April 21, 1931. A. K. BARTA 1,802,315

RECORD CONDENSING APPARATUS

Filed May 20, 1929 4 Sheets-Sheet 1

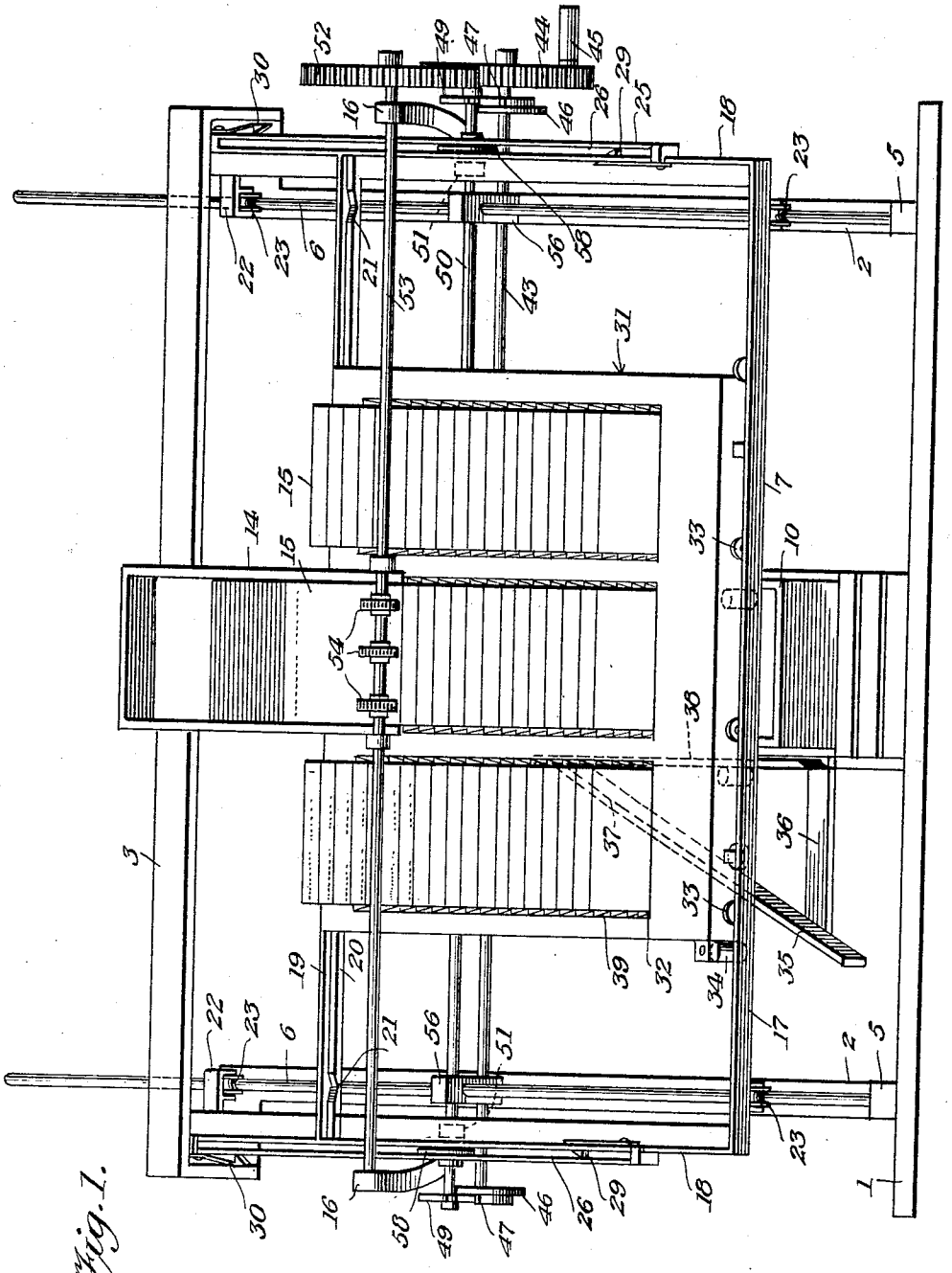


Fig. 1.

A. K. Barta

INVENTOR

BY Victor J. Evans

ATTORNEY

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Fig. 4.

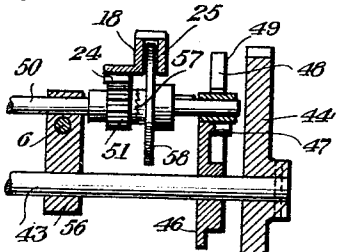


Fig. 5.

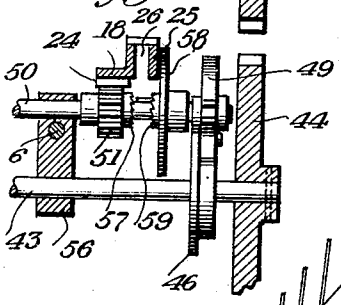


Fig. 2.

A. K. Barta
INVENTOR

BY Victor J. Evans
ATTORNEY

April 21, 1931. A. K. BARTA 1,802,315

RECORD CONDENSING APPARATUS

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Fig. 3.

