

April 24, 1928.

1,667,216

F. NIGRA

RECORD CABINET

Filed Jan. 22, 1926

4 Sheets-Sheet 1

Fig. 1.

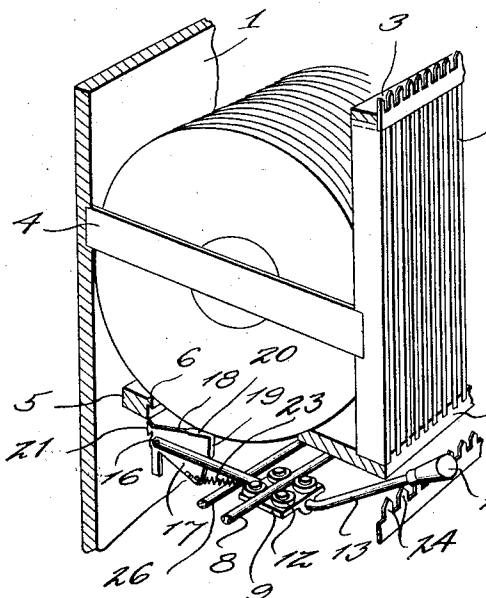


Fig. 3.

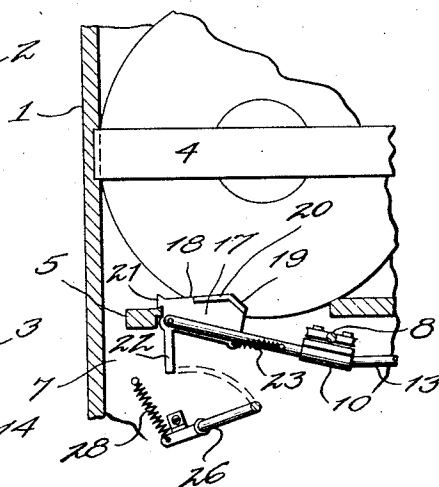


Fig. 4.

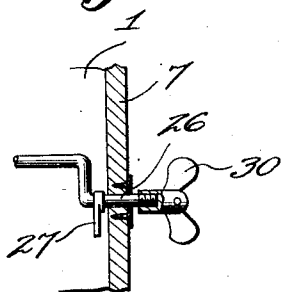
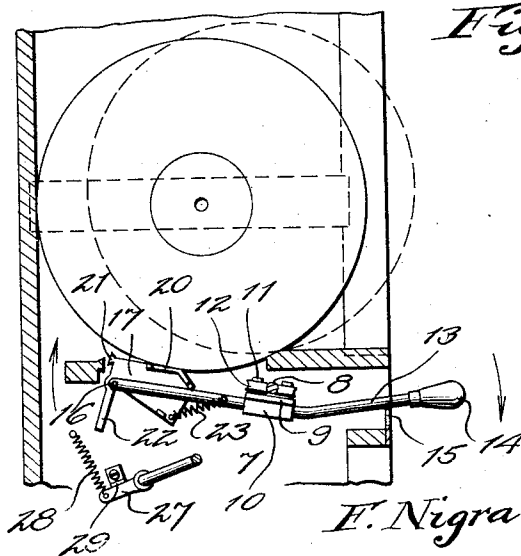


Fig. 2.



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Fig. 5.

