H. N. MARVIN.

APPARATUS FOR DELINEATING CHARACTER ACCORDING TO THE CHARACTER OF THE HAND.

APPLICATION FILED JAN. 22, 1919.

1,312,860.

Patented Aug. 12, 1919.

3 SHEETS—SHEET 1.

Fig. 1

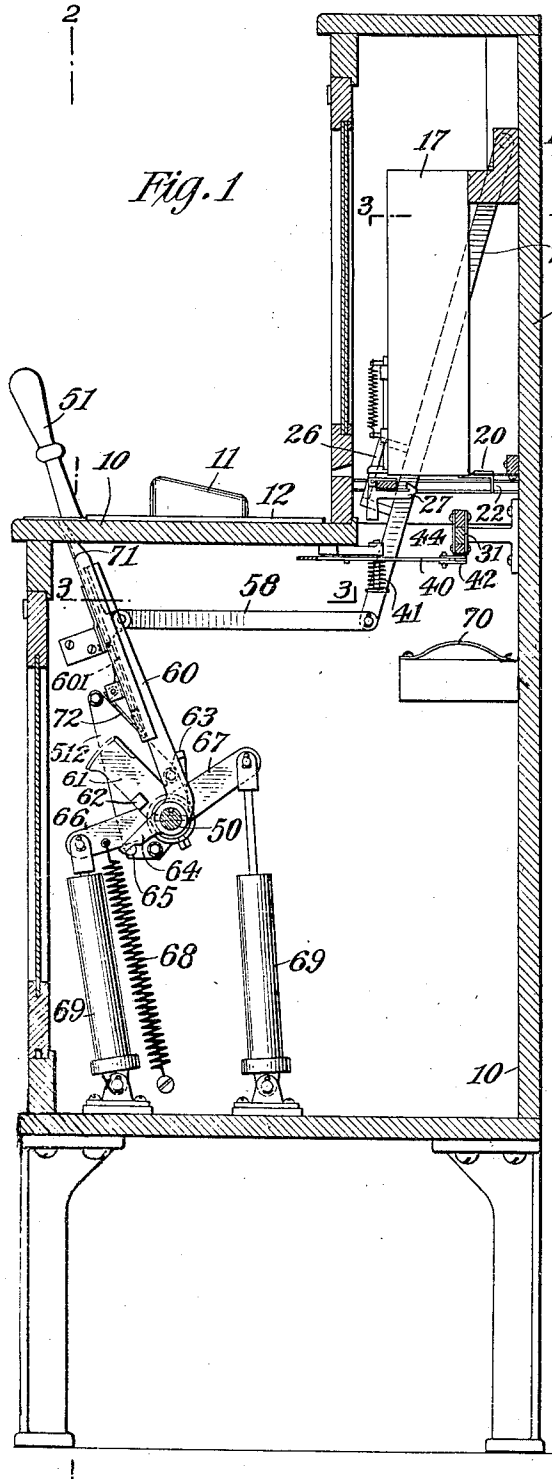
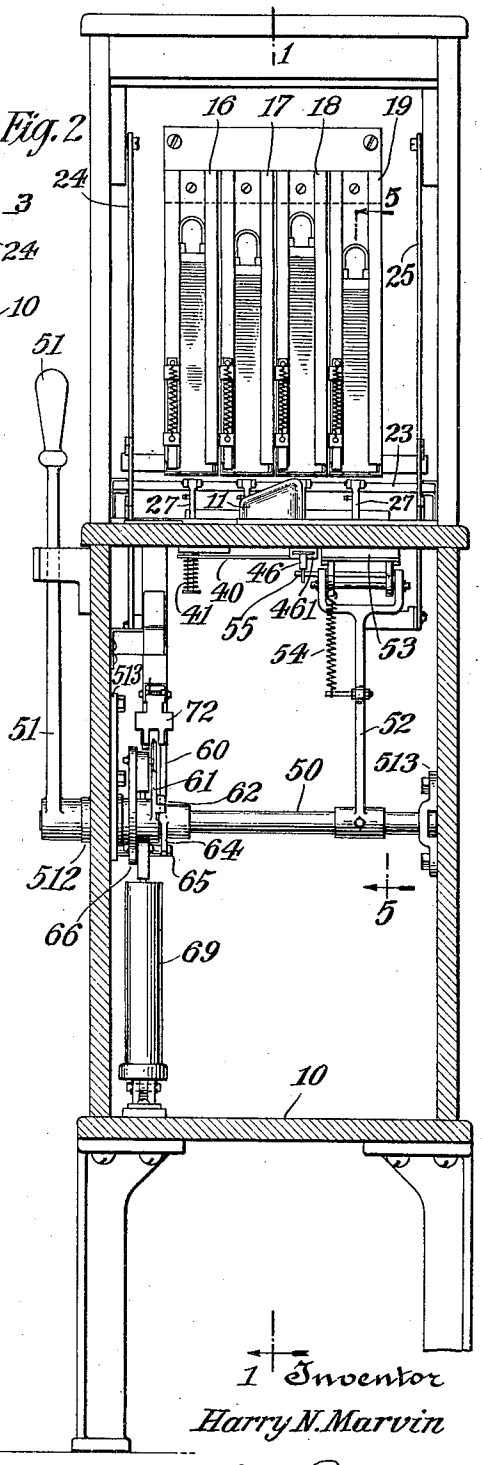