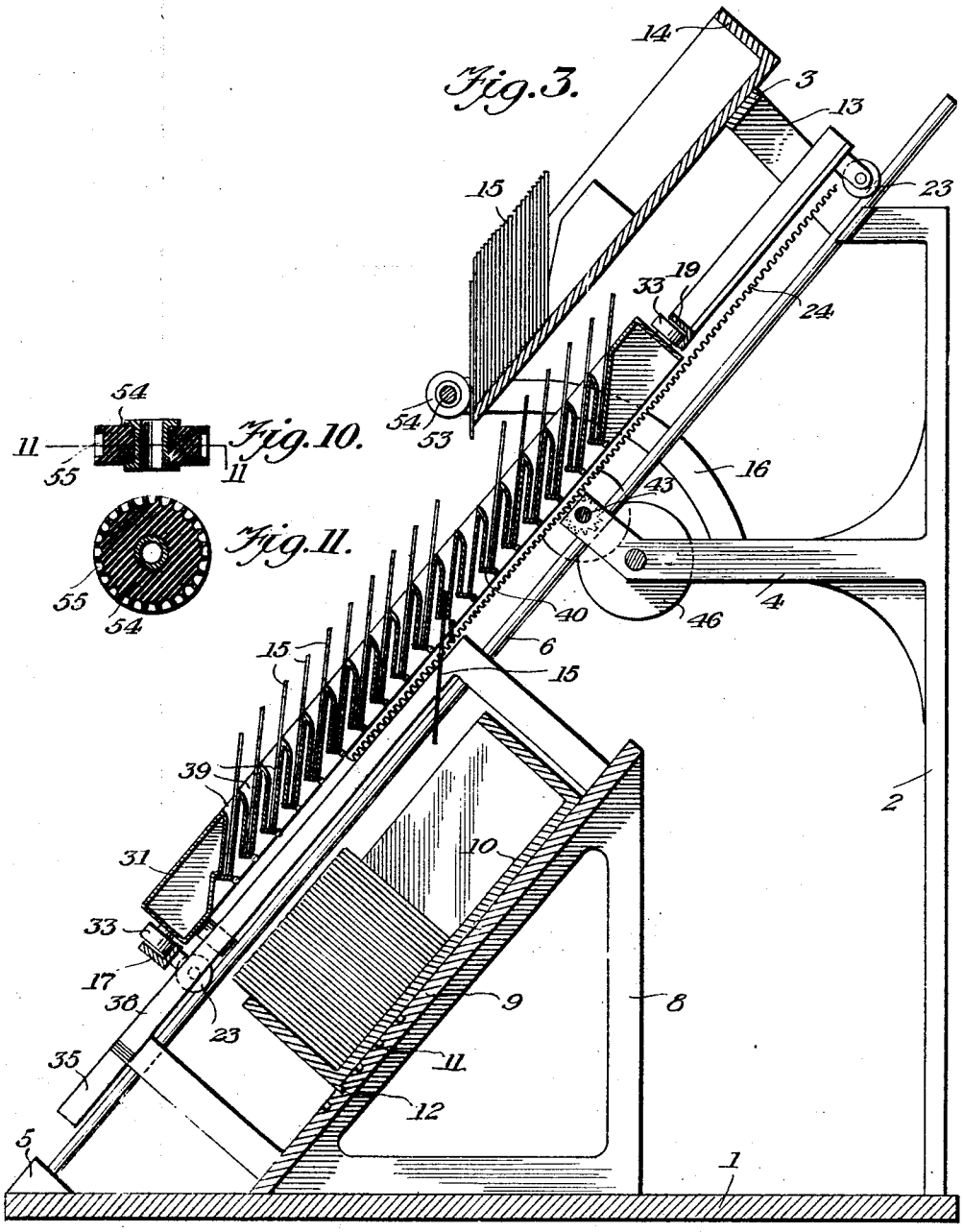


Fig. 10.

Fig. 11.

A. K. Barta
INVENTOR

BY Victor J. Evans
ATTORNEY

April 21, 1931. A. K. BARTA 1,802,315

RECORD CONDENSING APPARATUS

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Fig. 6.

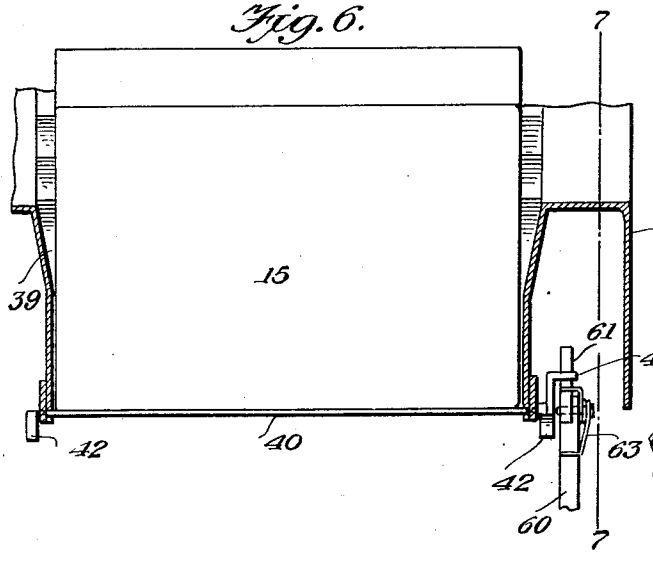


Fig. 7.

