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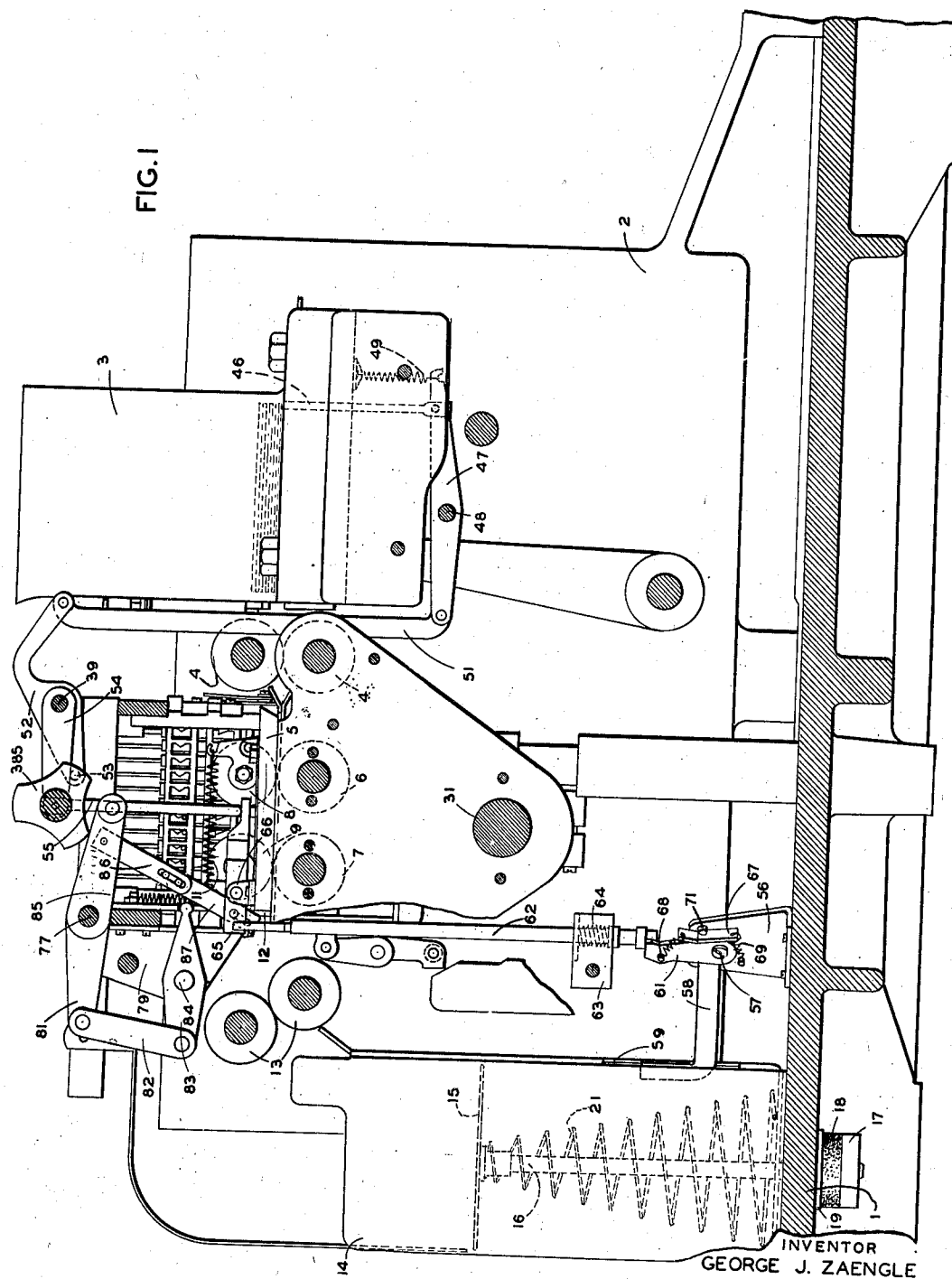
G. J. ZAENGLE