Fig. 2



Inventor
Harry N. Marvin

by his Attorney George F. Scull

THE COLUMBIA PLANOGRAPH CO., WASHINGTON, D. C.

H. N. MARVIN.

APPARATUS FOR DELINEATING CHARACTER ACCORDING TO THE CHARACTER OF THE HAND.

APPLICATION FILED JAN. 22, 1919.

1,312,860.

Patented Aug. 12, 1919.

3 SHEETS—SHEET 2.

Fig. 3

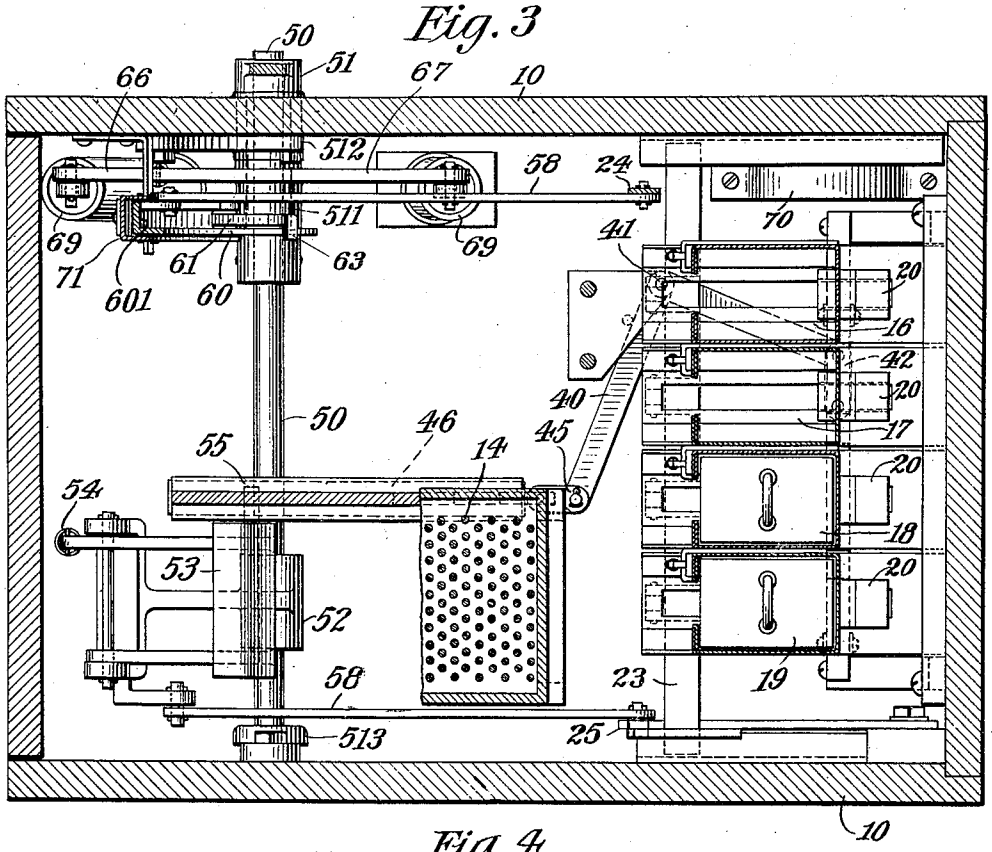
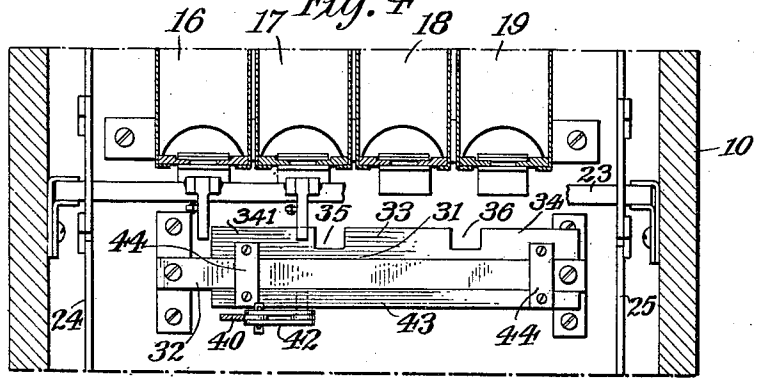


