

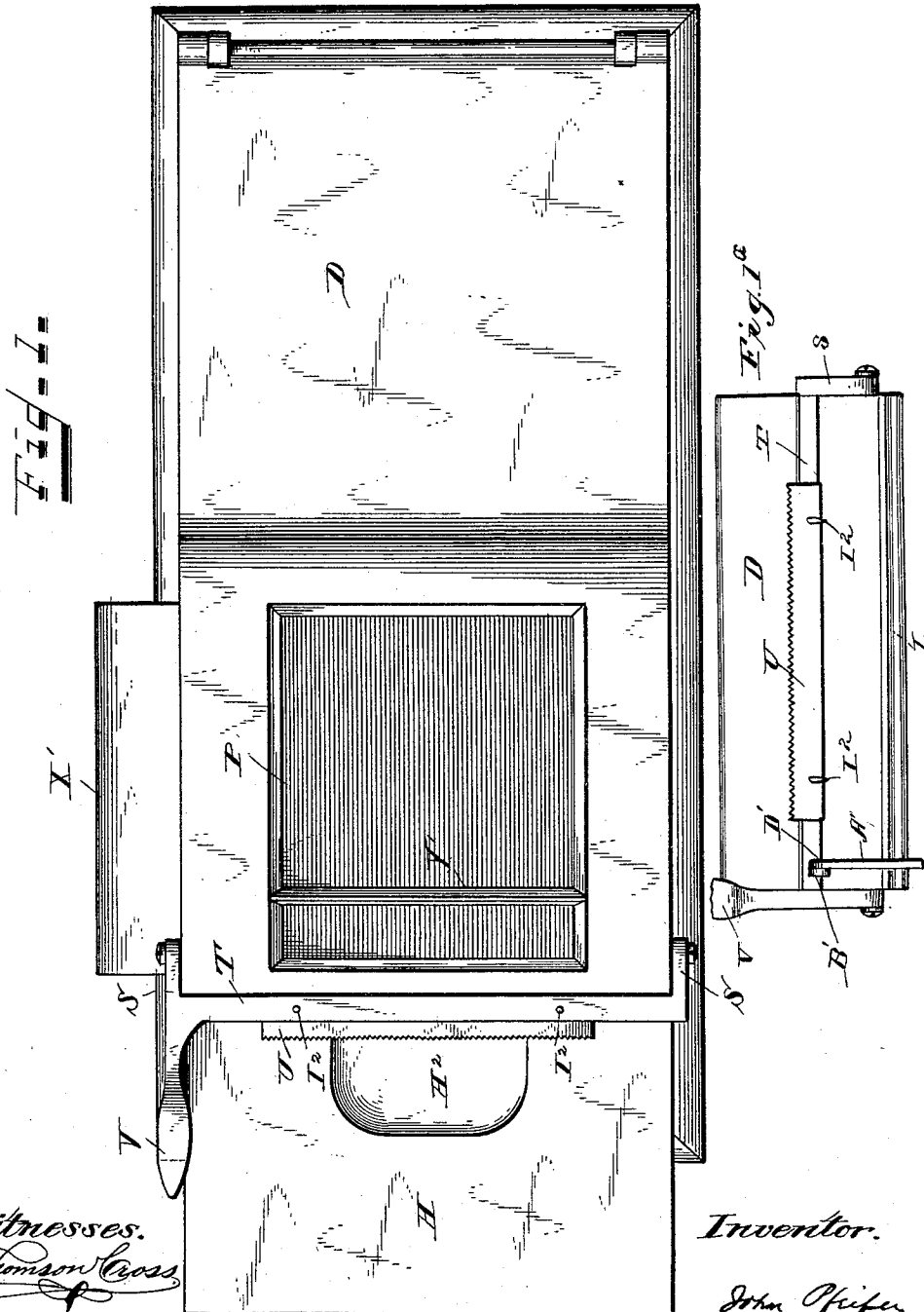
(No Model.)

5 Sheets—Sheet 1.

J. PFEIFER.
AUTOGRAPHIC REGISTER.

No. 484,643.

Patented Oct. 18, 1892.



Witnesses.
Thomson Cross
Edw Handing Haug

Inventor.
John Pfifer
by Paul & Hunter
his Attorneys.

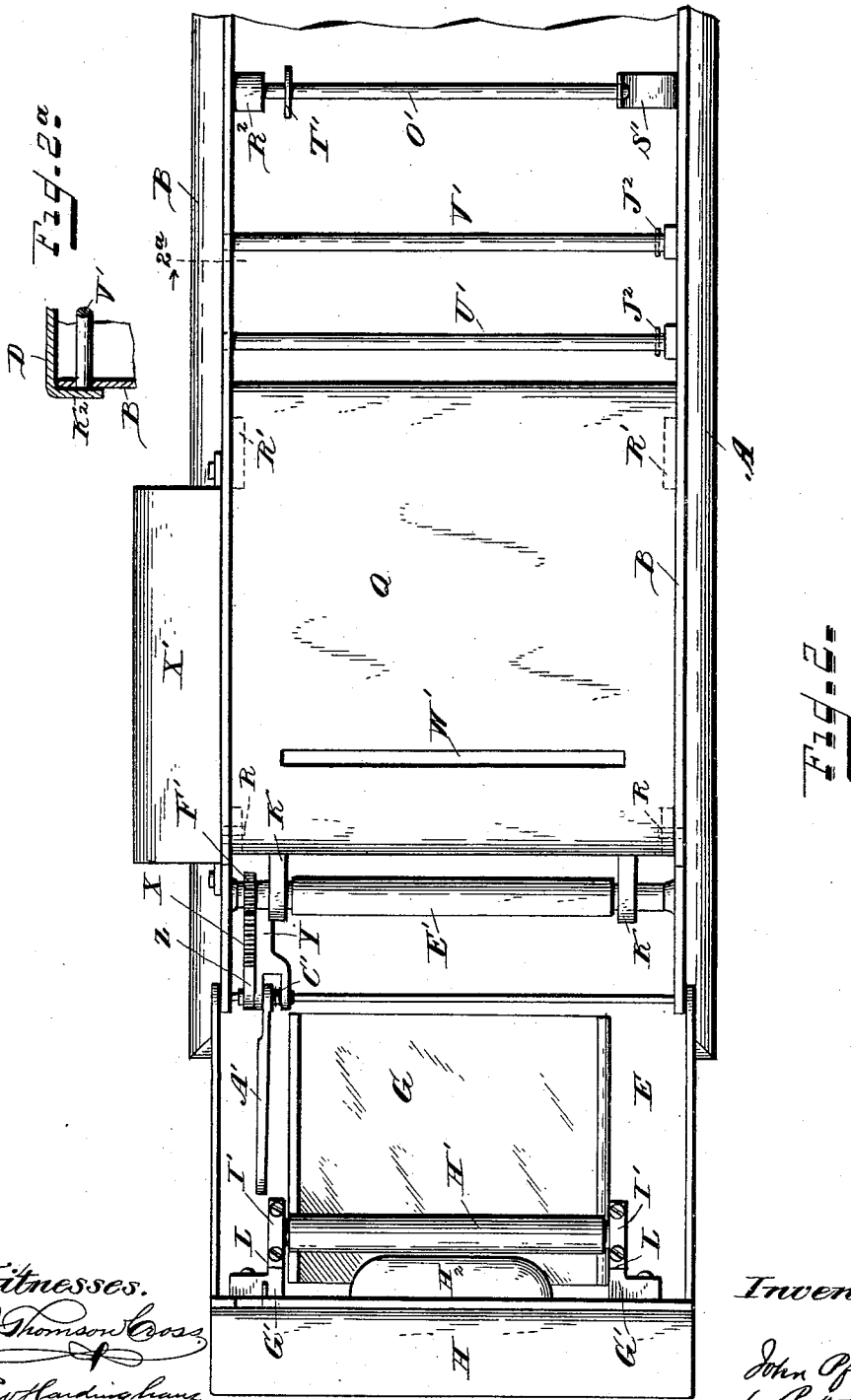
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5 Sheets—Sheet 2.