2,124,223

TABULATING MACHINE

Filed Oct. 15, 1937

3 Sheets-Sheet 1



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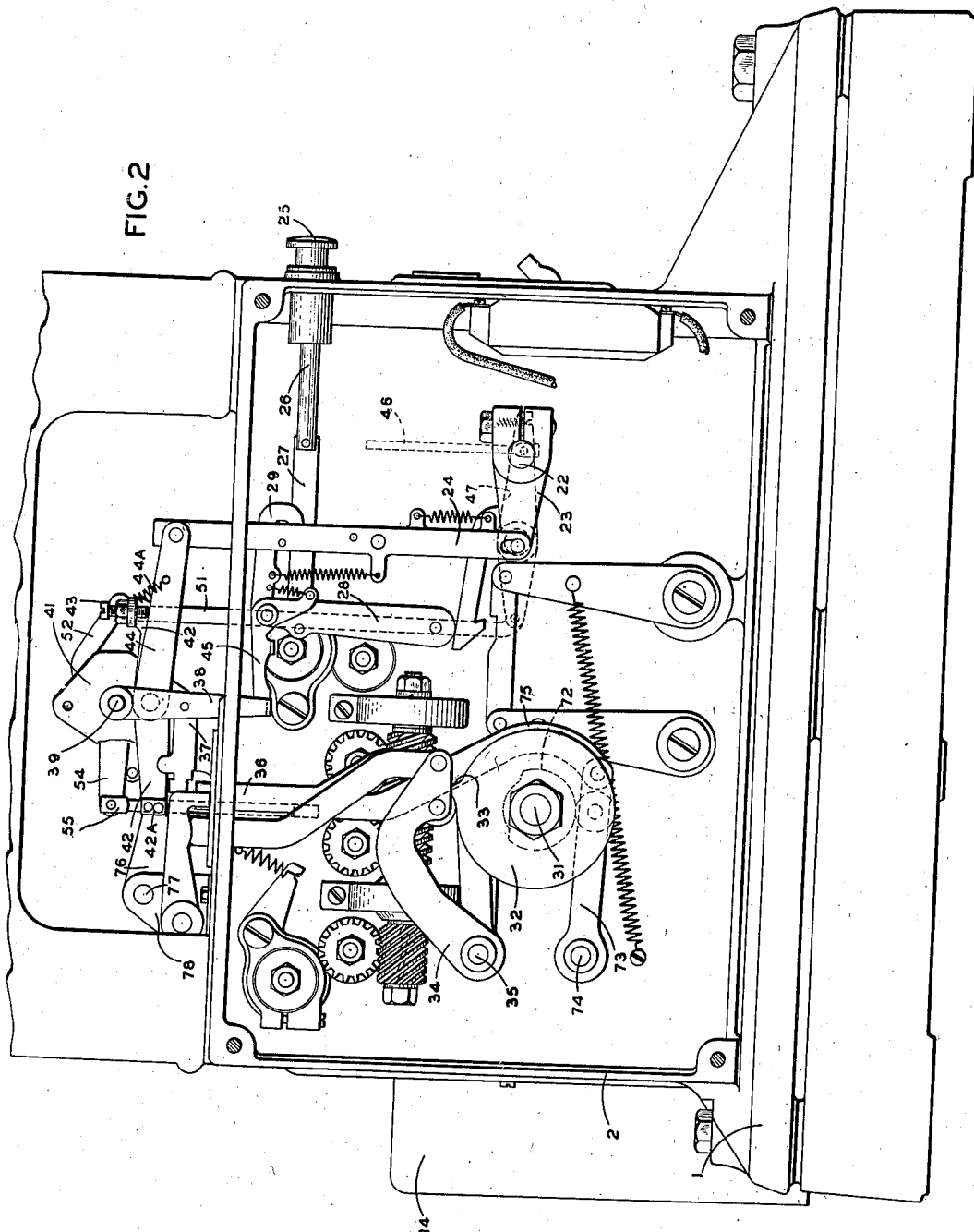
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3 Sheets-Sheet 2