Fig. 4



Inventor
Harry N. Marvin
by his Attorney
George F. Scull

THE COLUMBIA PLANOGRAPH CO., WASHINGTON, D. C.

H. N. MARVIN.

APPARATUS FOR DELINEATING CHARACTER ACCORDING TO THE CHARACTER OF THE HAND.

APPLICATION FILED JAN. 22, 1919.

1,312,860.

Patented Aug. 12, 1919.

3 SHEETS—SHEET 3.

Fig. 7

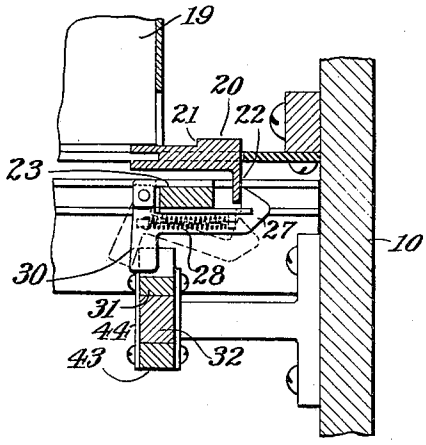


Fig. 5

Fig. 6

Inventor
Harry N. Marvin
by his Attorney
George F. Reed

THE COLUMBIA PLANOGRAPH CO., WASHINGTON, D. C

UNITED STATES PATENT OFFICE.

HARRY N. MARVIN, OF RYE, NEW YORK.

APPARATUS FOR DELINEATING CHARACTER ACCORDING TO THE CHARACTER OF THE HAND.

1,312,860. Specification of Letters Patent. Patented Aug. 12, 1919.

Application filed January 22, 1919. Serial No. 272,489.

To all whom it may concern:

Be it known that I, HARRY N. MARVIN, a citizen of the United States, residing at Rye, in the county of Westchester, State of New York, have invented certain new and useful Improvements in Apparatus for Delineating Character According to the Character of the Hand, of which the following is a specification, reference being had to the drawings accompanying and forming a part of the same.

My present invention is an improvement on the apparatus described in Patent 854,752, granted May 28, 1907.

One of the objects of my present invention is to provide a simplified form of machine of the type described in said patent. Another object of my invention is to provide a machine which is controlled only by the length of the hand, but which at the same time is certain in its action, and relatively simplified and inexpensive in construction.

With these and other objects in view my invention consists of the combinations and arrangements hereinafter pointed out and claimed.

In the drawings, Figure 1 is a sectional side elevation of an illustrative form of my invention showing the parts in normal position;

Fig. 2 is a sectional front elevation of my illustrative form of machine taken on the line 2—2 of Fig. 1;

Fig. 3 is a sectional plan view of the machine shown in Figs. 1 and 2, taken along the line 3—3 of Fig. 1;

Fig. 4 is a sectional front elevation of a part of the ejector mechanism, taken along the line 4—4 of Fig. 5;

Fig. 5 is a sectional elevation, enlarged, taken along the line 5—5 of Fig. 2;

Fig. 6 is a section on the line 6—6 of Fig. 5, and

Fig. 7 is a sectional elevation of the ejector pawls.

In the drawings and the accompanying description, the reference figures relate to corresponding parts.