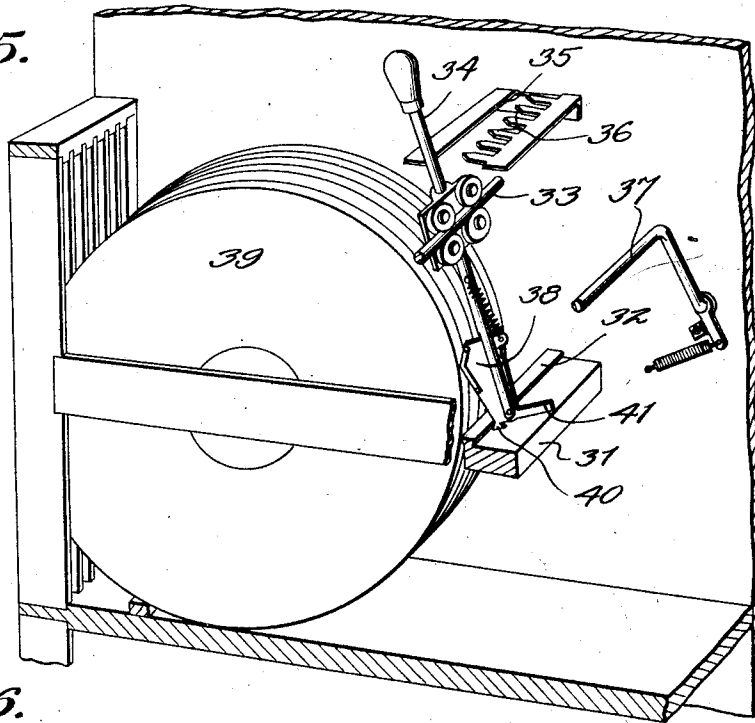


Fig. 6.

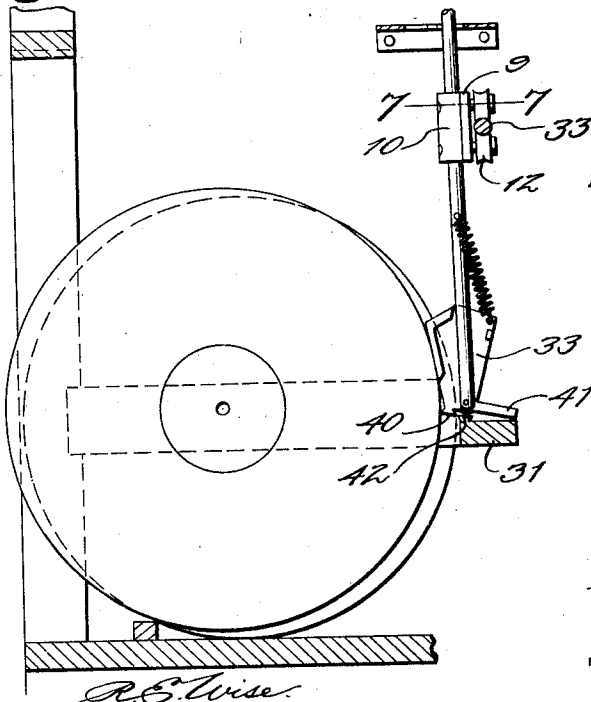
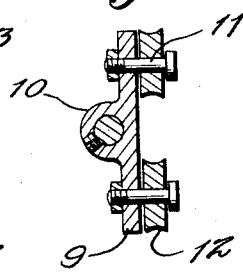


Fig. 7.



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4 Sheets-Sheet 3

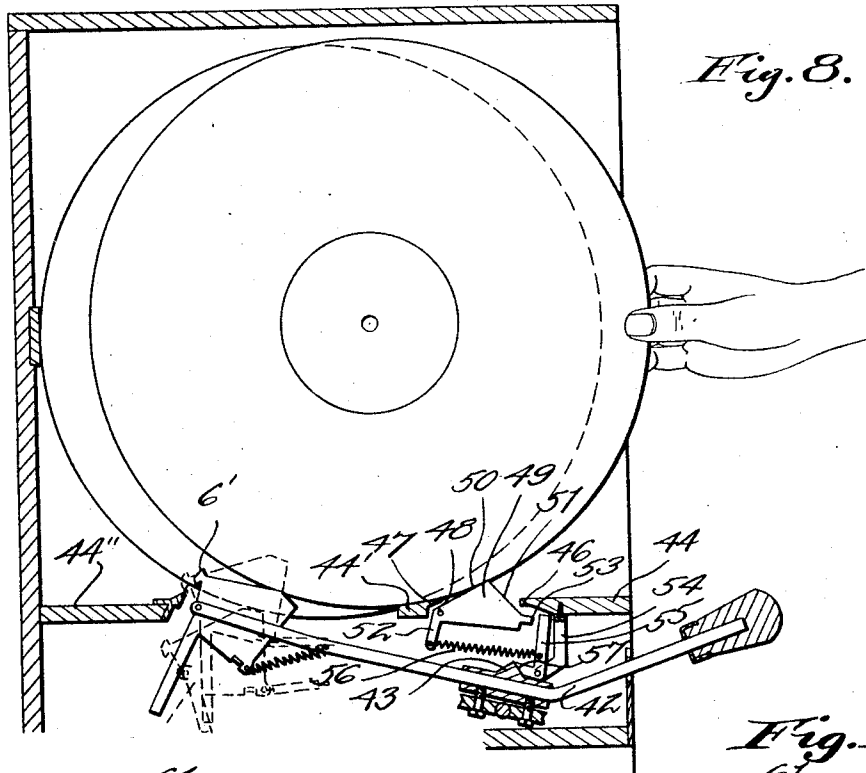


Fig. 8.

