom of the magazine is further made in such a way that the tickets rest only on two projecting rails 46 between which is the introduction slot for feed slide 30. In this way, as Figs. 7 and 8 illustrate, badly shaped tickets can be also withdrawn with certainty.

The tickets coming out of magazine 29 reach the printing table or platen 47 which occupies the whole length of the shaft row. This printing table is guided along from the shaft under the printing dies.

In order that the ticket shall receive the impression of each die, the table is guided in a cycloidal or undulatory path. At each turning point of two cycloids (Figs. 2 and 7) an impression takes place from the die which stands there. The table rests with both ends (Figs. 2 and 3) on journals 48 and 49, of which, 48 is moved straight forward in a rail 50, while the other 49, which carries the actual printing table on itself describes in comparison with guide 50 a cycloidal way. For this purpose, journal 49 is carried away by the crank 52 which revolves by means of a gear wheel 53 and a rack 54, during the move of the whole printing table in guide 50, and prescribes thereby the cycloidal path indicated in Fig. 3, moved over by journal 49. The driving of the table is caused through a long sliding lever 55 by crank 56. At the end of lever 55 is a link 57 which moves a guide block 58 along the guide 50. The block 58 engages crank 52 by suitable prolongations and simultaneously rolls gear wheel 53 along rack 54. The link 57 engages the journal 59 on guide block 58.

As soon as a ticket is withdrawn from a magazine and transported to the table, the latter sets itself in motion and takes the ticket with it in the direction of the dies. In order to keep the ticket on the table a spring rail 60 is disposed lengthwise above the table so that it follows the movements of the table. This rail holds the ticket fast until the latter is gripped by the noses 62 at the back end of the table. The noses are integral with the table 47 so that the ticket then lies in the correct position. If the table is then set in motion the ticket then comes under each die in order, through the cycloidal movement. The printing pad 51 lies elastically on the printing table.

The position of die 63 is shown in Fig. 2. The guide 50 is two sided in order to secure correct direction. Therefore the gear

wheels 53 are also double on both sides of the guide and engage themselves with the corresponding racks 54.

The finished ticket is striped in the left end position of the printing table and falls out of the apparatus. This may be done by a spring shown at 50ª in Fig. 18.

In addition to the main dies 63 a control die 64 is also provided, which furnishes the ticket with a sign, which can only be understood by the ticket inspector. The dies themselves can be of any desired kind, for example, a circle with inscription. If the dies are made to revolve on a vertical axis by means of crank 65, and if a scale 66 is arranged under the crank, the inspector can daily put the stamp in a new position known only to himself and thereby be enabled later to control with facility the correctness of the corresponding date and consequently the genuineness of each ticket issued.

A forgery can be prevented in a still more efficient manner if a special sign, an appropriate letter or a geometrical figure, is printed over the whole ticket or a part of the same, and if the sign is slit up into two parts by a section line or other suitable separation, one part of which is situated on the printing plate while the other is additionally printed only in the apparatus by means of special dies so that consequently only the plate introduced into the apparatus will print the complete control sign.

In Figs. 14 and 15, relatively 16 and 17 two different possible separations for the sign there chosen are shown. During the rotation of shaft 8 a control print is also produced by the dies after they have been adjusted for the printing of the specific indications desired. The control strip runs from a cylinder 67 and after being guided around an impression pad 68 is rerolled on a second cylinder 69. The impression pad 68 is carried by a frame 70 which is pressed, at each cycle of work, as soon as it is in guide rail 71 against the dies. The frame 70 is moved against the dies by means of a spring lever 72 under the influence of a cam disk 73 and drawn back again to its original position after the printing is done. On the return, a feed mechanism 74 rolls the cylinder 69 forward one division, by means of a rod 75. As soon as the strip comes to an end or tears, a locking of the apparatus takes place in the following manner. A cranked lever 76 maintained shortly before by the tension of the strip, changes its position on the tearing or running out of the strip in such a manner that another lever 77 is gripped and pressed down by the next descent of the frame 70. The latter lever acts on a locking pin 78 which lies behind the introduction aperture 3 and hereby locks the apparatus. It is to be noted that this control strip is arranged to be depressed by the mechanism above set forth, against the indications of the station and the fare and such indications as to whether the fare is first or some other class so that the control strip forms a recording means for indicating the station, the fare, the class of fare, and such other data as may be desired to be recorded. It is obvious that this data may be changed both in the items and other features as desired and it is also obvious that the setting of the data on the control strip may take place, by proper arrangement of the cams, either before or after the printing of the same data on the tickets.

I claim—

1. In a printing machine, a group of type-wheels, a printing block movable into printing position in the machine, means controlled by said block for selecting and setting the type-wheels into printing position, and a lock for said means controlled by the printing block.

2. In a printing machine, a group of type-wheels, a printing block provided with characters giving fixed ticket characteristics, said block being movable into printing position in the machine, means controlled by said block for selecting and setting the type-wheels into printing position, and a recording means for some of the type-wheels.