In the form illustrated, the machine is incased in a casing 10 having a portion on which is mounted a stop 11 adjacent a set of plates 12—13 attached to the casing, these plates being spaced apart and each being provided with a set of holes through which project portions of the pins 14, each of which is provided with a stop shoulder 15, as shown best in Figs. 5 and 6. This portion of the arrangement is similar to the arrangement in Patent No. 854,752 referred to above. Also, in a manner similar in the above referred to patent, there is provided a series of card magazines 16, 17, 18 and 19 in which cards are stacked in the usual manner and are supported by card guides beneath each of the magazines in such a way that the lowermost card may be slid from underneath the pile to be delivered through a suitable opening in the casing 10. Since the specific construction of these card magazines is no part of my present invention, further description thereof will be unnecessary.

Each of the card ejectors comprise a plate 20 mounted on suitable slides so that it may be reciprocated beneath one of the card magazines, there being such a plate for each magazine. The plate 20 is provided with a shoulder 21 which engages with the lowermost card in the magazine and is also provided, in the form illustrated, with a projector 22. Normally the plate 20 is positioned as shown in Fig. 5 and it is obvious that by sliding it to the left of that figure, a card will be ejected by contact with the shoulder 21.

Arranged to reciprocate below the magazines is a bar 23 suitably mounted in guides at either end attached to the casing 10, the bar 23 being connected at either end to one of a pair of pivoted arms 24, 25 through a loop 26 which permits the bar 23 to slide horizontally as the arms 24, 25 swing.

A plurality of pawls 27 are pivotally mounted on the bar 23, each pawl being beneath one of the card magazines. A spring 28 holds the pawls in the position shown in full lines in Fig. 7 and, in this position, the nose of the pawl is in alinement with the projection 22 of the plate 20 so that as the bar 23 is moved to the right of Fig. 5, the cam surface on this nose contacts with the projections 22 and, unless prevented by other mechanism, will snap into place back of projection 22 in the manner shown in full lines in Fig. 7. Then, as the bar 23 returns to the position shown in Fig. 5, the plate 20 will be drawn forward to eject a card. The plate 20 is returned to its normal position at the rear of the card magazine by contact with bar 23 as the latter is again moved to the right of Fig. 5.

While I have provided an ejector and a pawl for each of the card magazines, it will be understood that, in a machine of this character, it is desirable to eject the cards selectively in accordance with the character of the hand of the person whose character is being delineated, and I have provided a simplified selective device which, in the form illustrated, comprises primarily a bar which is longitudinally movable and which has suitable projections and cut away portions to contact with projections 30 on the pawls 27 so that, at each reciprocation of the bar 23, only one of the pawls 27 will remain operative.

Referring to Fig. 4 particularly, the longitudinally movable selector bar 31 is mounted on the guide 32 attached to the casing, the bar 31 being provided with projections 33, 34 and 341. In some aspects, it may be considered that the bar 31 is provided with notches 35, 36.

In the position shown in Fig. 4, it will be clear that, as the bar 23 moves to the right of Fig. 5, the projections 30 on each of the three pawls 27 at the right of Fig. 4 will strike projections 33, 34 and 341 of the bar 31 and will be turned into the dotted line position of Fig. 7, so that as the bar 23 returns to the position of Fig. 5, the corresponding ejector plates 20 will not be moved. On the other hand, since the pawl under the magazine 16 at the left of Fig. 4 has no projection on the bar 31 opposite it, it will remain in operative position and snap back of the projection 22 on its ejector plate 20 so that a card will be ejected from the magazine 16 when bar 23 moves to the left of Fig. 5.

The projections 33, 34 and 341 are so arranged on the bar 31 that, as the bar 31 is shifted to the left in Fig. 4, only one of the pawls 27 will remain operative. That is to say, if the bar 31 is shifted a short distance to the left of Fig. 4, the notch 35 will come opposite the projection on the pawl 27 beneath the magazine 17 but projections on the bar 31 will coöperate with the projections on the pawls under each of the other magazines so that a card will be ejected from magazine 17 only.

Longitudinal motion is given to the bar 31 in the illustrative machine by the motion of a bell crank 40 pivoted at 41 and connected by line 42 to the bar 43 which, through the straps 44, 44 is really a portion of the bar 31.