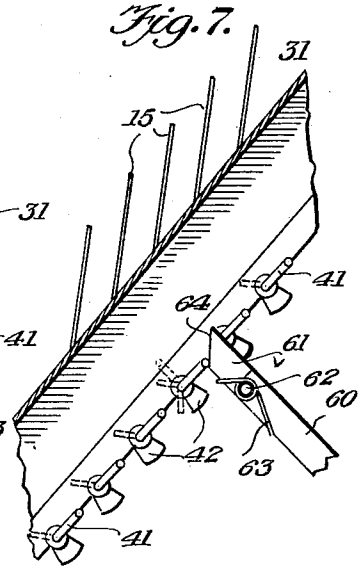


Fig. 8.

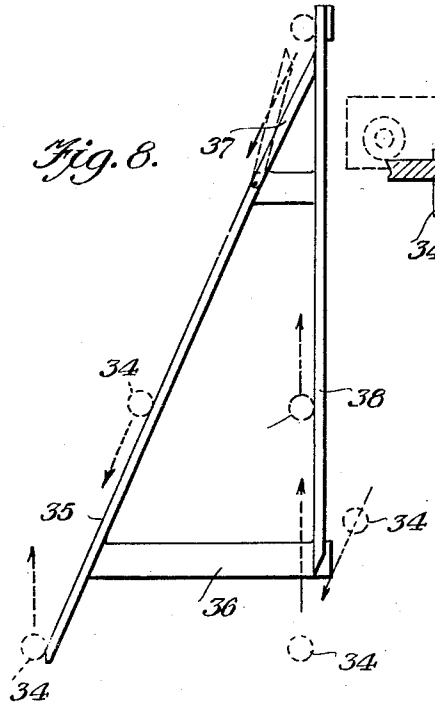
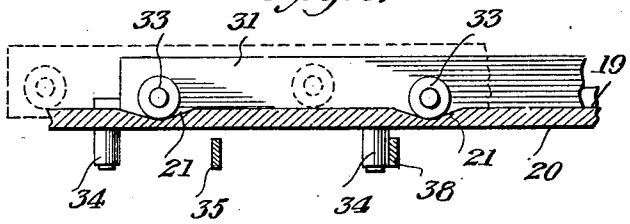


Fig. 9.



A. K. Barta
INVENTOR

BY Victor J. Evans
ATTORNEY

Patented Apr. 21, 1931 1,802,315

UNITED STATES PATENT OFFICE

ADOLF K. BARTA, OF WASHINGTON, DISTRICT OF COLUMBIA

RECORD-CONDENSING APPARATUS

Application filed May 20, 1929. Serial No. 364,569.

The invention has reference to means for taking care of voluminous records and condensing the same.

It is well known that in Government bureaus, mercantile establishments and in fact numerous other places, businesses, etc., the records which are generally in card form accumulate very rapidly so that by the time they become obsolete, or nearly so, the problem arises as to what disposition may be made of them or what method may be resorted to for making a guide to the record or a condensed record of portions of the cards or the like for identification, so that the record cards themselves may be stored away so as not to encumber the space available for taking care of current cards or other records. Naturally it is not desirable that the original records be destroyed but in cases where reference thereto is not likely to be frequent a condensed guide should be sufficient.

It is with the above facts in view that I have devised the present invention which has for its general object the provision of means whereby record cards may be distributed within supporting means and so arranged therein that a large number may be photographed to form the permanent guide or condensed partial record, means being also provided whereby the cards may then be returned to storage boxes, trays or the like and stored out of the way. In accordance with this system the photograph, showing vital portions of the record cards, might be taken upon a reel or strip of film or upon individual plates or films as desired, the intention being that inspection, if needed at any subsequent time, may be had by projecting the photograph upon a screen by means of a stereopticon lantern or the like, the data thus obtained being sufficient to enable the custodian of the record to identify and locate the original card or cards desired. Furthermore, photostats of any desired portions of a group of cards may be made and bound in book form for convenience.

An important object of the invention is to provide an apparatus which will operate automatically to feed cards out of a storage box or drawer into the holder in which they are to be held while photographed, and for subsequently discharging the photographed cards into another storage box or compartment, the proper order of the cards being maintained at all times so that there will be no upsetting of their numerical, chronological or alphabetical arrangement, whichever constitutes the filing method.

Another object of the invention is to provide an apparatus of this character by means of which the cards in a storage box may be successively fed in proper order into a plurality of holders, one after another so that a photograph of all the cards in the series of holders may be taken, thereby making it possible to obtain in a single photograph portions of the records displayed on all of the cards, thereby greatly cutting down the number of photographs necessary and condensing the record to a comparatively few photographs or photostats which may obviously be stored in a small space or bound in book form and be easily handled in case it is necessary to refer to them for identifying an original record card or obtaining at least a partial record.

A further object of the invention is to provide an apparatus of this character in the nature of a machine having driving means cooperating with a transmission mechanism and feeding and subsequent distributing means for taking care of all the cards without any touching thereof or manual manipulation, means being also provided for shifting the carriers so that each will be filled in its proper order after the preceding one has been filled.

Another object is to provide a device of this character equipped with means whereby the cards may, after being photographed in their carriers, be automatically returned to a single storage box similar to the one from which they are initially taken, the carriers being, moreover, filled with a fresh supply of cards as the previously photographed cards are discharged so that there will be no time lost and no interruption in the carrying out of the system.