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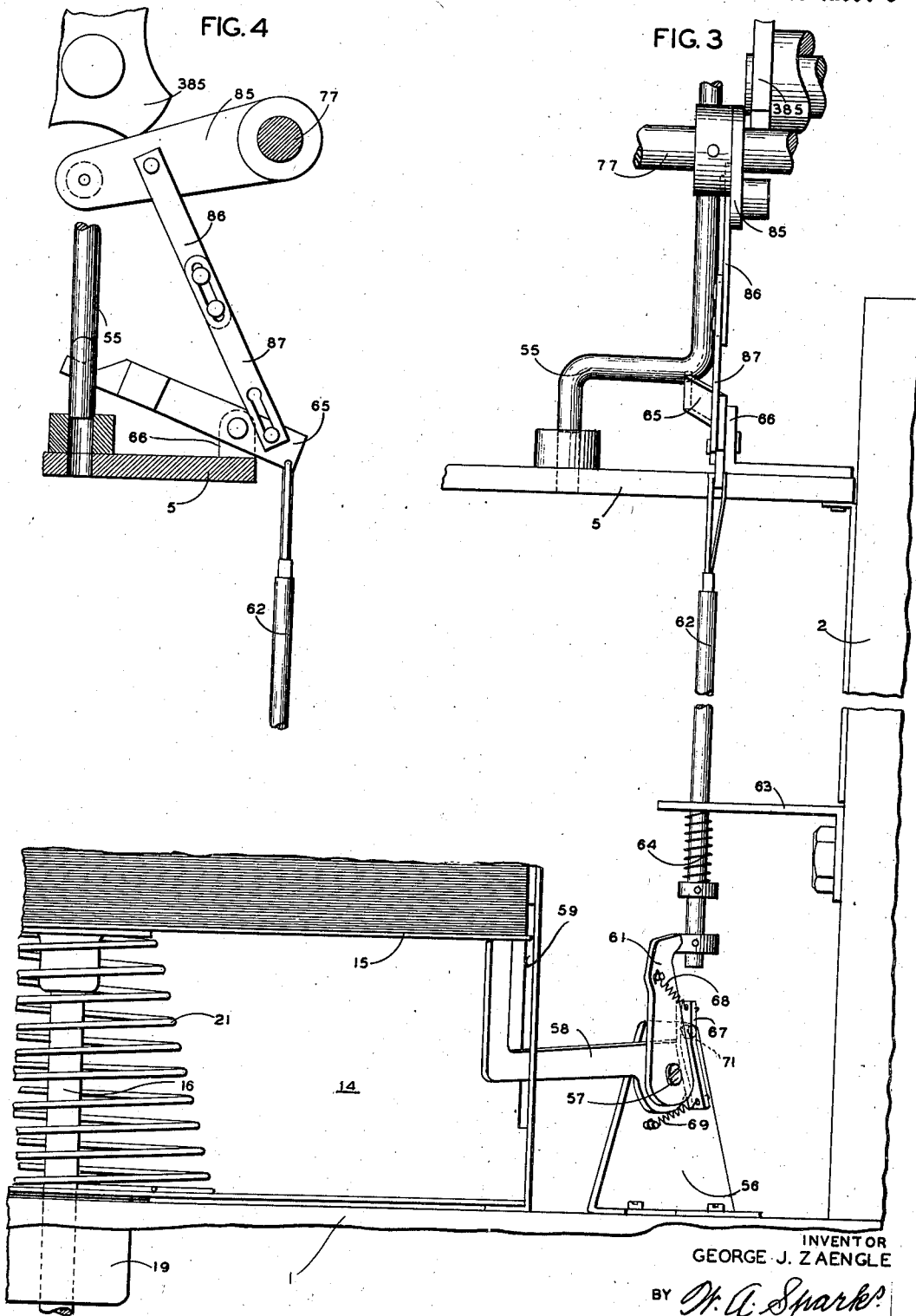
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3 Sheets-Sheet 3



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2,124,223

TABULATING MACHINE

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3 Claims. (Cl. 271-56)

This invention relates generally to controlling mechanism for tabulating machines and more particularly to an automatic means for stopping the machine when the card eject pocket is filled in order to prevent the cards from overflowing therefrom.

The device of the present invention is disclosed in the description to follow as applied to a Powers type tabulating machine which, as is well known in the art, operates on perforated record cards to tabulate the data contained on these cards. The record cards are fed seriatim from a storage magazine into a sensing chamber where they are analyzed and from there are ejected into a receiving or eject pocket. The receiving or eject pocket used in the Powers machine is of ample size to accommodate all of the cards which may be placed in the storage magazine at one time but it has been found that if the operator of the machine continues to insert successive stacks of cards into the magazine and neglects to remove the accumulated cards from the eject pocket at regular intervals, then the cards will overflow from the pocket and drop to the floor in considerable disorder. This is undesirable as the cards which are used in the tabulator are sorted in a certain sequence which should be maintained even after the cards are run through the machine. This is done to permit refeeding for future use. It has also been found that if the receiving pocket is permitted to overflow, the ejection of the cards from the sensing chamber is sometimes hindered to the extent of causing jamming of the machine.

The device of the present invention constitutes a means for preventing the overflow of the receiving pocket through the provision of controlling mechanism operable by a floating plate in the receiving pocket for effecting an operation of the regular stopping mechanism of the machine when the pocket becomes filled.

One object of this invention is to provide means for causing the machine to stop when the eject pocket is filled thereby preventing the disarrangement of card sequence caused by the overflow of the pocket.

Another object of this invention is to provide a stopping device operable from the receiving pocket of a tabulating machine and cooperable with the regular stopping mechanism of the machine which device may be mounted in its present embodiment on a Powers type tabulating machine, and in other embodiments on any similar type of machine.

Other objects and structural details of my invention will be apparent from the following description when read in connection with the accompanying drawings wherein:

Fig. 1 is a view of the base portion of a tabulator, with the left hand side plate removed, as seen from the left hand side of the machine.

Fig. 2 is a view of the base portion of the machine in left hand side elevation and shows the controls for engaging and disengaging the clutch mechanism.

Fig. 3 is a detailed view in rear elevation of the controlling mechanism of the invention in operated position.

Fig. 4 is a detailed view illustrating the means for restoring the controlling mechanism of the invention to normal position.

General description

As mentioned above the mechanism of the invention is shown as mounted on a Powers type tabulator. A machine of this general type is disclosed in the U. S. patent to William W. Lasker No. 2,044,119 issued June 16, 1936. The present invention is concerned chiefly with certain base controls for the automatic stopping of the machine so that the drawings and the description to follow are directed primarily towards the disclosure of these controls. For a more complete showing of the various operating mechanisms of the base, reference should be made to the above mentioned patent.