By link 45, one end of the bell crank 40 is connected to a longitudinally movable notched bar 46 provided with notches 47, 48 and 49. Bar 46 is mounted in the guide 461 attached to the lower pin plate 13.

Extending across the casing is a power shaft 50 mounted in suitable bearings 512, 513 attached to the casing 10. Fastened to the shaft 50 is a supporting arm 52, pivotally mounted on which is a traveler 53 held normally upward against the lower pin plate 13 by a spring 54. In the form illustrated, the traveler 53 has a pin 55 projecting from one side thereof so as to move in a path which includes the notches on the bar 46. The traveler 53 is provided with a rounded nose and, as the shaft 50 is turned so as to move the arm 52 to the right of Fig. 5, the traveler 53 normally moves along the lower pin plate 13 with its nose in contact with the plate, lifting the pins 14 upwardly. When thus operated, the pin 55 will contact with the notch 49, and, through the connection 45 and bell crank 40, will move the selector bar 31 the maximum distance to the left of Fig. 4, so that the pawl beneath magazine 19 will be the only one which remains operative.

As the traveler 53 reaches the end of its stroke, it will be moved downward automatically by contact with the triangular fixed cam 56. This will cause pin 55 to disengage bar 46 and the latter will come to rest, permitting the continued motion of the shaft 50 and its attached mechanism, while the selector bar 31 is at rest. By this arrangement, the bar 31 is correctly positioned and is no longer in motion when the projections 30 strike it. This disengaging action occurs at a definite point of travel of the traveler 53, regardless of which particular notch in bar 46 has been engaged by pin 55.

In the same manner as provided for in the prior Patent 854,752, the stop 11 is provided so that the hand of the person whose character is being delineated can be placed on the upper pin plate 12 with the stop 11 between the thumb and the hand to locate the hand. The pressure of the hand holds the pins 14 downward against the pressure of the spring 54 as the arm 52 swings to the right of Fig. 5 until the maximum length of the hand is reached, at which time all of the pins in a row longitudinally of the traveler 53 will be free to rise. This will permit the traveler 53 itself to rise and the pin 55 to engage one of the notches 47 or 48 for intermediate lengths of hands or to escape the notch 47 entirely for the maximum length of hand. In the latter case, no motion will be given to the bar 46 so that the pawl under magazine 16 will remain operative, since the bar 31 will remain in the position shown in Fig. 4. Engagement with either of the notches 47 or 48 will move the selector bar 31 to permit the ejectors for magazine 17 or magazine 18, respectively, to operate. It will be seen that a card from either of the magazines 16, 17 or 18 will be ejected according to the maximum length of the hand being measured or a card from the magazine 19 in the event that the hand is improperly applied to the plate 12 or if no hand is so ap-

plied. The card from the magazine 19 may contain appropriate warning to the operator. It will also be understood that the cards in the several magazines will each bear a delineation of character corresponding to the dimension of the hand being measured. It will also be understood that, while preferably I have used the length of the hand as the basis for the delineation, the width of the hand may be used for such purpose.

In the form illustrated, the bar 46 is returned to its normal position, as shown in Fig. 5, by contact between the pin 55 and a pin 57 attached to the bar 46. Because of the position of the pin 57, the return of bar 46 is delayed, however, so that the selector bar 31 will remain in its adjusted position sufficiently long to permit it to operate on the projections 30 as the bar 23 carrying the pawls 27 is moved to the left of Fig. 5 to eject the appropriate card, the bar 23 being moved through the arms 24, 25, which are connected through the links 58, 58 with the arm 52 on one side of the machine and with a lever 60, attached to shaft 50 on the opposite side of the machine. The lever 60 is attached to shaft 50 along side of a member 61 which in the form illustrated, is attached to a sleeve 511 forming part of a handle 51 and extending through the bearing 512, the shaft 50 resting in the sleeve 511. The member 61 is provided with a pair of lugs 62, 63 spaced apart so that the distance between them is greater than the width of the arm of lever 60. The lever 60 is also provided with a toe 64 which contacts with a stop pin 65 to locate the normal position of the lever 60 and the shaft 50. Also attached to the sleeve 511 is a pair of arms 66, 67 provided with a spring 68 and a pair of cushioning devices 69, these latter being of the usual construction to prevent too rapid motion of the shaft 50.