A more specific object is to provide an apparatus of this character embodying a peculiar and novel transmission whereby the entire action is accomplished by the simple

turning of a crank or other similar handle, in case manual operation is desired, or which may, if preferred, be driven by an electric motor in a very simple and easily controlled manner.

An additional object is to provide an apparatus of this character which will be comparatively simple and inexpensive to make, easy to operate, positive in action, efficient and durable in service, and a general improvement in the art.

With the above and other objects and advantages in view, the invention preferably consists in the arrangement and combination of parts as well as in the details of construction to be hereinafter more fully described and claimed, and illustrated in the accompanying drawings, in which:—

Figure 1 is a front elevation of the complete machine showing the parts in an intermediate position.

Figure 2 is a side elevation thereof.

Figure 3 is a central vertical longitudinal section taken from front to back.

Figure 4 is a detail view through a portion of the transmission mechanism for moving the carriers upwardly, the parts being shown in one position.

Figure 5 is a similar view showing the same parts in a different position.

Figure 6 is a view partly in elevation and partly in section showing the mechanism for releasing the gate at the bottom of the compartments in the carrier.

Figure 7 is a sectional view taken on substantially the line 7—7 of Figure 6.

Figure 8 is a detail view illustrating the means for effecting automatic lateral shifting of the carrier.

Figure 9 is a detail sectional view showing the means for maintaining the carrier in a shifted position.

Figure 10 is a cross sectional view through one of the card feed rollers.

Figure 11 is a sectional view therethrough taken on substantially the line 11—11 of Figure 10.

Referring more particularly to the drawings, I have illustrated the device as comprising a relatively rigid supporting structure including a base 1 from which rise uprights 2 carrying a transverse upper member 3 and forwardly extending arms 4. Mounted within bosses 5 on the base 1 are the lower ends of upwardly and rearwardly inclined guide rods or rails 6 which have their upper portions suitably supported upon the top cross member 3. These rods 6 are arranged in parallel relation and serve to support a carriage indicated generally by the numeral 7 and which will be described in greater detail hereinafter. The stationary portion of the machine further comprises triangular frame members 8 suitably mounted on the base 1 and carrying a platform portion 9 adapted to support a storage box or tray 10 in inclined position beneath and parallel with the carriage 7. As such boxes are not necessarily of the same length and as it may be desired to maintain them in adjusted position with respect to the platform 9, I have shown the latter as provided with a plurality of transverse grooves 11 within any one of which may be engaged a depending cleat 12 on the lower or forward end of the box 10 as clearly illustrated in Figure 3.

Carried by the upper cross member 3 is an inverted U-shaped frame 13 constituting a support for the upper rear end of a tray 14 in which are disposed the cards 15 to be photographed and then deposited in a storage box such as that indicated at 10. The lower end portion of this tray 14 fits between upwardly and forwardly extending arms 16 carried by the arms 4. Of course it is understood that the lower or forward end of the tray 14 is open so that the stack of cards 15 therein may be fed out of this compartment or box or tray into the carrier means to be described.

The above mentioned carriage 7 is represented as including a frame comprising a lower rail 17 preferably angle shaped in cross section as clearly illustrated in Figure 3, side members 18 and a top rail 19, the rails having flanges 20 formed with depressions or recesses 21 at a plurality of points. At the upper and lower portions of this carriage are brackets 22 carrying grooved rollers 23 traveling upon the guide rods 6 so that the entire carriage may move freely upwardly or downwardly as the case may be during the operation of the machine. Each side member 18 carries a rack bar 24. Secured on the outside of each side bar 18 is a bar 25 offset with respect thereto to provide a guide space 26 for a purpose to be described, and each bar 25 is provided near its upper and lower ends with openings 27 and 28 respectively for a purpose to be described. Secured upon the lower portion of each side member 18 is a spring wedge 29 projecting through an opening in the side bar, and secured upon the outside of the upper portion of each bar 25 is a similar spring wedge 30 opposite and adapted to project through the opening 27.

Mounted within the carriage 7 is a carrier indicated as a whole by the numeral 31, this carrier being preferably of sheet metal construction and including a box-like frame of rectangular form having a plurality of compartments 32 therein. It should be understood that there may be any desired number of compartments depending upon the size of the machine but in the present instance three are illustrated. This carrier is provided at its top and bottom portions with suitably journaled rollers 33 which travel along the rails 17 and 19 so that the carrier may move transversely with respect to the carriage 7 by

the means to be described. It will be observed that there is only one tray 14 and one receiving box 10 located centrally with respect to the machine whereas there are three compartments in the carrier 31, the intention being that this carrier be shifted laterally with respect to the carriage, the different selected or sequential positions of the carrier being maintained by engagement of the rollers 33 within the depressions 21 in the flanges 20 of the rails 17 and 19. Journaled at the lower portion of the carrier 31 are rollers 34 located at spaced intervals and arranged in depending position, these rollers being adapted to cooperate with an inclined rail 35 mounted by means of an arm 36 on one of the triangular frames 8 of the stationary supporting structure, this rail 35 having therein a pivoted gate 37 normally coextensive therewith and engaging against a rail 38 which extends parallel with the rods 6. The rollers 34 cooperate with this inclined rail 35, at certain times in a manner to be further described for the purpose of effecting lateral shifting of the carrier 31 step by step.