J. PFEIFER.
AUTOGRAPHIC REGISTER.

No. 484,643.

Patented Oct. 18, 1892.



Witnesses.
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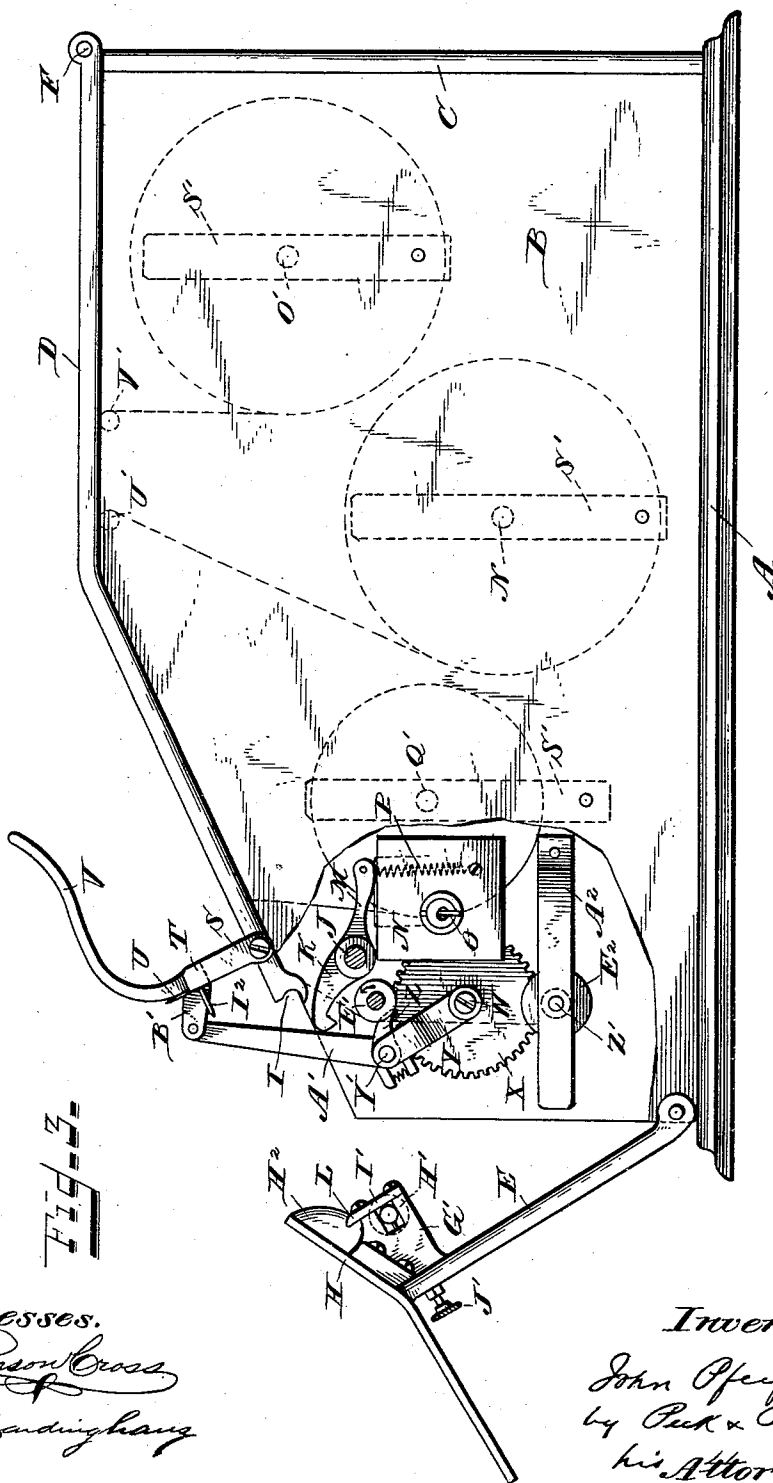
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J. PFEIFER.
AUTOGRAPHIC REGISTER.

No. 484,643.

Patented Oct. 18, 1892.