According to the well known construction of the Powers machine and as is partially shown herein, the mechanism of the base is mounted upon a plate 1 (see Fig. 1) and is further supported by the side frames 2 mounted upon the base plate 1. Situated at the front of the machine is a card magazine or storage chamber 3 into which the cards to be tabulated are placed. A card picker (not shown) is provided for ejecting the cards singly from the magazine 3 into position to be picked up by a pair of power driven feed rollers 4 thereby to be fed into the sensing chamber where the perforated data on the card is analyzed. The sensing chamber is comprised of a perforated plate 5 supported between the side frames 2 and a second perforated plate (not shown) spaced slightly below the plate 5 and rigidly secured thereto by means of screws. Each successive card is driven by the rollers 4 between the above two plates and continues its rearward travel under the propulsion of two sets of positively driven skid rollers 6 and 7 (one set shown) cooperable respectively with two sets of pressure rolls 8 and 9 (one set shown) mounted on the upper surface of the plate 5 near the opposite ends thereof and extending downward through openings cut in the plate. Each pair of rolls 8 and 9 are connected by a spring 11 and are thereby urged into contact with their respective pair of skid rollers 6 and 7. Normally blocking the exit of the sensing chamber is a plate or card stop 12 which is adapted to hold the card in position for sensing in order that the data represented thereon may be recorded and accumulated. During the time the card remains in the sensing chamber limiting against the stop

12 the skid rollers 6 and 7 revolve without effect while the pressure rolls 8 and 9 remain idle. Once for each machine cycle the card stop 12 is elevated out of its blocking position (through means later to be described) whereupon the card in the chamber is immediately ejected therefrom by the sets of rolls 6 and 8, 7 and 9 and is positioned between still another pair of rollers 13 which deposit the card in a receiving or eject pocket 14. The receiving pocket 14 is of a single piece construction and is formed with side plates, a rear plate (as viewed from the rear of the machine) and a base plate but no front plate. The rear of the pocket (as viewed from the front of the machine) is left open in order to simplify the removal of the cards therefrom. The pocket is fastened by screws to the base plate 2 and contains a floating plate 15 to the lower surface of which is secured the upper end of a vertical rod 16. The rod 16 extends downwardly through the base of the pocket 14 and also through a hole in the main base plate 1. Secured to the lower end of the rod 16 is a collar 17 on the upper surface of which is adhesively fixed a felt strip 18 adapted to contact a collar 19 rigidly secured to the base plate of the pocket 14 and extending through an opening in the plate 2. The floating plate 15 is normally held in the position shown in Fig. 1, which is its highest vertical position, by means of a compression spring 21 fixed to the base plate 1 and pressing against the lower surface of the plate 15. As the cards are fed into the receiving pocket 14 by the rollers 13, they drop onto the plate 15 which extends throughout the width of the pocket. As the cards continue to be fed into the receiving pocket their accumulated weight causes the plate 15 to move downward, against the expansion of spring 21, thereby making room for additional cards. In the machines heretofore used, not equipped with the device of the present invention, a large accumulation of cards in the receiving pocket would cause the plate 15 to be depressed until the spring 21 could no longer be compressed at which time the operator had to stop the machine and remove the cards in order to prevent the pocket from overflowing. The present invention operates in a manner to be described to stop the machine automatically before the plate 15 reaches its extreme lowered position.

Starting and stopping mechanism

As disclosed in the above mentioned Patent 2,044,119 tabulating machines of the type shown herein contain certain motor operated drive mechanisms and are provided with a clutch for engaging and disengaging the motor and the drive mechanisms. The drive and clutch mechanisms employed in the present machine are not completely shown herein but may be of the same type as that shown in the above patent. Certain of the control mechanism for operating the machine clutch is shown herein however, and operates, briefly, as follows. As shown in Fig. 2 one end of a shaft 22 is loosely mounted between the side frames 2. The opposite or right hand end of the shaft 22 controls the clutch mechanism and it is through the rocking of this shaft that the clutch is moved to engaged or disengaged position. When the shaft 22 is positioned as shown in Fig. 2 the clutch is disengaged. Clockwise movement of the shaft 22 will engage the clutch and place the machine drive mechanism under the control of the motor. Secured to the extreme left-hand end of the shaft 22

(Fig. 2) is a rearwardly extending arm 23 to which is connected certain toggle mechanism (not shown herein) mounted on the right-hand side of a link 24 also connected to the arm 23. The above toggle mechanism has been disclosed in various modified forms in numerous previous applications and patents. The application of Elmer H. Dreher, S. N. 69,570, filed March 18, 1936, for example, describes a type of toggle mechanism applicable to the present machine, as does the application of Karl Braun, S. N. 138,699 filed April 24, 1937. The shaft 22, therefore, in the position shown in Fig. 2 is holding the clutch disengaged and so long as the toggle mechanism remains erect, or unbroken, the shaft will be held in this position. If, however, the toggle is caused to break, suitable spring tension (not shown) is provided for rocking the shaft 22 a short distance in a clockwise direction (Fig. 2) which causes the engagement of the clutch and an upward movement of link 24 to place certain elements associated therewith in operating position in a manner to be described hereinafter. Now, if at some point in the operation of the machine the link 24 is depressed it will straighten the toggle mechanism mounted thereon to rock arm 23 and thereby shaft 22 a sufficient distance to again disengage the machine clutch.