The respective compartments 32 are intended to receive the cards 15 and to hold them in separated relation so that the upper portions thereof may be photographed to make a condensed record. For this reason, each of the compartments 32 is represented as formed with a rack comprising a series of transverse pockets 39 within each of which may be received one of the cards 15. The upper or entrance ends of these pockets are represented as flared in order to facilitate the entrance of the cards thereinto during the operation of the machine. These pockets are open at their bottom ends and normally closed by gates or pivoted plates 40 suitably journaled transversely of the entire carrier 31 the projecting ends at one side of the carrier being provided with crank arms 41 and weights 42, the latter being so arranged as to normally maintain the gates or pivoted plates closed so as to form a bottom for each of the pockets. The arms 41 provide means whereby the pockets may be opened at certain times to be described.

The operating means for effecting upward and downward movement of the carriage 7 is here represented as comprising a shaft 43 journaled transversely of the stationary support, that is through the forward portions of the arms 4, this shaft carrying a gear 44 equipped with a handle 45 if such is desired for manual operation. The shaft 43 also carries disks 46 each having a pin 47 projecting from one side thereof adapted to enter, successively, a plurality or series of radial slots 48 in a disk or star wheel 49 mounted on a shaft 50 journaled transversely of the machine and equipped with pinions 51 meshing with the rack bars 24. By this means it will be seen that at every rotation of the shaft 43 the pin 47 on the disk 46 at each side of the machine will operate to engage within one of the slots 48 and thereby effect a quarter rotation of the shaft 50 and partial rotation of the pinions 51 which, by virtue of their engagement with the rack bars 24 will operate to move the carriage 7 upwardly, it being of course understood that this carriage is initially at its lowermost position. The gear 44 meshes with a gear 52 on a shaft 53 which extends transversely of the machine and which is journaled through the extremities of the arms 16. The shaft 53 carries a plurality of rubber or other similar friction rollers 54 opposite the lower end of the tray 14. These rollers are intended to engage against the exposed or lowermost card 15 in the tray 14 for the purpose of drawing it downwardly, and the rollers preferably have their peripheries formed with a series of suction cups 55 which will prevent slippage and insure a proper gripping action on the cards. It might be mentioned in passing that the shafts 43 and 50 are journally supported by bearing blocks 56 which are mounted on the rods 6 as clearly illustrated in Figures 1, 4 and 5. The rotation of the shaft 43 in a counter clockwise direction will consequently effect step by step movement of the carrier 31 upwardly and when the carrier reaches the upper limit of its movement it is intended that it fall back by gravity. It therefore becomes necessary to provide a releasable connection in the drive mechanism, or in other words to provide means whereby the pinions 51 may be permitted to turn upon the shaft 50 when the carrier 31 is intended to return gravitationally to its lowered position.

In carrying out this feature of the invention, I provide the pinions 51 with clutch faces 57 and mount them rotatably upon the shaft 50. Splined upon the shaft 50 are disks 58, located at opposite sides of the machine, which disks are equipped with clutch faces 59 adapted to engage with the clutch faces 57. The disks 58 are intended to operate at certain times within the spaces 26 between the side bars 18 and the bars 25 and at other times to be located outwardly of the bars 25, and it is for this reason that the openings 27 and 28 and spring wedges 30 and 29 are provided. The exact operation of these parts will be explained.

In order to effect opening movement of the closure plates or gates 40 at the bottom of the respective pockets 39, I provide an arm 60 mounted for example upon one of the frame members 8 and carrying a wedge or cam member 61 pivoted at 62 by a rule joint capable of swinging forwardly and downwardly, alignment being normally maintained as by means of a spring 63. This member 61 has an inclined face 64 positioned in

the path of movement of the crank arms 41 as the carrier 31 moves upwardly.

Assuming that the device has been constructed and assembled as above described, the operation is as follows: First, the cards to be photographed for the purpose of making a condensed record are packed within the tray 14 in their proper order and are prevented from slipping out by engagement of the rollers 54 with the endmost card at the exposed or open end of the tray.

Initially, the carrier 31 is at its lowermost position and to the right of the stationary frame, as viewed from the front thereof so that the first compartment 32 will be beneath the tray 14 and above the box 10. The operator then grasps the crank handle 45 and turns the shaft 43 whereupon the pin 47 on the disk 46 will successively enter the slots 48 in the disk or star wheel 49 and rotate the shaft 50 and pinions 51 for moving the carrier 31 upwardly step by step. During this part of the movement the disks 58 are located within the spaces 26 between the side members 18 and the bars 25 as clearly illustrated in Figure 1 so that the clutch members 59 and 57 will be in engagement locking the pinions 51 to the shaft 50 so that the engagement of the pinions 51 with the rack bars 24 will operate to drive the carrier 31 upwardly step by step. At the same time, the engagement of the gear 44 with the gear 52 will operate to drive the shaft 53 and rotate the rollers 54 thereon and these rollers being in frictional engagement with the lower most or exposed card 15 will slide the same downwardly and discharge it from the bottom of the tray 14. As it falls the card will be deposited within the uppermost one of the pockets 39 in the leftmost compartment 32. As the shaft 50 makes an additional partial turn resulting in upward movement of the carrier 31 another step, the next card 15 will be moved downwardly by the rollers 54 on the shaft 53 and will be deposited within the next pocket 39, and so on until all of the pockets have been filled, at which time the carriage 7 will be at the uppermost limit of its movement.