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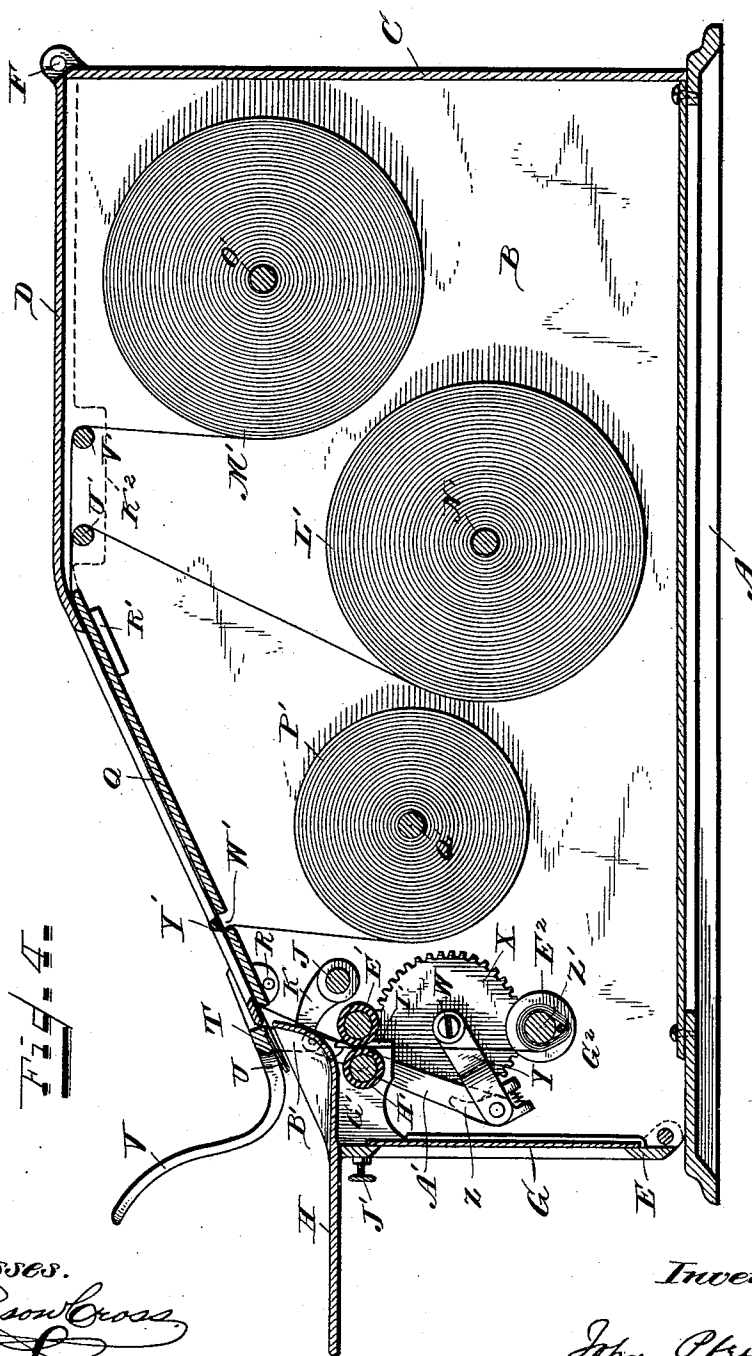
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J. PFEIFER.
AUTOGRAPHIC REGISTER.

No. 484,643.

Patented Oct. 18, 1892.



Witnesses.
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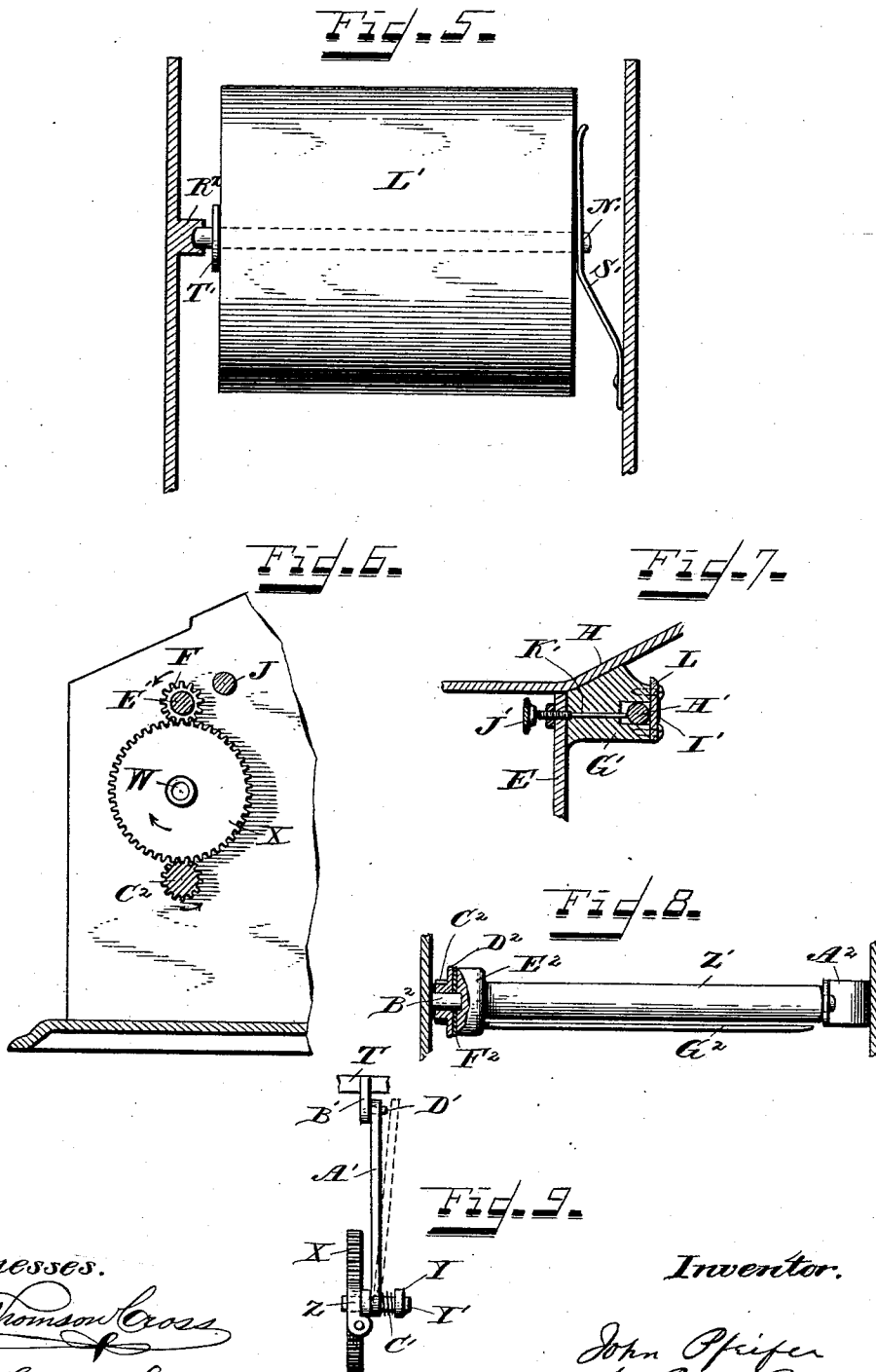
(No Model.)