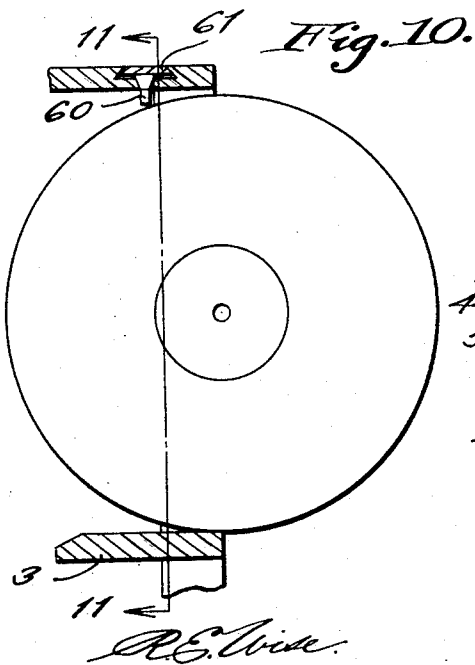


Fig. 10.

Fig. 9.

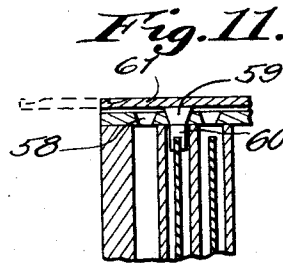
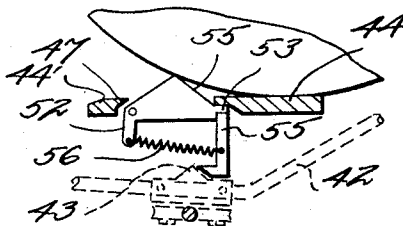


Fig. 11.

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Fig. 12.

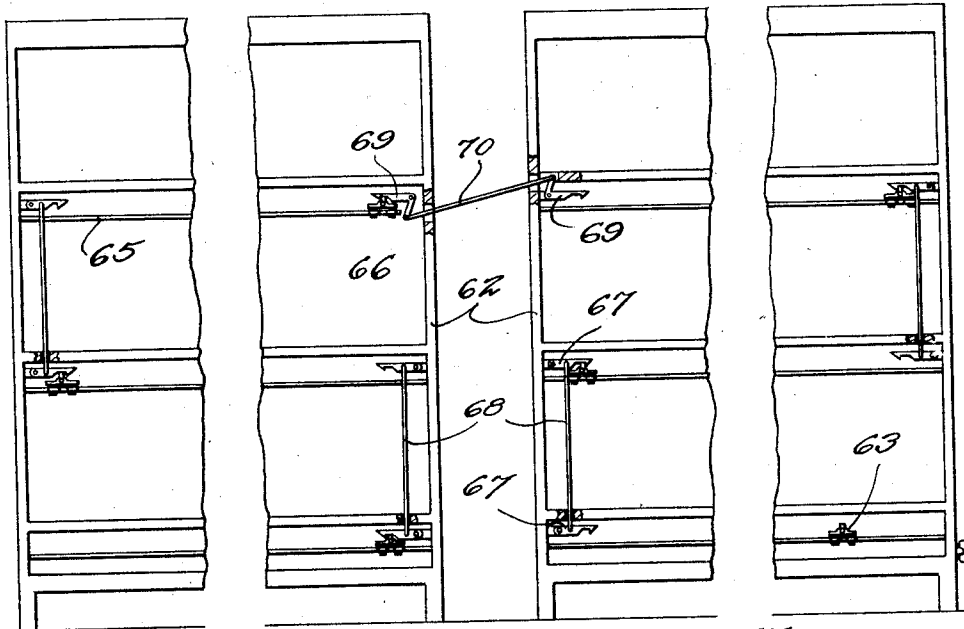
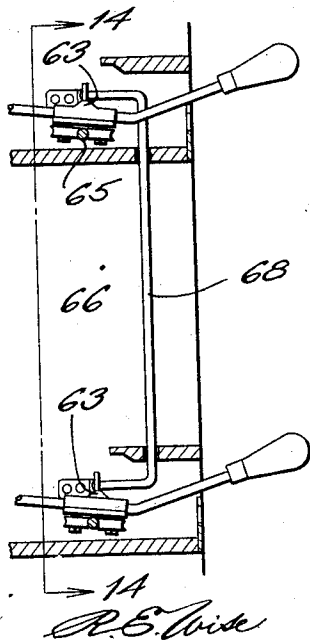