During the upward movement of the carriage it is of course apparent that the crank arms 41 carried by the pivoted gates or plates 40 at the bottom of the respective pockets 39 will engage against the inclined surface 64 of the member 61 and will ride upwardly there-along, opening the bottom of the pockets so that cards therein and remaining therein from the previous filling of the pockets may drop out into the box 10. Of course, if it occurs that the carrier 31 is entirely empty, as when initially starting the operation of the machine, this opening movement of the gates or pivoted plates forming the closures for the bottom of the pockets will have no effect as there will then be no cards in the pockets to be discharged. This feature comes in only after the carrier 31 has been filled, removed, photographed and then replaced and the machine operated for effecting redistribution of the cards and the disposition of a new set within the carrier. However, just as soon as the crank arms 41 ride off from the the inclined surface 64 the weights 42 will operate to return the gates or pivoted plates 40 to their closed position, it being of course obvious that the plates must be in closed position by the time the respective pockets arrive at a position beneath the lower end of the tray 14 ready to receive a card therefrom. When the carriage 7 reaches the uppermost limit of its movement the spring cam or wedge 29 will engage against the disk 58 and force it laterally through the opening 28 in the lower end portion of each of the bars 25.

As the structure is the same, in this respect, at both sides of the machine, it is apparent that both disks will then be forced outwardly through the openings 28, thus disengaging the clutch members 59 from the clutch members 57 and breaking the drive connection between the shaft 50 and the pinions 51. When this occurs it is of course apparent that there is nothing to urge or hold the carriage 7 in its uppermost position and it will drop by gravity. In view of the fact that the carrier 31 is mounted within the confines of the carriage 7 it is apparent that it will also be carried downwardly with it. As the downward movement of the carriage takes place the leftmost roller 34 on the carrier 31, which has previously moved upwardly along the outer side of the bar 38 and through the pivoted gate 37, into the position shown at the upper extremity of Figure 8, will, upon downward movement of the carriage engage against the top or outer side of the gate 37 and ride there-along and down the inclined bar 35, thus shifting the carrier 31 to the left one step. The rollers 33 on the carrier 31 will then engage within certain of the depressions 21 and maintain the carrier in the intermediate position shown in Figure 1. As soon as the carriage 7 has gravitated to its lowermost position the disks 58 which are then at the outer sides of the bars 25 will strike against the spring wedges or cams 30 which will operate to force the disks through the openings 27 into the spaces 26, reengaging the clutch faces 59 and again locking the pinions 51 onto the shaft 50 for rotation therewith so that when the operator again grasps the crank handle 45 and turns the shaft 43 the pin and star wheel connection above described, which constitute a species of Geneva movement, will operate again to move the carriage upwardly step by step.

The rollers 54 then operate to feed successive cards in the tray 14 downwardly into the successive pockets in the central compart-

ment 32. When the carriage again reaches the uppermost limit of its movement the spring wedge or cam members 11 engage the disks 58 and release the clutch members so that the carriage will again drop down, the next depending roller 34 on the carrier 31 then engaging the gate 37 and bar or rail 35 so that the carrier 31 will be shifted another step to the left, the leftmost rollers 33 then engaging within the depressions 21 and maintaining the parts in the proper relation. The clutch members are again engaged when the carriage returns to its lowermost position so that when the shaft 43 is again rotated to drive the shafts 50 and 53 the carriage will again be moved upwardly so as to effect filling of the pockets in the right hand compartment 32 of the carrier. When this compartment is filled the carriage 7 will again drop to its lowermost position subsequently to which it is intended that the carrier 31 be removed and a photograph taken of the various cards therein. After this, the carrier is returned to the machine and disposed at its right hand position so that when the operator turns the shaft 50 by means of the crank handle 45 the operation will be identically the same as before with this single exception that in view of the fact that the pockets 39 are all occupied by cards, the cards therein will drop out into the box 10 when the crank arms 41 on the pivoted plates or gate members 40 engage the inclined surface of the member 61, the previously photographed cards being consequently placed within the storage box 10 and the pockets having their bottoms closed by the time the cards drop down from the tray 14. This constitutes the entire cycle of operation.

In the use of the machine, it is of course apparent that the spacing of the cards 15 in the pockets 39 will govern the extent of the cards exposed for photographing purposes and it is equally apparent that the area exposed may be regulated to a certain extent by tilting the carrier to a greater or less extent so that more or less of each card will be visible above the upper edge of the one in front of it. After a photograph has been taken of all the cards in the carrier such photographs may be filed away and it is obvious that the top portion of a large number of cards, which top portion may and very probably will bear the necessary data, will be shown on a single photograph. By this means it is apparent that the number of photographs necessary will be a small fraction of the number of cards and that the individual photographs may themselves be a small fraction of the size of an individual card, thereby making it possible to condense the record to a marvelous extent. Whenever in the course of time it is necessary or desirable to identify one of the original cards or ascertain what data may have been thereon, it is a simple matter to inspect the photographs closely, with a microscope if necessary, or to make an enlargement thereof or to make a projection thereof on a suitable screen so as to render the data readily visible. Various alternative plans along this line will naturally present themselves to one of intelligence and imagination without it being necessary to give a detailed analysis of all the possibilities, an important variation being the making of photostats and binding them in book form.