5 Sheets—Sheet 5.

J. PFEIFER.
AUTOGRAPHIC REGISTER.

No. 484,643.

Patented Oct. 18, 1892.



Witnesses.

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Edw. Handinghaus

Inventor.

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UNITED STATES PATENT OFFICE.

JOHN PFEIFER, OF DAYTON, OHIO, ASSIGNOR TO THE NATIONAL CASH REGISTER COMPANY, OF SAME PLACE.

AUTOGRAPHIC REGISTER.

SPECIFICATION forming part of Letters Patent No. 484,643, dated October 18, 1892.

Application filed February 25, 1892. Serial No. 422,739. (No model.)

To all whom it may concern:

Be it known that I, JOHN PFEIFER, a citizen of the United States, residing at Dayton, in the county of Montgomery and State of Ohio, have

invented certain new and useful Improvements in Autographic Registers, of which the following is a description, reference being had to the accompanying drawings, forming part of this specification.

My invention relates to that class of autographic registers or manual recorders which contain a supply of two or more strips or ribbons of paper carried in suitable form, preferably upon spools or reels, all of which strips are led over an exposed tablet-face, where any desired matter may be written upon the outer one and duplicated upon the others by suitable interposed transfer-sheets or carbon-paper. One of these strips constitutes a permanent record-strip and is led from the exposed tablet-face back into the machine and there stored in suitable form as a record, while the other strip or strips are led out of the machine and the portions written upon severed from the body of the strips to form detached checks.

My invention has for its object the simplification and cheapening of the construction of this class of machines; and its novelty consists in the new combinations, arrangements, constructions, and modes of operation of the various parts, which will be hereinafter set forth, and specifically pointed out in the claims.

In the accompanying drawings, Figure 1 is a top plan view of my improved machine; Fig. 1^a, a detail of the knife-bar and puncturing-pins and associated parts; Fig. 2, a top plan view of the machine with the lid removed, the rear end of the machine broken away, and the hinged front wall thrown forward and downward. Fig. 2^a is a detail view to be hereinafter referred to; Fig. 3, a side elevation of the machine with a portion of the casing broken away, the knife-bar and handle thrown upward, and the hinged front wall thrown slightly forward; Fig. 4, a vertical section on the line 4 4 of Fig. 1; Fig. 5, a detail of one of the reels which carry the supply-rolls of paper, showing the means for supporting the same; Fig. 6, a detail showing the driving-

gear and associated parts; Fig. 7, a sectional detail showing the adjusting devices for one of the feed-rollers; Fig. 8, a vertical longitudinal section through the storing-reel and associated devices, and Fig. 9 a detail view of the front end of the pawl-arm and the link connecting it to the knife-bar.

The same letters of reference are used to indicate identical parts in all the figures.

The casing inclosing most of the working parts of the machine consists of a base and bottom A, side walls B, and one end wall C, suitably secured together, a hinged top or lid D, and a hinged front wall E. The lid is hinged to the body of the casing at the upper rear corner F of the latter, and its forward portion is inclined downward at an angle to its horizontal rear portion to fit and rest upon the downwardly and forwardly inclined upper edges of the side walls B. The front wall E is hinged to the lower forward corner of the casing, and preferably contains a large glass-covered window G, Fig. 2, for a purpose to be explained. The forward end of the lid does not extend quite to the forward end of the casing, as seen in Fig. 3, and the hinged front wall E carries at its upper edge a plate H, which projects rearward far enough to meet the forward end of the lid when the front wall is swung up into position to close the casing. In such position the rear edge of the plate H fits in notches I in the forward end of the lid D, so that the latter cannot be swung upward until the front wall E is swung forward and the edge of the plate H disengaged from the notches I. Fast upon a rock-shaft J, journaled at its ends in the side walls B, is a locking-dog K, which co-operates with a catch at L, carried by the front wall E. When the front wall is swung upward into position to close the casing and the shaft J is rocked forward, the dog K will be thrown down over the catch L, and the lid D and front wall E be thereby securely locked. Fast upon and projecting rearwardly from the shaft J at its right-hand end, Fig. 3, is an arm M, which rests upon the bolt of a lock N, secured upon the inner face of the side wall B. The bolt of the lock may be operated from the exterior of the casing by a key inserted at O. When it is

thrown upward, the locking-dog K will be thrown downward, and when the bolt is thrown downward a spring P, connected to the arm M, will pull the latter downward and lift the dog K out of locking position. If desired, the locking-dog K might be yieldingly pressed downward into locking position by a spring, so that when the front wall E is thrown upward into position it will become automatically locked, the bolt of the lock N in such case being arranged to lift the dog K out of locking position when it is desired to release the front wall E and lid D; also, while one locking-dog K upon the rock-shaft J will serve the purpose of locking up the front wall E, yet I prefer to employ two such dogs, one upon the shaft near each end, as seen in Fig. 2, and have two catches L upon the wall E to co-operate with them.

The forward inclined portion of the lid D has in it a large rectangular opening P, Fig. 1, immediately beneath which is the writing-tablet Q, consisting of a thin plate hinged to the side walls B at its forward end at R, Fig. 4, and resting at its rear end upon lugs R' upon the inner faces of said side walls, Figs. 2 and 4. When the front wall E is unlocked and swung forward and downward and the lid D swung upward and rearward, the plate Q may be swung upward and forward to give free access to the interior of the casing.

Hinged to the forward end of the lid D by side arms S at each side, Fig. 1, is a knife-bar T, extending across the machine immediately in front of the front edge of the lid. This knife-bar preferably has a serrated tearing-edge U and at one end, preferably its left-hand end, is provided with a handle V, by which the bar may be swung up and down for a purpose to be presently explained.