3. In a printing machine, a group of type-wheels, a printing block movable into printing position in the machine, a recording means for some of the wheels, and means controlled by said block for selecting and setting the type-wheels into printing position, said means having common intermediary elements for controlling the registers.

4. In a ticket printing machine, a group of type-wheels, racks geared, respectively, to said wheels, a printing block movable into printing position in the machine, a register for each type-wheel geared to the rack thereof, means for imparting motion to the racks, and means controlled by the printing block for selecting and limiting the motion of the racks.

5. In a ticket printing machine, a group of type-wheels, racks geared, respectively, to said wheels, a printing block movable into printing position in the machine, a register for each type-wheel geared to the rack thereof, means for imparting motion to the racks, the register being interposed between said means and the racks, and means controlled by the printing block for selecting and limiting the motion of the racks.

6. In a ticket printing machine, a group of type-wheels, racks geared, respectively, to said wheels, a printing block movable into printing position in the machine, a register for each type-wheel geared to the rack thereof, means for imparting motion to the racks, means controlled by the printing block for selecting and limiting the motion

of the racks, a platen, operating means for the platen, a drive shaft for said operating means, a lock for the drive-shaft controlled by the printing block, locking means for the aforesaid racks, and means carried by the drive shaft for controlling the last-mentioned locking means.

7. In a ticket printing machine, a group of type-wheels, racks geared, respectively, to said wheels, a printing block movable into printing position in the machine, a register for each type-wheel, spring-actuated shafts geared to the respective racks, from which shafts the respective registers are actuated and the racks are given motion, and means controlled by the printing blocks for selecting and limiting the motion of the racks.

8. In a ticket printing machine, a group of type-wheels, racks geared, respectively, to the type-wheels, a series of racks geared, respectively, to the first-mentioned racks, a printing block movable into printing position in the machine and having means for selecting and controlling the travel of the second-mentioned racks, a register for each type-wheel geared to the rack thereof, and means for imparting movement to the racks.

9. In a ticket printing machine, a group of type-wheels, racks geared, respectively, to the type-wheels, a series of racks geared, respectively, to the first-mentioned racks, a printing block movable into printing position in the machine and having means for selecting and controlling the travel of the second-mentioned racks, a register for each type-wheel geared to the rack thereof, means for imparting movement to the racks, a lock for the second-mentioned racks, and means controlled by the printing block for releasing said racks.

10. In a ticket printing machine, a group of type-wheels, racks geared, respectively, to the type-wheels, means for imparting motion to the racks, a lock for the racks, a platen, operating means for the platen, a draft shaft for said operating means, means on said shaft for actuating the aforesaid lock to release the racks, and a printing block movable into printing position in the machine and having means for selecting and controlling the travel of the racks.

11. In a ticket printing machine, a group of type-wheels, racks geared, respectively, to the type-wheels, means for imparting motion to the racks, a lock for the racks, a platen, operating means for the platen, a drive shaft for said operating means, means on said shaft for actuating the aforesaid lock to release the racks, a printing block movable into printing position in the machine and having means for selecting and controlling the travel of the racks, and a lock for the drive shaft controlled by the printing block.

12. In a ticket printing machine, a group of type-wheels, racks geared, respectively, to said wheels, means for imparting motion to the racks, and a printing block provided with characters giving fixed ticket characteristics, said block being movable into printing position in the machine, and having means for selecting and controlling the travel of the racks.

13. In a ticket printing machine, a group of type-wheels, racks geared, respectively, to said wheels, spring-actuated shafts geared to the respective racks, and a printing block movable into printing position in the machine, and having means for selecting and controlling the travel of the racks.

14. In a ticket printing machine, a group of type-wheels, racks geared, respectively, to said wheels and having projections, means for imparting motion to said racks, and a printing block provided with characters giving fixed ticket characteristics, said block being movable into printing position in the machine and having apertures adapted to be entered by the aforesaid projections to select and control the travel of the racks.

15. In a ticket printing machine, a group of type-wheels, a printing block movable into printing position in the machine, a series of magazines for the blanks to be printed, means for feeding the blanks from the magazines, means controlled by the printing block for selecting and setting the type-wheels into printing position, and means also controlled by the printing block for selecting the magazines.

16. In a ticket printing machine, a group of type-wheels, racks geared, respectively, to said wheels, means for imparting motion to the racks, a series of magazines for the blanks to be printed, feeding means for the blanks, lock-out devices for the feeding means, and a printing block movable into printing position in the machine, said block having means for selecting and controlling the travel of the racks and means for controlling the aforesaid lockout devices.

17. In a ticket printing machine, a group of type-wheels, racks geared, respectively, to said wheels, spring-actuated shafts geared to the respective racks, a series of magazines for the blanks to be printed, feeding means for the blanks, lock-out devices for the feeding means, and a printing block movable into printing position in the machine, said block having means for selecting and controlling the travel of the racks and means for controlling the aforesaid lock-out devices.