From the foregoing description and a study of the drawings it will be apparent that I have thus provided an extremely simple and novel system for condensing records so that the records need not be kept on hand but may be stored away, or even destroyed in some instances if necessary or advisable. The machine will operate with extreme simplicity inasmuch as all the movements are entirely automatic and controlled by a simple rotation of a shaft, which rotation may be effected manually or by means of a suitable power device, depending upon the preference of the manufacturer, the contemplated cost of the apparatus and other circumstances. It is believed that the construction, operation and advantages will be readily apparent to one skilled in the art without further explanation.

While I have shown and described the preferred embodiment of the invention, it should be understood that I reserve the right to make all such changes in the details of construction as well as in the arrangement and combination of parts as will not depart from the spirit of the invention or the scope of the subjoined claims.

Having thus described the invention, I claim:—

1. In a machine of the character described, the combination of a relatively stationary supporting structure, a card-holding tray mounted at the upper portion of said structure, a carriage mounted for movement upwardly and downwardly upon said supporting structure, and a carrier mounted for transverse movement within said carriage and provided with a card holding rack.

2. In a machine of the character described, the combination of a relatively stationary supporting structure, a carriage mounted for movement upwardly and downwardly within said structure, a carrier mounted for transverse movement within said carriage, card-holding and guiding means located at the upper portion of said structure, and a series of racks within the carrier each adapted to receive and contain a plurality of cards deposited therein from said card holding and guiding means.

3. In an apparatus of the character described, a supporting structure, a carriage mounted for movement upwardly and down-

wardly therealong, means for moving the carriage, a carrier mounted for transverse movement within the carriage and formed with a plurality of compartments, card holding and guiding means at the upper portion of the structure, and a series of card receiving pockets within each of said compartments.

4. In an apparatus of the character described, a stationary supporting structure having guides thereon, a carriage mounted for upward and downward movement upon said guides, means for moving the carriage upwardly, means for holding the carriage against dropping gravitationally, means for releasing the holding means, a carrier mounted for transverse movement within the carriage and provided with a plurality of compartments containing a series of card receiving racks, card holding and depositing means located above the carrier, and means for effecting movement of the carrier step by step to bring the successive compartments beneath said card depositing means.

5. In an apparatus of the character described, a supporting structure, a carriage mounted for movement upwardly and downwardly therealong, means for moving the carriage upwardly, means for holding the carriage, means for releasing the holding means so that the carriage may drop upon reaching the upward limit of its movement, a carrier mounted for transverse movement within the carriage and formed with a series of compartments each provided with a plurality of card receiving racks, means located above the carrier for discharging cards in sequence, and track and roller means for shifting the carrier laterally step by step to bring the successive compartments beneath the card depositing means during each downward movement of the carriage.

6. In an apparatus of the character described, a supporting structure, a carriage mounted for movement upwardly and downwardly therealong, a carrier mounted for movement transversely of the carriage, a plurality of compartments in the carrier each having a series of pockets therein, card holding and depositing means located above the carrier, means for shifting the carrier step by step laterally at each downward movement of the carriage, and releasable closures for the bottoms of the pockets.

7. In an apparatus of the character described, a supporting structure, a carriage mounted for movement upwardly and downwardly therealong, a carrier mounted for movement transversely of the carriage, a plurality of compartments in the carrier each having a series of pockets therein, card holding and depositing means located above the carrier, means for shifting the carrier step by step laterally at each downward movement of the carriage, releasable closures for the bottoms of the pockets, means for opening said closures in advance of the time at which the pockets receive cards, and a receiving box located beneath the carrier in position to receive the cards discharged from the pockets upon opening of the closures.

8. In an apparatus of the character described, a supporting structure, a carriage mounted thereon for upward and downward movement, card holding and depositing means at the top of the structure, a carrier mounted for transverse movement within the carriage, a plurality of groups of card holding pockets within the carrier, a card receiving box beneath the carrier, and means for simultaneously moving the carriage upwardly, discharging cards downwardly into the pockets, and discharging other cards from the pockets into said box.

9. In an apparatus of the character described, a stationary supporting structure, a carriage mounted for upward and downward movement therealong, tracks forming part of the carriage, a carrier movable along said tracks transversely of the carriage and formed with a plurality of compartments each having a series of card receiving pockets therein, card holding and discharging means located above the carrier, means for moving the carriage upwardly, means operable when the carriage reaches the upward limit of its movement to permit the same to drop gravitationally, means operable upon downward movement of the carriage for shifting the carrier laterally to bring the successive compartments beneath said card depositing means, and means for releasing previously deposited cards within the carrier whereby they may fall into a storage compartment.