Loosely mounted upon a stud W, projecting inward from the left-hand side wall B, is a gear-wheel X, Figs. 2, 3, 4, and 6. Loosely mounted upon the stud W beside the gear is an arm Y, carrying a pawl Z, spring-pressed into engagement with the teeth of the gear. A link A' connects the outer end of the arm Y with the lower end of a short arm B', depending from the knife-bar T, so that whenever the handle V and bar T are thrown upward the pawl Z will turn the gear X, and as the handle and bar are moved downward the pawl will slip idly backward over the teeth of the gear. The pivotal connection of the link A' to the arm Y at its lower end and to the arm B' at its upper end is shown in the detail view in Fig. 9, where it will be seen that the outer end of the arm Y is forked and the link is pivoted upon a cross-pin Y' between the prongs of the fork. The link fits so loosely upon this cross-pin that it is free to rock laterally, as indicated by the dotted lines; but a spring C', confined between its lower end and one prong of the fork, yieldingly holds its upper end to the left. Its upper end is connected to the arm B' by a stud D' upon said arm, which pin enters a hole in the

upper end of the link. When the link is swung to the right against the pressure of the spring C', the stud D' will be disengaged from the hole, and the link thereby disconnected from the knife-bar, so that the lid D can be swung upward and backward, as before described.

Journalled at its opposite ends in the side walls B, in front of the rock-shaft J heretofore described, is a feed-roller E'. At its left-hand end this roller has fast upon it a pinion F', which meshes with the gear X, as seen in the detail view in Fig. 6. Whenever the handle V and knife-bar T are swung upward and the gear X turned in the manner above described, the feed-roller E' will be turned forward in the direction of the arrow.

Journalled at its opposite ends in slots in lugs or brackets G', projecting rearward from the front wall E, is a second feed-roller H', adapted to bear against the roller E' when the front wall is swung up into position and locked, as seen in Fig. 4. The ends of the spindles of this roller H' are journalled in the slots in the lugs G', as seen in Figs. 3 and 7, and are confined therein by the plates I', which are screwed upon the ends of the lugs, across the slots, and whose upper ends conveniently form the catches L, which co-operate with the locking-dogs K, as before described. The roller H' is capable of backward and forward adjustment in the slots in the lugs G' to cause it to bear with greater or less pressure against the roller E', the two rollers preferably being covered with rubber, as usual. It is adjusted by means of thumb-screws J', Figs. 3 and 7, passed from the front face of the wall E through holes in the lugs G' and bearing at their rear ends against the ends of the roller-spindle. Instead of making the screws themselves long enough to reach from the front face of the wall E back into engagement with the spindle I prefer to interpose loose pins K' in the holes in the lugs G' between the inner ends of the screws and the roller-spindle, as shown.

In the machine illustrated in the drawings I employ three strips of paper—one record-strip and two check-strips—though any desired number of check-strips may be employed without changing the construction of the machine or departing from my invention. The supply of the check-strips is carried in two rolls L' M', Figs. 3 and 4, upon spools or spindles N' O', while the record-strip is carried in a roll P' on a spindle Q'. At one end the spindles N' O' Q' have their bearings in bosses R², formed upon the inner face of the side wall, Figs. 2 and 5. At their opposite ends the spindles have their bearings in holes in flat springs S', secured at their lower ends to the side wall B and bent outward and upward into position to yieldingly press against the ends of the rolls of paper. Near their ends, which have their bearings in the bosses R², the spindles are provided with flanges T', against which the ends of the rolls of paper

fit and which prevent the pressure of the springs S' against the opposite ends of the rolls from forcing the rolls against the bosses R². The friction between the springs S' and the ends of the rolls offers resistance to the turning of the latter and preserves the desired tension on the paper strips as the latter are withdrawn from the rolls. By simply pressing the upper ends of the springs S' toward the side wall of the casing to which they are secured the ends of the spindles which are supported by them may be readily disengaged and the empty spindles removed and new rolls of paper inserted.

From the rolls L' M' the check-strips are led upward over guide-rollers U' V', Figs. 2 and 4, thence forward over the plate Q beneath the opening P in the forward inclined portion of the lid D, thence on forward beneath the knife-bar T, and out of the machine. The record-strip is led from the roll P' up through a transverse slot W' in the plate Q, Figs. 2 and 4, thence forward over the portion of the plate in front of said slot, and thence downward between the feed-rollers E' H'. Suitable transfer-sheets—such as the usual carbon-paper—carried upon a roll within a casing X', secured to the left-hand side wall of the main casing, as seen in Figs. 1 and 2, are led across the plate Q between the respective strips of paper and are confined at their free ends between the lid D and upper edge of the right-hand side wall of the casing. When the portions extending over the plate Q are used until the copies made by them begin to grow indistinct, the lid D can be raised, the carbon-sheets drawn to the right until fresh portions are brought over the plate Q, and the lid be then lowered into place and the used portions of the sheets torn off.

It will be noticed that while the check-strips L' M' are drawn over the whole length of the plate Q the record-strip P' is passed over only the lower end of the plate at the left of the slot W' in Fig. 2, so that the matter which may be written upon the check-strips at a point to the right of the slot in said figure will not be duplicated on the record-strip. The purpose of this arrangement is to allow the record-strip to be used, when desired, to record only the footings or totals of the amounts entered upon each check of the check-strips. In many instances in the use of machines of this character it is not necessary to preserve upon the record-strip all the items and details which may be entered upon the check-strips, and by the arrangement above described I am enabled to employ the record-strip solely for the matter which it is necessary or desirable to have entered upon it, and to thereby economize in the use of such strip and avoid the necessity of replenishing the supply of it as often as would be necessary if it were used up as rapidly as the check-strips. This feature of my invention, while illustrated and described in this application, is not claimed herein, but

forms the subject-matter of a separate application filed by me on the 29th day of July, 1892, and bearing Serial No. 441,624.

For the purpose of conveniently separating the portion of the check-strip upon which are to be written the details and items which are not to be duplicated upon the record-strip from the portion upon which the matter which is to be duplicated upon the record-strip is to be written I divide the opening P in the lid D into two portions by a cross-piece Y', as seen in Fig. 1.