It will be seen that, because of the lost motion between the projection 62, 63, the spring 68 will return the shaft 50 and the handle 51 to the position shown in Fig. 1 after the handle 51 has been moved to the right of that figure, but that the lever 60 will not begin to move toward the left of Fig. 1 until after the shaft 50 has moved some considerable distance in that direction, the lug 63 contacting with one side of the lever 60 transmitting the pressure of the spring 68 to the lever 60, which in turn, through the connections 58 and the arms 24, 25, will move the bar 23 to eject the appropriate card. In order to insure the holding of the bar 23 in its rearmost position until the handle 51 has moved toward the left of Fig. 1 on its return journey, I provide a suitable retarding device which, in the form illustrated, comprises a flat spring 70, whose surface is wiped by the end of the arm 24. The resistance of this retarding device is overcome by the spring 68 but is sufficient to hold the arms 24 in their rearmost position until lug 63 contacts with lever 60.

When the machine is to be coin controlled, any suitable coin actuated mechanism may be employed, and I have illustrated such a mechanism in my preferred form of machine. On the lever 60, I provide a guide surface 601 extending at right angles to the side of lever 60, this surface extending downwardly below the top of the member 61, a slot being cut in the surface 601 to permit member 61 to pass through. Adjacent lever 60, when in its normal position, is a coin chute 71, the front of which is closed by the surface 601, when lever 60 is in rest position. A coin passed through the casing 10 will be delivered between a spring held gate 72 on chute 71 and astride the slot in the surface 601. The coin thus positioned forms a connection between lever 60 and member 61 as handle 51 is moved, so that motion is transmitted to lever 60 and shaft 50 and from thence to the operating parts of the machine. As the handle 51 is moved to the left of Fig. 1, the member 61 moves away from the lever 60 to permit the coin to drop to free the machine from further operation until a second coin is inserted.

It will be obvious that the construction of the machine embodying my present invention may be widely varied and it should be understood that the form which I have shown is merely illustrative.

I claim:

1. In a machine of the class described, a series of card magazines, means for ejecting cards from the magazines constructed and arranged normally to eject one card from each magazine at each operation of the machine, a hand measuring device, and means connected to the hand measuring device constructed and arranged to prevent the operation of all of the card ejecting means except the one corresponding to the size of the hand being measured.

2. In a machine of the class described, a series of card magazines, a plurality of card ejectors, each adapted to eject a card from one of the magazines, a plurality of engaging members, each adapted to coöperate with one of the card ejectors, means to move the engaging members back and forth under the card ejectors, a hand measuring device, and a longitudinally movable member connected to the hand measuring device and constructed and arranged to control selectively the operation of the engaging members according to the size of the hand being measured.

3. In a machine of the class described, a series of card magazines, a plurality of card ejectors, each adapted to eject a card from one of the magazines, a plurality of engaging members, each adapted to coöperate with

one of the card ejectors, means to move the engaging members back and forth under the card ejectors, each of the engaging members being constructed and arranged normally to engage an ejector as the engaging member is moved in one direction, a hand measuring device, and a longitudinally movable member connected to the hand measuring device and provided with means to prevent the operation of all of the engaging members except the one coöperating with the card ejector corresponding to the size of the hand being measured.

4. In a machine of the class described, a series of card magazines, a plurality of card ejectors, each adapted to eject a card from one of the magazines, a plurality of pawls each adapted to engage with one of the card ejectors, means to move the pawls back and forth under the card ejectors, a hand measuring device and a movable member connected to the hand measuring device and provided with means to prevent the operation of all of the pawls except the one corresponding to the size of the hand being measured.

5. In a machine of the class described, a series of card magazines, a plurality of card ejectors, each adapted to eject a card from one of the magazines, a plurality of pawls each adapted to engage with one of the card ejectors, each pawl having a projection, means to move the pawls back and forth under the card ejectors, a hand measuring device, a movable member connected to the hand measuring device and provided with means to contact with the projections to prevent the operation of all of the pawls except the one corresponding to the size of the hand being measured.

6. In a machine of the class described, a series of card magazines, a plurality of card ejectors, each adapted to eject a card from one of the magazines, a plurality of pawls each adapted to engage with one of the card ejectors, each pawl having a projection, means to move the pawls back and forth under the card ejectors, a hand measuring device, a longitudinally movable bar connected to the hand measuring device and provided with projections adapted to contact with the projections on the pawls to prevent the operation of all of the pawls except the one corresponding to the size of the hand being measured.