The means for causing the breaking of the toggle mechanism and the consequent engagement of the clutch lies in a manually operable push button 25 (Fig. 2) situated at the front of the machine. The button 25 is secured to the outer end of a rod 26, the inner end of which is connected to a rearwardly extending link 27 which is, in turn, connected to an arm 28 pivoted to side frame 2. Connected to the upper end of the arm 28 is a forwardly extending hook-like lever 29 cooperable with the previously mentioned toggle mechanism. When the machine is in the stopping position the button 25 and its associated elements 26, 27, 28, and 29 occupy the position shown in Fig. 2 due to the pressure of a coil spring (not shown) which urges the button 25 outward. If, however, the button 25 is pressed inward the result will be to rock the arm 28 a short distance in a counterclockwise direction which, through the medium of lever 29, serves to break the toggle, in a manner not herein shown to engage the clutch.

As previously mentioned the disabling of the clutch is caused by the depression of the link 24. Through means now to be described it will be seen that the link 24 may be caused to be depressed either manually, by pressing button 25 while the machine is running, or through any one of several automatic means. Still referring to Fig. 2 there is also shown therein the well known main cam shaft 31 supported between the side frames 2 and adapted to rotate in a clockwise direction (Fig. 2) as long as the clutch is engaged. Fixed to the extreme left-hand end of the shaft 31 is a cam 32 formed with a single high spot or bump 33. Cooperating with the cam 32 is a follower on an arm 34 pivoted to the outer end of a stud 35 fastened to the frame plate 2. Connected to the forward end of the arm 34 is an upwardly extending link 36 guided in the bent over portion of the plate 2 and having its upper end positioned just beneath a recessed portion of an interponent arm 37. The interponent arm 37 is pivoted at its forward end to another arm 38 fast on a shaft 39 loosely supported by a casting 41 secured to the plate 2. It will be seen that the link 36 is given a vertical

reciprocal motion once for each cycle of the cam 32. It will also be seen that as long as the arm 37 remains in the position shown in Fig. 2 the link 36 will be unable to elevate the arm since the upper end of the link will merely move ineffectively in the recessed portion of the arm mentioned above. If, however, the arm 37 is caused to move rearwardly by the rocking of arm 38 the lower edge of the arm will be moved into position over the link 36 so that the next time the link is elevated the arm 37 will be rocked upward to cause the simultaneous rocking of a lever 42 by contacting a lug 42A secured to the rearmost end of the lever. The lever 42 is pivoted at its mid-point to a stud also supported by the casting 41 and has its forward end bent over and a set screw 43 passed therethrough. The lower end of the screw 43 bears against an arm 44 pivoted at its rearmost end to the same stud which supports lever 42, and connected at its forward end to the upper end of the link 24. While the machine clutch is disengaged the link 24 is held depressed by reason of the erect toggle, and a spring 44A connecting the arm 44 and lever 42 holds the lever rocked in the position shown in Fig. 2. When the toggle is broken, however, the link 24 rises as previously described and rocks the lever 42 in a counterclockwise direction to bring the lug 42A into contact with the arm 37. Therefore, if the arm 37 is shifted by link 36 as before mentioned the result will be to rock the lever 42 in a clockwise direction thereby rocking the arm 44 in the same direction to depress the link 24 causing the disengagement of the machine clutch as previously described. It is evident, therefore, that anything which rocks the arm 38 rearwardly will cause the stopping of the machine. This may be done manually by pressing the button 25 or automatically by rocking the shaft 29 to which the arm 38 is secured.