At each lifting of the handle V of the knife-bar T the gear-wheel X will turn the feed-rollers E' H' sufficiently to carry forward the record-strip far enough to withdraw from the tablet-face Q the portion of the strip which has been written upon and bring a fresh portion into position to receive the footing of the next check. From the feed-rollers E' H' the record-strip P' is led downward and wound upon a storing-reel Z'. The construction and mode of operation of this storing-reel are believed to be new, and may be described as follows, reference being had to Figs. 3, 4, and 8. At its right-hand end the spindle of this reel is journaled in a spring A², similar to the springs which support the ends of the rolls L' M' P'. The end of the spindle enters a hole in the spring and the latter bears against the end of the body of the reel and presses it toward the left. At its opposite end the reel is journaled upon a stud B², Fig. 8, projecting inward from the side wall of the casing, the end of the reel being provided with a socket, which the end of the stud enters. Loosely mounted upon this stud is a pinion C², which meshes with the gear X, Fig. 6. Secured to the side of the pinion C² is a flange or disk D² of greater diameter than the pinion. The adjacent end of the reel Z' has fast upon or integral with it a corresponding flange or collar E², while between the two flanges upon the stud B² is placed a friction-washer F², preferably made of rubber or leather or like material. The spring A², in which the right-hand end of the reel is journaled, presses the reel toward the left. The pinion C² bears at its left-hand side against the wall of the casing or against a collar thereon surrounding the base of the stud B². The friction-washer F² is thus compressed between the flange D² of the pinion and the flange E² on the reel by the pressure of the spring A², so that while it is possible for the pinion to turn independently of the reel it will turn the reel with it unless the reel offers sufficient resistance to overcome the friction between the flanges and friction-washer.

The pinion C² is of approximately the same size as the pinion F', which drives the feed-roller E', Fig. 6, and as the body of the reel Z' is of approximately the same diameter as the feed-roller E' the reel Z' when empty or nearly empty will in making one complete revolution wind upon itself the amount of paper which is fed forward by one revolution

of the feed-rollers $E' H'$; but as the quantity of paper wound upon the reel Z' is increased a complete revolution of the reel would wind up more paper than would be fed forward by a revolution of the feed-rollers. If there were nothing to prevent, the reel would thus draw the record-strip forward independently of the feed-rollers, and a gradually-increasing quantity of the strip would be wound upon the reel at each revolution. Under the construction which I have shown and described, however, the resistance offered to the drawing forward of the record-strip, except as it is fed by the feed-rollers, is sufficient to overcome the friction between the flanges $D^2 E^2$ and washer F^2 and hold the reel Z' stationary, while the pinion C^2 and disk D^2 turn independently of it. In this manner the reel Z' is turned far enough at each operation to wind up the length of strip which is fed forward by the feed-rollers and is then arrested, and the pinion C^2 and disk D^2 turn independently of it during the remainder of their movement. The storing-reel Z' is thus relieved of any work of drawing forward the record-strip and has only to wind up the strip as it is fed to it by the feed-rollers. At the same time a regular and even feed of the record-strip is preserved, so that the same length of the strip is drawn over the writing-tablet at each operation of the machine whether the storing-reel be nearly empty or nearly filled. By pressing the spring A^2 slightly to the right in Fig. 8 that end of the reel may be readily disengaged from the spring and its opposite end disengaged from the stud B^2 and the reel removed, and it can be replaced with equal facility.

For the purpose of readily attaching the end of the record-strip to the storage-reel the latter has a pin G^2 secured at its left-hand end to the flange E^2 and extending parallel with the body of the reel nearly to its opposite end. The end of the strip can be inserted between this pin and the reel and doubled upon itself, and thereby easily wound upon the reel.

Under the construction above described the general mode of operation is as follows: The supply of check-strips and record-strip being placed in the machine and the strips led forward, as shown in Figs. 3 and 4, and the record-strip attached to the storage-reel, the clerk writes upon the outer check-strip through the upper portion of the opening P , Fig. 1, the items of the sale and such other matter as desired and upon said strip below the cross-bar Y' the footing of all the items and any other necessary memoranda. He then throws up the handle V and knife-bar T and grasps the forward edges of the two check-strips which were beneath the knife-bar and pulls them forward out of the machine until all the written matter upon them is in front of the knife-bar. He then depresses the handle and knife-bar and tears off the two checks against the knife. The plate H has a depression or bowl in it near

its middle at H^2 , as seen in Figs. 1 to 4, to enable the clerk to more readily grasp the ends of the check-strips. The lifting of the handle and knife-bar to enable the clerk to get hold of the ends of the check-strips has caused the pawl Z to turn the gear X , and the latter has turned the feed-rollers $E' H'$ and carried forward the portion of the record-strip which was written upon, and the storage-reel has wound upon it the portion of the record-strip which has been delivered to it by the feed-rollers. As the record-strip is fed forward from the feed-rollers to the storage-reel the matter written upon it is exposed to view through the window G in the front wall of the casing. It is necessary for the clerk to raise the handle V and knife-bar T in order to get hold of the ends of the check-strips to draw them out, so that the feeding-rollers and storage-reel will be actuated each time to feed forward and wind up the record-strip; but as an additional safeguard to insure the throwing up of the handle far enough to cause the proper feeding of the record-strip at each operation of the machine I provide the knife-bar T with one or more (in this instance two) pendent pins I^2 , Figs. 1^a and 3, adapted to pass through the ends of the check-strips and enter holes in the plate H when the handle and knife-bar are depressed. These pins prevent the strips being drawn out, even if the clerk were able to get hold of them, until the knife-bar has been lifted high enough to disengage the pins from the strips, and the movement of the bar necessary for this purpose is sufficient to cause the pawl Z to turn the gear X the necessary distance to properly actuate the feeding-rollers and storage-reel. The pins I^2 might be employed independently of the knife-bar T for the purpose of insuring the lifting of the handle V and feeding of the record-strip. Thus, as the simplest illustration, suppose the bar T were not a knife-bar, but simply a cross-bar moved by the handle and carrying the pins I^2 . In such case it would be necessary to lift the handle and bar, and thereby actuate the feeding-rollers, in order to permit the check-strip to be withdrawn, just as it now is, and if the bar or handle had a resetting-spring connected to it the bar would be thrown down and the pins I^2 passed through the check-strip as soon as the handle was released by the operator. It will thus be seen that in such case it would be necessary for the clerk to lift the handle at each operation of the machine, and thereby wind up the record-strip, and that when he had released the handle the pins I^2 would pass through the check-strip again. It will, of course, be understood that this feature of my invention is applicable as well to a machine in which the knife-bar or handle actuates the feeding-rollers alone or the storage-reel alone as to a machine in which it actuates both the storage-reel and the feeding-rollers.