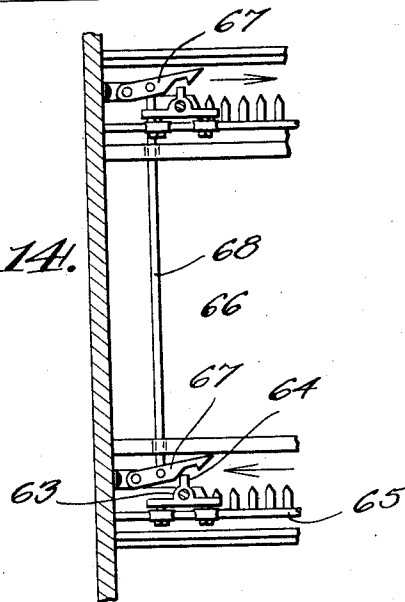
Fig. 13.



WITNESS:

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Fig. 14.



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UNITED STATES PATENT OFFICE.

FERDINAND NIGRA, OF SAN ANTONIO, TEXAS.

RECORD CABINET.

Application filed January 22, 1926. Serial No. 83,101.

An object of my present invention is the provision of simple means operable to partially project devices from compartments in which they are wholly housed to permit of the selective withdrawal of any one of the said devices.

Specifically the improvement has reference to an ejector in the nature of a block or dog pivotally secured to and spring influenced on a lever that is mounted on a carriage for travel below or at one side of a cabinet that is divided into compartments, in each of which there is wholly housed a device, such for instance, as a disc record for phonographs, which cannot be removed by the fingers of a person, and wherein the swinging of the lever in one direction will actuate the ejector to cause the same to move a selected disc record to a position whereby the same may be withdrawn from its compartment, after which the dog will be locked in a position to prevent the removal of any other record from any other compartment until after the withdrawn record is again inserted in its compartment when the locked dog will be automatically released so that any other record may be withdrawn by again actuating the lever, and further wherein means is provided to permit of the insertion of a record in a vacated compartment should it be found desirable.

A still further object is the provision of means especially adapted for use in connection with cabinets for disc records, but which, of course, may be successfully employed in connection with other cabinets having separate compartments for devices, such as canned merchandise or similar articles and wherein means, comprising a handle which carries a pivoted spring influenced ejector in the nature of a dog is slidable on a carriage to arrange the dog adjacent any one of the records or the like so that the swinging of the lever in one direction will bring the dog against the record or article to partly project the same from its compartment and thereafter lock the dog and lever to prevent further movement thereof until the removed record is replaced.

A still further object is the provision of ejecting means for this purpose which may be locked against action except by an authorized person.

A further object is the provision, in a cabinet for disc records or the like, of means for

ejecting a selected record from the compartments therein, means for locking the remaining records in their respective compartments, and means for preventing the reinsertion of a record in the compartment from which another record has been removed, with the result that each of the several records may occupy only the compartment designed therefor.

With the above broadly stated objects in view, the invention further consists in certain novel features of construction, combination and operative association of parts, a satisfactory embodiment of which is illustrated by the accompanying drawings.

In the drawings:

Figure 1 is a fragmentary perspective view of my improvement.

Figure 2 is a sectional view to illustrate the initial movement required in partly ejecting a record from its compartment.

Figure 3 is a view similar to Figure 2, showing the position of parts when the record has been removed from its compartment.

Figure 4 is a detail sectional view through one side of the cabinet to illustrate the crank shaft which permits the removal of other records when the last compartment vacated is not refilled and showing the manner in which the crank shaft is journaled as well as the removable handle for the crank shaft.