7. In a machine of the class described, a series of card magazines, a card ejecting device for each magazine, a hand measuring device and a selective device adapted to control the card ejecting device selectively, said selective device including a member adapted to be moved by the hand measuring device inversely according to the size of the hand being measured.

8. In a machine of the class described, a selective device comprising a hand measuring device, a member adapted to be moved by the measuring device, connecting means between the member and the measuring device constructed and arranged to prevent motion of the member until the hand has been measured.

9. In a machine of the class described, a traveler, a member adapted to be moved by the traveler, connections adapted to transmit the motion of the traveler to the member and means, controlled by the hand being measured, to prevent the transmission of motion to the member until the hand has been measured.

10. In a machine of the class described, a traveler, means to move the traveler along the hand being measured, a movable bar provided with notches adapted normally to engage the traveler and move with it, and means controlled by the hand being measured to move the traveler crosswise of its direction of travel along the hand, to prevent engagement with the notches until the traveler reaches the end of the hand being measured.

11. In a machine of the class described, a traveler, means to move the traveler along the hand being measured, a movable bar provided with notches adapted normally to engage the traveler and move with it, means controlled by the hand being measured to move the traveler crosswise of its direction of travel along the hand, to prevent engagement with the notches until the traveler reaches the end of the hand being measured, and means to disengage the traveler and the bar after they are engaged and before the traveler reaches the end of its motion.

12. In a machine of the class described, a traveler, means to move the traveler along the hand being measured, a movable bar provided with notches adapted normally to engage the traveler and move with it, means controlled by the hand being measured to move the traveler crosswise of its direction of travel along the hand, to prevent engagement with the notches until the traveler reaches the end of the hand being measured, and a fixed cam arranged to contact with the traveler before it completes its stroke, to disengage the traveler and the bar.

13. In a machine of the class described, a traveler, a support therefor, means to move the support along the hand being measured, the traveler being mounted on the support to move crosswise of the direction of motion of the traveler, a movable bar having notches adapted to be engaged by the traveler and means under control of the hand being measured to swing the traveler on the support to prevent engagement with the notches until the traveler reaches the end of the hand being measured.

14. In a machine of the class described, a

traveler, a support therefor, means to move the support back and forth under the hand being measured, the traveler being yieldingly mounted on the support to move across the direction of travel of the support, a movable bar having notches positioned to engage the traveler as it moves, means under the control of the hand being measured to prevent engagement with the notches until the traveler reaches the end of the hand being measured, a series of card magazines, a card ejector for each magazine, a movable selector member connected to the notched bar and means on the selective member to control the operation of the ejectors so as to cause a card to be ejected from a magazine corresponding to the distance which the notch bar is moved by the traveler.

15. In a machine of the class described, a card magazine, card ejecting mechanism adapted to reciprocate beneath the magazine, a spring to move the card ejecting mechanism to eject a card, means, including a lost motion device, to move the card ejecting mechanism into operative position and a retarding device coöperating with the card ejecting mechanism to delay the action of the card ejecting mechanism while the last named means is moving to normal position.

16. In a machine of the class described, a power shaft, a first member attached thereto, a second member loosely mounted on the shaft and connected to the first member by a lost motion connection constructed and arranged to permit the second member to move while the first member is at rest, a card magazine, card ejecting mechanism connected to the first member, a spring arranged to move the first member in the direction to eject a card from the magazine, when the lost motion of the connection between the first and the second member is taken up, and a retarding means for the card ejecting mechanism arranged to prevent the ejection of a card until the lost motion of the connection is taken up.

17. In a machine of the class described, a power shaft, a handle loosely mounted on the shaft, a stop for the handle, a spring connected to the handle and arranged to rotate it into normal stopped position, a lever connected to the shaft, and connected to the handle by a lost motion connection with the lost motion in one direction taken up when the handle is in normal position, so as to prevent motion of the lever until the handle is moved, a card magazine and a card ejecting mechanism therefor connected to the lever.

HARRY N. MARVIN.

Copies of this patent may be obtained for five cents each, by addressing the "Commissioner of Patents. Washington, D. C."