The guide-rods $U' V'$, Fig. 2, are mounted at their left-hand ends in holes in the side

wall B of the casing, as seen in Fig. 2^a, so that the rods can be slid toward the left to give free access to the interior of the casing when the lid D and plate Q are swung up, as before described. Pins J², passed through the rods U' V' near their right-hand ends, prevent the entire withdrawal of the rods from the casing. At a point opposite the rods U' V' the left-hand edge of the lid D is provided with a depending flange K², Figs. 2^a and 4. When the lid is down, the flange will hold the rods in position in the casing. Furthermore, if the rods are partially withdrawn from the casing the flange K² will strike them when it is attempted to close the lid and prevent it being closed until the rods are pushed into proper position.

Having thus fully described my invention, I claim—

1. In an autographic register, the combination of the casing having the hinged lid D, the hinged front wall E, having the glass-covered window G, the locking-dog K, co-operating with a catch upon the hinged wall E, and a lock N, co-operating with the dog K and accessible to a key from the exterior of the machine, substantially as described.

2. In an autographic register, the combination of the casing having the hinged lid D, the hinged front wall E, having the plate H, whose rear edge fits in notches I in the lid D, the rock-shaft J, the locking-dogs K, fast thereon and co-operating with the catches upon the hinged front wall E, and a lock N, co-operating with the rock-shaft J and accessible to a key from the exterior of the machine, substantially as described.

3. In an autographic register, the combination of a storage-reel for the record-strip, a movable knife-bar for severing the check-strip, and driving mechanism for the storage-reel actuated by the movements of the knife-bar.

4. In an autographic register, the combination of a storage-reel for the record-strip, a hinged knife-bar for severing the check-strip, and driving mechanism for the storage-reel, actuated by the movements of the knife-bar.

5. In an autographic register, the combination of a storage-reel for the record-strip, a driving-gear therefor, an actuating-pawl for the gear, a movable knife-bar for severing the check-strip, and connections between the knife-bar and pawl for actuating the gear from the movements of the knife-bar.

6. In an autographic register, the combination of a storage-reel for the record-strip, a driving-gear therefor, a swinging arm carrying a pawl for actuating the gear, a hinged knife-bar for severing the check-strip, and connections between said bar and the swinging arm for transmitting the movements of the bar to said arm.

7. The combination of the storage-reel Z', the driving-gear X, the arm Y, carrying the pawl Z, engaging the gear X, the hinged knife-bar T, provided with an operating-

handle V, and the link A', connecting the arm Y and knife-bar T.

8. The combination of the storage-reel Z', the driving-gear X, the arm Y, carrying the pawl Z, engaging the gear X, the lid D, the knife-bar T, hinged thereto, and the link A', connected to the arm Y at its lower end and detachably connected to the bar T at its upper end.

9. The combination of the storage-reel Z', the driving-gear X, the arm Y, carrying the pawl Z, engaging the gear X, the hinged knife-bar T, the link A', pivoted to the arm Y at its lower end and detachably connected to the bar T at its upper end, and the spring C', acting on the link A' to yieldingly maintain its connection with the bar T.

10. In an autographic register, the combination of feeding-rollers for the record-strip, a movable knife-bar for severing the check-strip, and driving mechanism for the feeding-rollers, actuated by the movements of the knife-bar.

11. In an autographic register, the combination of a storage-reel and feeding-rollers for the record-strip, a movable knife-bar for severing the check-strip, and driving mechanism for the storage-reel and feeding-rollers, actuated by the movements of the knife-bar.

12. In an autographic register, the combination of a storage-reel and feeding-rollers for the record-strip, a hinged knife-bar provided with an operating-handle for severing the check-strip, and driving mechanism for the storage-reel and feeding-rollers, actuated by the movements of the knife-bar.

13. In an autographic register, the combination of a storage-reel and feeding-rollers for the record-strip, a single driving-gear for the storage-reel and one of the feeding-rollers, an actuating-pawl for the gear, a movable knife-bar for severing the check-strip, and connections between said bar and the actuating-pawl for the driving-gear.

14. In an autographic register, the combination of a storage-reel and feeding-rollers for the record-strip, a single driving-gear for the storage-reel and one of the feeding-rollers, a swinging arm carrying a pawl engaging said gear, a hinged knife-bar for severing the check-strip, and a link connecting said bar with the swinging pawl-arm.

15. In an autographic register, the combination, with the casing and the fixed feeding-roller E', journaled therein, of the hinged front wall E, carrying the roller H', adapted to bear against the roller E' when the wall E is swung up into position.

16. In an autographic register, the combination, with the casing and the feeding-roller E', journaled therein, of the hinged front wall E, having rearwardly-projecting lugs or brackets G', the roller H', adjustably journaled therein and adapted to bear against the roller E' when the wall E is swung up into position, and adjusting-screws J', co-operating with the

roller H' to regulate the pressure of the latter against the roller E'.

17. In an autographic register, the combination, with the casing and the fixed feeding-roller E', journaled therein, of the hinged front wall E, carrying the roller H', adapted to bear against the roller E' when the wall E is swung up into position, and the locking-dogs K, co-operating with the catches upon the front wall E to hold the latter in position, with the roller H' bearing against the roller E'.

18. In an autographic register, the combination, with the casing and the feeding-roller E', journaled therein, of the swinging front wall E, having rearwardly-projecting lugs G', the roller H', journaled therein and adapted to bear against the roller E' when the wall E is swung up into position, the rock-shaft J, the locking-dogs K, fast thereon and arranged to co-operate with the catches L upon the lugs G', and means controlled by a key from the exterior of the casing for actuating the rock-shaft and locking-dogs.

19. In an autographic register, the combination of the casing having the fixed feeding-roller E' journaled therein, the hinged front wall E, having the rearwardly-projecting lugs G', the roller H', journaled in slots in said lugs, the plate I', secured upon said lugs, the adjusting-screws J', co-operating with the roller H' to regulate its pressure against the roller E', the rock-shaft J, the locking-dogs K, fast thereon and co-operating with the upper ends L of the plates I', the arm M, fast upon the rock-shaft J, and the spring P and lock N, co-operating with the arm M to move the dogs K into and out of locking position.