The arm 38 extends downwardly through a slot in the plate 2 and its lower end of a lug which is adapted to be engaged by a shoulder formed in the rearmost end of a finger-like arm 45 connected at its forward end to the previously mentioned arm 28 movable by the button 25. If, then, it is desirable to stop the machine manually the button 25 is pressed inward thereby rocking the arm 38 and positioning the shoulder on arm 37 over the link 36. The button must then be held in operating position until the high spot 33 on cam 32 elevates the link 36 at which time the above sequence of operation takes place. The shaft 39 which also rocks the arm 38 is, as previously mentioned, supported by a casting 41 only partially shown herein. The casting 41 also acts as a support for the automatic total control mechanism which is standard mechanism for all Powers tabulators. The total control mechanism has been omitted from the present drawings and a portion of the casting 41 cut away in order to show more clearly the control mechanism for rocking the shaft 39. As disclosed in Patent No. 2,044,119 there is provided two standard operating means for automatically stopping the machine. One means comprises a spring pressed pin projecting into the card magazine 3. While there are one or more cards present in the magazine this pin is held displaced and ineffective. When the last card leaves the magazine, however, the pin will move under tension of its spring to rock the shaft 39 and thereby stop the machine. The second standard means for automatically stopping the machine lies in the provision of a special pin in the lower pin box

(not shown). This pin rises with the lower pin box once for each machine cycle to sense the card in the sensing chamber. If a card is present in the chamber, the special pin will limit against its lower surface and be ineffective. When no card is in the chamber, however, the pin is permitted to move to its extreme elevated position with the pin box and causes the rocking of shaft 39 to stop the machine. This second means is provided in order to prevent a continuance of machine operation when the cards fail to feed properly from the magazine because of jamming or some like occurrence.

The above automatic stop devices are partially shown herein in Figs. 1 and 2. Referring to Fig. 1 the above mentioned pin projecting into the card magazine 3 is indicated by the reference numeral 46 and is shown held displaced by the cards in the magazine. The lower end of the pin 46 is connected to a lever 47 pivoted at its mid-point to a frame supported stud 48. A spring 49 tensioned between the forward end of the lever 47 and the base of the card magazine serves to urge the lever 47 in a counter-clockwise direction and the pin 46 upward. The rear end of the lever 47 is connected to a vertical link 51 connected at its upper end to an arm 52 loosely mounted on the shaft 39. The arm 52 extends rearwardly of its pivot 39 and on its far end is a laterally extending stud 53 which underlies an arm 54 secured to the shaft 39. It is evident that upward motion of the pin 46 and counter-clockwise movement of the lever 47 will be transmitted through link 51, arm 52 and arm 54 to the shaft 39 to rock the shaft in a clockwise direction as viewed in Fig. 1. The stop pin contained in the lower pin box is not shown herein but is adapted to cooperate with an offset rod 55 connected at its upper end to the arm 54 and having its lower end projecting downward through the upper chamber plate 5 (see also Fig. 3). The stop pin is positioned directly beneath the rod 55 and if no card is in the chamber during a sensing operation the pin will elevate the rod to rock shaft 39 through arm 54. The weight of rod 55 and arm 54 cause shaft 39 and arm 38 to assume the normal position shown in Fig. 2. The drawings have been made on the assumption that a card is in the sensing chamber and preventing an operation of rod 55.

Automatic stop from receiving pocket

The mechanism of the invention makes possible a third means of automatically stopping the machine, this mechanism being controlled from the receiving or eject pocket 14 and operating to rock the shaft 39 like the two standard means described above. As shown in Fig. 2 there is mounted on the base plate 1 slightly to the rear and to the right of the pocket 14 (as viewed from the rear of the machine) a plate or bracket 56. A shouldered screw 57 is secured in the bracket 56 and pivoted on the screw 57 is a rearwardly extending lever 58. The rearmost end of the lever 58 extends through a slot 59 cut in a corner of the pocket 14 and is formed with an upturned toe. Also pivoted on the screw 57 is a latch 61 the upper end of which normally rests beneath a collar secured to a vertically extending rod 62 guided in a bracket 63 mounted on the left hand side frame 2. A coil spring 64 compressed between the bracket 63 and a second collar on the rod 62 serves to urge the rod downward. The upper end of the rod 62 is connected by means of a spring clip to the rearmost end of an arm 65 pivoted to a bracket 66 secured to the upper