10. In an apparatus of the character described, a stationary supporting structure, a carriage mounted for upward and downward movement therealong, tracks forming part of the carriage, a carrier movable along said tracks transversely of the carriage and formed with a plurality of compartments each having a series of card receiving pockets therein, card holding and discharging means located above the carrier, means for moving the carriage upwardly, means operable when the carriage reaches the upward limit of its movement to permit the same to drop gravitationally, means operable upon downward movement of the carriage for shifting the carrier laterally to bring the successive compartments beneath said card depositing means, means for releasing previously deposited cards within the carrier whereby they may fall into a storage compartment, said means comprising closure plates for the bottom of the racks having crank arms thereon and weights, the weights normally holding the closure plates in closed position, and means mounted on the supporting structure and disposed in the path of travel of the cam

arms for effecting partial rotation thereof to swing the closure plates to open position.

11. In an apparatus of the character described, a supporting structure, guides on said structure, a carriage mounted upon said guides for upward and downward movement, a carrier mounted for movement transversely of the carriage and provided with a plurality of compartments containing card receiving pockets, card holding means located above the carrier, rack and pinion means for moving the carriage upwardly, means for shifting the carrier laterally upon every downward movement of the carriage, means operating simultaneously with the carriage raising means for discharging cards from said card holder whereby they will be deposited within the pockets, and means for disengaging the drive connection of the rack and pinion means when the carriage reaches the upward limit of its movement.

12. In an apparatus of the character described, a stationary supporting structure, a carriage mounted therein for upward and downward movement, a carrier mounted within the carriage and having a series of card receiving pockets, card holding and depositing means located above the carrier, card receiving means located beneath the carrier, means for moving the carriage upwardly and simultaneously depositing cards into said pockets, closure means for the pockets, and means operating in advance of the depositing means for opening said closure means to permit the cards to pass into said receiving means.

13. In an apparatus of the character described, a stationary supporting structure, a carriage mounted therein for upward and downward movement, a carrier mounted within the carriage and having a series of card receiving pockets, card holding and depositing means located above the carrier, card receiving means located beneath the carrier, means for moving the carriage upwardly and simultaneously depositing cards into said pockets, closure means for the pockets, and means operating in advance of the depositing means for opening said closure means to permit the cards to pass into said receiving means, and means for permitting the carriage to drop to its lowermost position when it reaches its uppermost position.

14. In an apparatus of the character described, a stationary supporting structure, a carriage mounted therein for upward and downward movement, a carrier mounted within the carriage and having a series of card receiving pockets, card holding and depositing means located above the carrier, card receiving means located beneath the carrier, means for moving the carriage upwardly and simultaneously depositing cards into said pockets, closure means for the pockets, means operating in advance of the depositing means for opening said closure means to permit the cards to pass into said receiving means, and means for permitting the carriage to drop to its lowermost position when it reaches its uppermost position, said means comprising a clutch mechanism interposed in the means for moving the carriage upwardly, and wedge means cooperating with said clutch means for disengaging the latter when the carriage reaches its upward limit of movement and for reengaging the same when the carriage reaches its lowermost position.

15. A record condensing system in which the record involves a plurality of cards, means for grouping the cards whereby only essential portions thereof will be exposed in a limited area permitting photographing as a single group, and means for returning the cards into stacked position.

16. A record condensing system in which the record involves a number of cards, means for stationarily supporting the cards in overlapping relation to expose an essential portion of each to constitute a guide for future reference, whereby the exposed portions may be photographed as a single group, and means for restoring the cards to stacked condition.

17. Means for condensing a record involving a stack of cards, comprising means for dropping and supporting the cards in substantially vertical position and overlapping relation to expose essential portions thereof in apparent contiguous relation whereby the exposed portions may be photographed as a single group.

18. Means for condensing a record involving a stack of cards, comprising means for initially holding the cards, means for dropping and arranging the cards in overlapping relation whereby portions thereof will be exposed for photographic purposes.

19. Means for condensing a record including a stack of cards, comprising means for supporting the cards in substantially vertical position and overlapping relation, means for feeding the cards into the supporting means, and means for dropping the cards out of said supporting means and restoring them to stacked condition.

20. Means for condensing a record including a stack of cards, comprising means for supporting the cards stationarily, a carrier for the cards to hold them in overlapping relation with essential portions exposed, means for feeding the cards from the holding means into the carrier.

21. Means for condensing a record including a stack of cards, comprising means for supporting the cards stationarily, a carrier for the cards to hold them in overlapping relation with essential portions exposed, means for feeding the cards from the holding means into the carrier, and means for removing the cards from the carrier and reassembling them in stack form.

22. Means for condensing a record including a stack of cards, comprising supporting the cards in stack form, a carrier for holding the cards in overlapping relation to exposed portions for photographing purposes, means for feeding the cards from the holding means into the carrier, means for shifting the carrier into a different position, and means for effecting removal of the cards from the carrier into reassembled registering relation.

23. In an apparatus for condensing a record including a plurality of cards, comprising means for supporting the cards in registering relation, a carrier to receive and hold the cards in overlapping relation with portions thereof exposed, means for moving the carrier step by step, means for feeding the cards into the carrier.

24. In an apparatus for condensing a record including a plurality of cards, comprising means for supporting the cards in registering relation, a carrier to receive and hold the cards in overlapping relation with portions thereof exposed, means for moving the carrier step by step, means for feeding the cards into the carrier, means for retaining the cards within the carrier, means for shifting the carrier in a different direction to a new position, and means for releasing said retaining means whereby the cards may drop from the carrier and be reassembled in registering relation.

In testimony whereof I affix my signature.

ADOLF K. BARTA.