18. In a ticket printing machine, a group of type-wheels, racks geared, respectively, to said wheels and having projections, means for imparting motion to said racks, a series of magazines for the blanks to be printed, feeding means for the blanks, lock-out devices for the feeding means, a rack con-

nected to the lock-out devices and having a projection, and a printing block movable into printing position in the machine and having apertures adapted to be entered by the aforesaid projections to select and control the travel of the racks.

19. In a ticket printing machine, a series of magazines for the blanks to be printed, feeding means for the blanks, lock-out devices for the feeding means, and a printing block movable into printing position in the machine, and having means for controlling the lock-out devices.

20. In a ticket printing machine, a series of magazines for the blanks to be printed, feeding means for the blanks, lock-out devices for the feeding means, a rack connected to the lock-out devices, means for imparting motion to the rack, and a printing block movable into printing position in the machine and having means for controlling the travel of the rack.

21. In a ticket printing machine, a series of magazines for the blanks to be printed, feeding means for the blanks, lock-out devices for the feeding means, a rack connected to the lock-out devices and having a projection, means for imparting motion to the rack, and a printing block movable into printing position in the machine, and having an aperture adapted to be entered by the aforesaid projection to control the travel of the rack.

22. In a ticket printing machine, a series of magazines for the blanks to be printed, a feed-slide for each magazine for feeding the blanks therefrom, spring-tensioned arms for actuating the feed-slides, means for holding the arms retracted, a lock-out device having slots to permit the arms to advance, and means for operating and controlling said lock-out device.

23. In a ticket printing machine, a series of magazines for the blanks to be printed, a feed-slide for each magazine for feeding the blanks therefrom, spring-tensioned arms for actuating the feed-slides, means for holding the arms retracted, a lock-out device having slots to permit the arms to advance, means for operating the lock-out device, and a printing block movable into printing position in the machine, and having means for controlling said operating means.

24. In a ticket printing machine, a series of magazines for the blanks to be printed, a feed-slide for each magazine for feeding the blanks therefrom, spring-tensioned arms for actuating the feed-slides, means for holding the arms retracted, a lock-out device having slots to permit the arms to advance, a rack operatively connected to the lock-out device, means for imparting movement to the rack, and means for controlling the travel of the rack.

25. In a ticket printing machine, a series of magazines for the blanks to be printed, a feed-slide for each magazine for feeding the blanks therefrom, spring-tensioned arms for actuating the feed-slides, means for holding the arms retracted, a lock-out device having slots to permit the arms to advance, a rack operatively connected to the lock-out device, means for imparting movement to the rack, and a printing block movable into printing position in the machine, and having means for controlling the travel of the rack.

26. In a ticket printing machine, a series of magazines for the blanks to be printed, a feed-slide for each magazine for feeding the blanks therefrom, spring-tensioned arms for actuating the feed-slides, means for holding the arms retracted, a lock-out device having slots to permit the arms to advance, a rack operatively connected to the lock-out device, and having a projection, means for imparting motion to the rack, and a printing block movable into printing position in the machine, and having an aperture adapted to be entered by the aforesaid projection to control the travel of the rack.

27. In a ticket printing machine, a series of magazines for the blanks to be printed, a feed-slide for each magazine for feeding the blanks therefrom, an actuating arm connected to each slide and having a prolongation, a slidable member having slots adapted to be brought in line with the aforesaid prolongations to release the actuating arms, operating means for said arms, and means for operating and controlling the movement of the slidable member to place a selected one of its slots in position to release a corresponding arm.

28. In a ticket printing machine, a series of relatively stationary imprinting elements, a platen, a guide-rail, a pivotal support for one end of the platen, said support being slidably mounted on the guide-rail, a journal carried by the other end of the platen, cranks on the journal, pinions carried by the cranks, racks on the guide-rail with which the pinions mesh, and means for reciprocating the platen.

29. In a ticket printing machine, a series of relatively stationary imprinting elements, a platen, a guide-rail, a pivotal support for one end of the platen, said support being slidably mounted on the guide-rail, a journal carried by the other end of the platen, cranks on the journal, pinions carried by the cranks, racks on the guide-rail with which the pinions mesh, and an oscillatory lever operatively connected to the platen.

30. In a ticket printing machine, a series of relatively stationary imprinting elements, a platen, means for moving the platen in an undulatory path past said series of imprinting elements, the undulations being toward the members of the series to take impressions

therefrom in consecutive order, and a presser bar engageable with the platen to hold the work thereon.

31. In a ticket printing machine, a movable platen, operating means for the platen, a lock for the operating means, a printing block insertible into the machine and controlling the lock, a recording device operatively connected to the platen, and a barrier controlled by the recording device to prevent insertion of the printing plate.

32. In a ticket printing machine, a movable platen, operating means for the platen, a lock for the operating means, a printing block insertible into the machine and controlling the lock, a recording device operatively connected to the platen, said device including a traveling web on which the record is made, a spring-tensioned device engaging the web and adapted to be tripped when the same is broken or the end is reached, and a barrier controlled by said tension device for preventing insertion of the printing block.

HEINRICH FRIEDLEIN.

In presence of—
ANIS VANDORY,
LUDWIG HAMMERSEN.