Figure 5 is a fragmentary sectional perspective view illustrating the ejecting means arranged directly in the cabinet, whereby persons not acquainted with the construction will be prevented from operating said means.

Figure 6 is a longitudinal sectional view through the construction illustrated in Figure 5 but showing the ejecting means operated to partly project a disc from its compartment.

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

Figure 8 is a view substantially similar to Figure 2 but illustrating the improvement provided with an automatic record locking dog, here shown unlocked by the lug on the carriage for the operating lever which lever is swung fully into slot so that the record is raised and projected sufficiently to permit its removal from its compartment.

Figure 9 is a detail sectional view showing the locking dog in locked position to prevent the insertion of a record, the dotted

line position of the carriage and operating lever showing the free position of parts.

Figure 10 is a detail sectional view to illustrate the peg stops employed on the type of record cabinet not equipped with the automatic lock.

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

Figure 12 is an elevation of a double cabinet to illustrate the manner by which the ejecting means in certain of the compartments thereof are locked.

Figure 13 is an enlarged detail section on the line 13—13 of Figure 12.

Figure 14 is a section on the line 14—14 of Figure 13.

I have not deemed it necessary to illustrate a full view of the record cabinet, but it is to be understood that the same is of an ornamental nature. In this connection it may be well to state that while I will, in the following description, refer to the cabinet as a container for disc records for phonographs, my improvement is not to be thus restricted, as the same may be successfully employed for ejecting commodities, such as canned goods, etc. from compartments in a cabinet or the like or for locking the said commodities from removal from the said compartments.

Referring now to the drawings in detail, and to Figures 1 to 4 in particular, a cabinet is broadly indicated by the numeral 1. This cabinet at its face, is provided with equidistantly spaced vertically disposed strips 2 having both their upper and lower edges secured in suitable horizontal supports 3. Each strip 2 is connected to the rear wall of the cabinet by a strip 4, and the spaces between the strips 2 and 4 divide the cabinet into a desired number of compartments. The lower horizontal member or floor 3 for the compartments is extended inwardly a suitable distance from the front of the cabinet, so that the floor of the compartments is open for the major length thereof. There is secured on the rear of the cabinet a longitudinally disposed strip 5. This strip is disposed a slight but suitable distance below the floor 3, and, of course, at a suitable distance from the said floor 3. The outer and upper corner of the floor strip 5 is formed or provided with an outwardly directed substantially dove-tailed element in the nature of a tooth 6. The tooth 6 is of a length equaling that of the strip 5 and the said strip is of a length equaling that of the cabinet.

Fixedly secured in the ends 7 of the cabinet, below each of the lower floor strips 3 there is a rail 8. The rail is preferably in the nature of a metal rod which is round in cross section and arranged for travel on this rail there is a carriage. The carriage includes a substantially rectangular body portion 9 having on its under face a boss or

barrel 10 and on its upper face stub shafts 11 for grooved rollers 12. The rollers are arranged in series on the carriage, the said series receiving therebetween and sustaining the carriage on the rail 8. Passing through the boss or barrel 10, and fixedly secured thereto in any desired or preferred manner, there is the lever 13 of the improvement. The portion of the lever extending outwardly from the carriage is bent angularly and has its end provided with a handle 14. This end of the lever passes through a suitable opening below the floor strip 3 of the cabinet and has its outer portion normally disposed above a toothed plate 15 which is fixedly secured to the outer face below the compartment of the cabinet.