surface of the sensing chamber plate 5. The arm 65 is bent inward slightly and its forward end is cut away to form a finger which rests beneath the offset portion of the previously mentioned rod 55. The above chain of mechanism is shown in Fig. 1 in its normal position with the rod 62 held upward against the tension of its spring 64 by the latch 61. Now, it will be seen that as the floating plate 15 descends under the weight of the accumulated cards supported thereon, the lower surface of the plate will contact the upturned toe of the lever 58 after the plate has moved a certain distance and that continued downward movement of the plate will rock the lever in a counter-clockwise direction as viewed in Fig. 1. The forward end of lever 58 is formed with a bent over lug 67 which bears upon the edge of the latch 61. A spring 68 tensioned between the latch 61 and the lug 67 serves to maintain the latch and lug in contact while another spring 69, tensioned between the bracket 56 and the lower end of lug 67 urges the lever 58 in a clockwise direction. A screw 71 set in the bracket 56 limits the distance which lever 58 may rock under tension of spring 69 and is formed with an eccentric head in order to vary the time of the lever's actuation by plate 15. Returning now to the counter-clockwise rocking motion imparted to the lever 58 by plate 15 it is evident that this motion will disable the latch 61 and permit the rod 62 to drop downward under tension of its spring 64. Downward motion of rod 62 causes a counter-clockwise motion (Fig. 1) of arm 65 about its pivot 66, thereby elevating rod 55 to rock the stop shaft 39. In operated position the above mechanism assumes the position shown in Fig. 3. The rocking of shaft 39 through the operation of lever 58 does not occur during any predetermined machine cycle nor at any predetermined moment during a cycle. The rod 62, when released by the disabling of latch 61, will be held downward by spring 64 so that the shaft 39 will remain rocked until the rise 33 on cam 32 (Fig. 2) reaches cooperative relation with its follower to actuate the mechanism for disengaging the clutch. After the machine has stopped the stack of cards in the receiving pocket 14 (Fig. 1) may be removed at which time the plate 15 will rise under expansion of the spring 21 thereby relieving the pressure on lever 58 and allowing it to be returned to normal by the spring 69. However, inasmuch as the rod 62 is still held depressed by the spring 64, the latch 61 is prevented from returning to normal with the lever 58 and is held outward in ineffective position against the tension of spring 68. Now, when it is desired to start the machine again the push button 25 (Fig. 2) is pressed causing immediate engagement of the clutch and the starting of the machine. However since the rod 62 is still depressed and consequently the shaft 39 is still rocked it will be seen that unless the shaft 39 is returned to normal at some time during the first machine cycle the machine will be again stopped after one cycle of the cam 32. Therefore an automatic means is provided for restoring the rod 62 and permitting the reengagement of latch 61 during the first cycle of operation after the machine is restarted.

It will be remembered that in considering the travel of the record cards through the machine, it was noted that each successive card is held in the sensing chamber for a portion of one machine cycle by the card stop 12. The stop 12 normally blocks the exit of the sensing chamber, but once for each machine cycle it is elevated for a short

time to enable the card which has just been sensed to be ejected into the receiving pocket 14. The card stop is thus a reciprocating element and is controlled by a cam on the main shaft 31. The restoration of rod 62 is accomplished in a manner now to be described by controlling mechanism intermediate of the card stop operating cam and the card stop itself. Referring now to Fig. 2 there is shown therein the card stop cam mounted on the shaft 31 and indicated by the reference numeral 72. Cooperating with the cam 72 is a roller bearing arm 73 pivoted at its rear-most end on a stud 74 fixed to the left-hand frame plate 2. The forward end of the arm 73 is connected to an upwardly extending link 75 extending through the bent over portion of side frame 2 and connected at its upper end to an arm 76 secured to a shaft 77 one end of which is loosely supported by a bracket 78 mounted on the frame 2. Suitable spring tension (not shown) is provided for urging the shaft 77 in a counterclockwise direction as viewed in Fig. 2. The shaft 77 is, however, normally held in the position shown in Fig. 2 by the cam 72, the high surface of which normally presses upon the roller on arm 73. The cam 72 is formed with a low spot or depression and when, in the course of rotation of shaft 31, this low spot reaches cooperative relation with the roller on arm 73, the spring pressure exerted upon shaft 77 causes the roller to move into the depression thereby permitting the shaft 77 to rock a short distance in a counter-clockwise direction. The opposite end of the shaft 77 (see Fig. 1) is supported in a manner not completely shown herein by a bracket 79 fixed to the rear of the upper pin box. The reciprocation of shaft 77 is imparted to the card stop 12 through arm 81, fast on the shaft 77, link 82 and another arm 83 fast on a shaft 84 supported at one end by the bracket 79 and at its other end by another bracket (not shown) similar to bracket 79 and secured to the opposite end of the upper pin box. Fixed to the opposite end of the shaft 84 is a second arm 83. The pair of arms 83 operate directly upon the card stop 12 and receive a reciprocal rocking motion from the shaft 77 to open and close the exit of the sensing chamber once for each cycle of the machine. Also secured to the shaft 77 is a forwardly extending follower arm 85 (Fig. 1) which heretofore has been used solely in cooperation with the card stop cam of the total unit. The purpose of this cam in the total unit is to hold the card stop closed for two complete machine cycles in order that the card which tripped the total may be retained in the sensing chamber to be positively sensed at the end of the total cycle. This function is old and well known in the Powers type machine and is fully described in the previously mentioned Patent 2,044,119 wherein Fig. 21 of the drawings illustrates the cam in question indicated by the numeral 385. This same cam is shown in the present case in Fig. 1 and bears the same reference numeral, 385. The cam 385 is positioned above the arm 85 and normally lies with one of its three low spots over the roller on the arm. The cam 385 is normally stationary and as long as it retains the position shown in Fig. 1, the shaft 77 is free to rock and the roller on arm 85 merely moves into and out of the low spot on the cam once each machine cycle. During a total taking operation, however, the cam 385 is adapted to rotate in three step like motions, during the first two of which one of the three high spots on the cam press upon the

roller on arm 85 and so prevent the reciprocation of shaft 77 and the consequent opening of the card stop. The third step of movement of cam 385 is the normalizing step of the control unit and places a low spot on the cam again above arm 85. Thus it will be seen that once each machine cycle, except during total taking operations the arm 85 moves in a reciprocal rocking motion with the shaft 77. It is this motion that is utilized to restore the rod 62.