20. In an autographic register, the combination of the casing having the hinged lid D, the hinged front wall E, adapted to lock the lid D when swung up into position, the fixed feeding-roller E', journaled in the casing, the roller H', journaled in bearings carried by the front wall E and adapted to bear against the roller E' when the front wall is swung up into position, the knife-bar T, hinged to the lid D, and driving mechanism for the feed-rollers, actuated by the movements of said bar.

21. In an autographic register, the combination of the tablet-plate Q, the plate H, having the depression or bowl H² at the lower end of the plate Q, and the hinged knife-bar T, having its edge overlying the bowl H², whereby when said knife-bar is raised the check-strip may be easily grasped and drawn out and when it is depressed the strip may be severed against its edge.

22. In an autographic register, the combination of the casing, the tablet-plate Q, supported therein, the hinged lid D, having an opening P above the plate Q, the hinged front wall E, having the plate H provided with the bowl or depression H², and the knife-bar T, hinged to the lid D and adapted to overlie the bowl H² when the front wall E is swung up into position.

23. In an autographic register, the combination of the hinged front wall E, provided with a glass-covered window G, the feeding-roller E' and storage-reel Z', journaled in approximately the same vertical plane behind the window G, the roller H', carried by the hinged front wall E and co-operating with the roller E', and driving mechanism for the feed-rollers, whereby the record-strip is exposed to view through the window G as it passes from the feeding-rollers to the storage-reel.

24. In an autographic register, the combination of a pair of feeding-rollers for the record-strip, feeding forward substantially the same length of strip at each operation of the machine, a storage-reel for the record-strip, a movable knife-bar for severing the check-strip, driving mechanism for the storage-reel, actuated by the movements of the knife-bar, and a yielding connection between said driving mechanism and reel.

25. In an autographic register, the combination of a pair of feeding-rollers for the record-strip, a movable knife-bar for severing the check-strip, driving mechanism for the feeding-rollers, actuated by the movements of said knife-bar, a storage-reel for the record-strip, driving mechanism for said reel having a defined movement at each operation of the machine, and a yielding connection between said driving mechanism and reel.

26. In an autographic register, the combination of a pair of feeding-rollers and a storage-reel for the record-strip, a movable knife-bar for severing the check-strip, driving mechanism for both the storage-reel and feeding-rollers, actuated by the movements of the knife-bar, and a yielding connection between said driving mechanism and the storage-reel.

27. In an autographic register, the combination of the gear-wheel X, the swinging arm J, the pawl Z, carried thereby and engaging the wheel X, means for giving the arm Y a definite movement at each operation of the machine, the feeding-rollers E' H', driven by the wheel X, the storage-reel Z', its driving-pinion C², geared to the wheel X, and a yielding connection between said pinion and reel.

28. In an autographic register, the combination of the gear-wheel X, arm Y, pawl Z, knife-bar T, link A', feeding-rollers E' H', driven by wheel X, storage-reel Z', its driving-pinion C², geared to wheel X, and a yielding connection between said pinion and reel.

29. In an autographic register, the combination, with the feeding-rollers for the record-strip and driving mechanism therefor, of a detaining-pin actuated by the driving mechanism and arranged to pass through the check-strip to prevent movement of the same and to be withdrawn therefrom when the driving mechanism is operated to actuate the feeding-rollers, whereby the check-strip cannot be withdrawn until the feeding-rollers are actuated to feed the record-strip.

30. In an autographic register, the combination of the feeding-rollers for the record-strip,

a driving mechanism, and an operating-handle therefor, a detaining-pin moved by the operating-handle and adapted to pass through the check-strip at one stroke of the handle and to be withdrawn therefrom at its opposite stroke, for the purpose described.

31. In an autographic register, the combination of a storing-reel for the record-strip, a driving mechanism, and an operating-handle therefor, a detaining-pin moved by the operating-handle and adapted to pass through the check-strip at one stroke of the handle and to be withdrawn therefrom at its opposite stroke, for the purpose described.

32. In an autographic register, the combination of a storage-reel for the record-strip, a movable knife-bar for severing the check-strip, a driving mechanism for the storage-reel, actuated by the movements of the knife-bar, and a detaining-pin moved by the knife-bar and adapted to pass through the check-strip during the movement of the bar in one direction and to be withdrawn therefrom by its movement in the opposite direction, for the purpose described.

33. In an autographic register, the combination of a pair of feeding-rollers for the record-strip, a movable knife-bar for severing the check-strip, a driving mechanism for the feeding-rollers, actuated by the movements of the knife-bar, and a detaining-pin moved by the knife-bar and adapted to pass through the check-strip during the movement of the bar in one direction and to be withdrawn therefrom by its movement in the opposite direction, for the purpose described.

34. In an autographic register, the combination, with the storing-reel and its driving mechanism, of the hinged bar T, actuating

said driving mechanism and provided with the pins I^2 , adapted to pass through the check-strip when the bar is depressed and to be withdrawn therefrom when the bar is lifted, for the purpose described.

35. In an autographic register, the combination, with the feeding-rollers for the record-strip and their driving mechanism, of the hinged bar T, actuating said driving mechanism and provided with the pins I^2 , adapted to pass through the check-strip when the bar is depressed and to be withdrawn therefrom when the bar is lifted, for the purpose described.

36. In an autographic register, the combination of the tablet Q, the hinged knife-bar T at the lower edge of the same, having the operating-handle V and provided with the pins I^2 , the driving-gear X, the swinging arm Y, carrying the pawl Z, engaging the gear X, and the link A', connecting the arm Y and bar T.

37. In an autographic register, the combination, with the casing having a hinged lid D, provided with a depending flange K^2 at one side, of the guide-rods U' V', passed through holes in the side wall of the casing adjacent the depending flange K^2 of the lid and provided with cross-pins J^2 to prevent their complete withdrawal, whereby when said rods are in proper position the flange K^2 prevents their withdrawal and whereby when the lid is raised and the rods are partially withdrawn the engagement of the flange K^2 with the rods will prevent closing of the lid.

JOHN PFEIFER.

Witnesses:

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