The inner end of the lever 13 terminates a slight distance away from the toothed edge of the floor strip 5, and pivotally secured to this end of the lever, as at 16, there is one corner of a block-like member which I will term an ejector. The ejector is broadly indicated by the numeral 17 and has its upper and outer faces or edges arranged at opposite angles with respect to its body, as indicated for distinction by the numerals 18 and 19, respectively. The angle surfaces at, and for a suitable distance from the juncture thereof, have arranged thereon a compressible strip 20. The angle surface 18 of the ejector 17 merges into a tooth 21 that has its opposite faces cut at inward angles. The lower corner of the ejector 17, opposite the tooth 21, is formed with a finger 22, and a light spring 23 is connected to the lower forward corner of the ejector and to the lever 13. The weight of the ejector will normally swing the lever to the position illustrated in Figure 1 of the drawings, so that the said lever may be moved longitudinally of the cabinet on the rail or track 8. The teeth 24 on the plate 15 are spaced so that one pair of teeth is arranged centrally with respect to each of the compartments in the cabinet. Thus it will be noted that the lever may be moved to bring its handle end 14 opposite any desired compartment. When brought to a position to partly eject a desired record from its compartment, a downward pressure is exerted on the handle 14 of the rail. This brings the angle face 18 of the ejector 17 against the lower edge of the disc 25 in the compartment which raises the record off of the floor strip 5 and causes the record to roll off of the surface 18 and over the surface 17 of the ejector outward of its compartment. The weight of the record when on the ejector will cause the latter to swing to an angle position with respect to the lever 13, to bring its toothed end upwardly and over the tooth 6 on the floor ledge strip 5 and the comparatively light spring 23 will swing the ejector in a second direction to bring its tooth 21 into

engagement with the said tooth 6, thus locking the ejector in the position illustrated in Figure 3 of the drawings.

The means for returning the ejector to normal position is simple, the same being merely in the nature of a crank shaft 26. The outer and short straight arms of the crank shaft are journaled in suitable bearing openings in the sides of the cabinet 1. On the portion of these arms 26, received in the cabinet, there is secured a finger 27 and to this finger there is connected a spring 28 which swings the crank shaft in one direction. Stop elements 29 limit this swinging of the crank shaft. The crank shaft is normally out of the path of engagement with the finger 22 on the ejector 17, but the crank shaft, through the medium of the removable handle 30, is designed to be swung against the tension of the spring to contact with the finger to swing the ejector to bring its tooth 21 out of engagement with the tooth 6 and thereby permit of the ejector and the lever associated therewith swinging to initial position, so that the record can be again inserted in its compartment. By providing the crank shaft with the removable operating handle 30, the said shaft cannot be operated except by authorized persons.

In Figures 5, 6 and 7, the construction is substantially similar to that previously described, except that a cleat 31, similar to the cleat 5, is arranged in the cabinet at the rear of the record compartments. The cleat, on its upper and outer corner is formed with a continuous tooth 32, similar to the tooth 6. The ejector and its lever are similar to that previously described, the said lever having fixed thereon a carriage having grooved rollers arranged to travel on a track or rail 33, similar to the track or rail 8. The handle end 34 of the lever is received through a central longitudinal opening 35 in the plate, and the inner member of the said plate is formed with projecting teeth 36, two of which being arranged opposite each of the compartments in the cabinet. The crank shaft 37 is more clearly illustrated in Figure 5 than in the remaining figures, while in Figure 7 the carriage construction is also better illustrated. The operation is precisely similar to that previously described, except, of course, the ejector 38 contacts with the rear peripheral edges of the records 39 and is locked by its tooth 40 engaging with the tooth 32 when the record is projected and is disengaged by the contact of the crank shaft 37 with the finger 41 of the said ejector 38.

In Figures 8 and 9, the ejector construction is similar to that previously described, the same being arranged below the record compartments in the same relative position as that shown in Figures 1 to 3. The car-