Connected to the arm 85 is a downwardly extending link 86 adjustably secured to a second link 87 connected by a pin and slot to the rear of the previously mentioned arm 65. A pin on the arm 65 normally rests in the upper end of a slot in link 87. The lost motion provided by this pin and slot connection enables the arm 85 to be reciprocated freely without effecting an operation of the arm 65 so long as the latter arm remains in normal position. However if the arm 65 is operated to bring about the stopping of the machine, it will be held in operating position by the rod 62 with the pin thereon resting in the lower end of the slot in link 87 as is illustrated in Fig. 4. Now, in the course of the first cycle of operation after the machine is again started, the arm 85 will be moved upward as the card stop is raised thereby rocking the arm 65 in a counter-clockwise direction (Fig. 4) to lift the rod 62 in which position it is retained, as the latch 61 returns to engaging position. The weight of rod 55 and arm 54 will immediately restore shaft 39 to normal and the tabulation of the cards is permitted to continue. It is possible that the machine may be stopped, through an actuation of lever 58, at the beginning of a total taking operation. If this occurs it is evident that the arm 85 will be prevented from restoring the arm 65 so that it becomes necessary to press the starting button 25 two or three times in order to complete the total operation. On the first adding cycle following the total cycle the arm 65 will be restored.

While I have described what I consider to be a highly desirable embodiment of my invention, it is obvious that many changes in form could be made without departing from the spirit of my invention, and I, therefore, do not limit myself to the exact form herein shown and described, nor to anything less than the whole of my invention as hereinbefore set forth, and as hereinafter claimed.

What I claim as new, and desire to secure by Letters Patent, is:

1. In a tabulating machine controlled by record cards passed through said machine, the combination of feed mechanism for moving said record cards through said machine, a receiving pocket to which said cards are conveyed by said feed mechanism, a floating plate in said pocket movable by an accumulation of said cards, means for interrupting the operation of said card feeding means, means spring-urged to effective position for conditioning said interrupting means for operation, means for latching said conditioning means in ineffective position, and means operable by said floating plate for disabling said latching means when a predetermined number of cards has accumulated.

2. In a machine of the class described controlled by record cards passed seriatim through

the machine, the combination of a receiving pocket into which the record cards are deposited after passing through the machine, a floating plate in said receiving pocket movable under the weight of said record cards, drive mechanism adapted to control the general operation of the machine including the feeding of the cards through the machine and into the receiving pocket, a power source for said drive mechanism, a clutch connecting said drive mechanism and said power source, means for shifting said clutch to disengaged position whereby said drive mechanism is disconnected from said power source, a reciprocable element operable by said drive mechanism for operating said shifting means, mechanism intermediate said reciprocable element and said shifting means for transmitting the motion of said element to said shifting means, said intermediate mechanism including an interponent movable to an effective and ineffective position with respect to said reciprocable element, means spring-urged to effective position for moving said intermediate mechanism and the interponent comprised therein to effective position, a latch adapted to engage said spring-urged means and hold it against operation, and means consisting of a lever cooperative with said latch and extending into said receiving pocket at a point in the path of said movable plate for disabling said latch when the accumulated weight of a predetermined number of cards has caused said movable plate to travel a certain distance.

3. In a machine of the class described controlled by record cards passed seriatim through the machine, the combination of a receiving pocket into which the record cards are deposited after passing through the machine, a floating plate in said receiving pocket movable under the weight of said record cards, drive mechanism adapted to control the general operation of the machine including the feeding of the cards through the machine and into the receiving pocket, a power source for said drive mechanism, a clutch connecting said drive mechanism and said power source, means for shifting said clutch to disengaged position whereby said drive mechanism is disconnected from said power source, a reciprocable element operable by said drive mechanism for operating said shifting means, mechanism intermediate said reciprocable element and said shifting means for transmitting the motion of said element to said shifting means, said intermediate mechanism including an interponent movable to an effective and ineffective position with respect to said reciprocable element, means spring-urged to effective position for moving said intermediate mechanism and the interponent comprised therein to effective position, a latch adapted to engage said spring-urged means and hold it against operation, means consisting of a lever cooperative with said latch and extending into said receiving pocket at a point in the path of said movable plate for disabling said latch when the accumulated weight of a predetermined number of cards has caused said movable plate to travel a certain distance, and a second reciprocable element operable from said drive mechanism for restoring said spring-urged means to ineffective position to permit its reengagement by said latch.

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