riage is of a slightly different construction, inasmuch as the barrel portion thereof through which the lever 42 passes, is formed with a central upstanding substantial cross sectionally V-shaped lug 43. Also the floor of the record holding compartments 45 is divided into three spaced sections. The outer floor section is designated by the numeral 44, the intermediate section by the numeral 44' and the inner floor section by the numeral 44''. The section 44' is in the nature of a comparatively narrow strip, while the inner floor section 44'' has its corner provided with the tooth 6' to be engaged by the tooth of the ejector 17' in a manner as previously described. The outer floor section 44 has its inner corner, on its lower face, reduced to provide what I will term a shoulder 46. The outer edge of the intermediate floor section 44' has its under face at its upper corner provided with a longitudinally extending beveled ledge 47. Pivoted below the ledge 47, as at 48, there is a block member which I will term a stop dog. This member is indicated by the numeral 49, and as disclosed by the drawings, has its upper edge or face cut at downward angles from its center to its ends, as indicated by the numerals 50 and 51, respectively. Below its pivot the dog 49 is formed with a depending finger 52, and at the terminal of the angle wall 51 the said dog is formed with a second outwardly projecting finger 53. Pivotaly secured to a depending bracket 54, supported from the outer section of the floor section 44, there is an angle latch member 55. A light spring 56 connects the inner arm of the latch member with the finger 52 and the lower or outer arm of the said latch member is beveled, as at 57. By this arrangement it will be apparent that the spring 56 swings the dog into contact with the beveled ledges 46 and 47 and likewise swings the latch beneath the finger 53 to lock the dog in the position shown in Figure 9 so that a record cannot be inserted in or withdrawn from any of the compartments. However, a downward swinging of the lever 42 will cause the outer face of the angle lug 43 to ride over the beveled or inclined end of the latch 55, which influences the spring 56 to swing the dog 49 to the position illustrated in Figure 8. When so arranged, it will be noted that the latch is swung out of contact with the finger 55 so that the dog 49 is unlocked and free to swing on its pivot to allow the withdrawn record to be again inserted in the compartment. But as the dogs on the remaining compartments are locked, as just described, records can neither be inserted or removed therefrom until the carriage has been moved below a selected record in a compartment and operated by the lever as

just described. The bell crank lever must be turned to return the ejector and its operating lever to normal position.

In the top portion of Figure 10, and in the detail sectional view in Figure 11, I have illustrated a means which is manually operated for preventing the removal of a disc record from its compartment except by those acquainted with the construction. Also, in these figures the means that hold the record in its proper compartment are employed for preventing the insertion in such compartment of a record not designed to be received therein. The top of each of the compartments is formed with a longitudinally extending dove-tail and channeled opening in which is received a dovetailed slide 61. The lower wall provided by the channel, in a line with the several compartments in the cabinet, has flared openings 58 therethrough and in each of these openings there is designed to be received the flared head 59 of a pin 60. The pins, of course, form obstructing elements for the disc records, and therefore the slide must be moved to permit of the withdrawal of a pin when a selected record is to be withdrawn from its compartment. In order to prevent the insertion of another record in the vacated compartment, the pin may be reinserted in the opening 58.

In Figures 12 to 14 I have illustrated, principally by diagrams, means for preventing the sliding of the lever carrying carriage, and the ejector associated therewith so that only a selected record in any one of a plurality of superimposed or adjacent compartments in a single or double cabinet 62 is to be removed therefrom. The levers and the ejectors carried thereby are of a construction similar to that described, and the carriages 63 move on the usual tracks and the ejectors are brought to unlocking or released position, as previously described. However, each of the carriages 63 has an upstanding lug 64 and the tracks 65 for the respective carriages are disposed below the respective compartments 66 in the cabinets. In the space for the rails 65 at the opposite ends of the superimposed compartments 66 in the respective cabinets there are pivotally connected dogs 67, and the dogs which are disposed in a line with each other are connected together by a rod 68. The dogs at one end of the upper compartments are indicated for distinction by the numerals 69, and these dogs being located in the spaced cabinets 62 and connected together by a rod 70. Supposing the carriage 63 to be in the position shown at the lower right-hand portion of Figure 12 of the drawings. This carriage, when moved longitudinally on its track will be brought to contact with the dog at one end of the said cabinet, the lug 64 on the said cabinet raising the dog, and through

the instrumentality of the rod 68 will raise the upper dog, which releases the carriage on the intermediate track from engagement by said upper dog. Thus the intermediate carriage may move on its track and operate to permit of its handle and ejector influencing any of the records in the intermediate cabinet, it being understood that the records on the lower compartments of the cabinets are to be actuated by the lower ejecting means. When the released intermediate carriage has been moved on its track, the lug 64 thereon will be brought beneath the second dog in the said cabinet, raising the upper dog to release the carriage from engagement thereby, and permitting the outer carriage to move until the same raises the dog 69 which exerts a pull on the rod 70 and releases the dog connected with the said track from engagement with the carriage in the upper left hand compartment of the cabinet on the left hand side of the said Figure 12. The operation of the dogs and carriages in the second cabinet is similar to that previously described, and from the foregoing it will be noted that the ejecting means in all of the several compartments may be held from operation when the carriages have been moved on their tracks to either end of the said cabinet.

It should have been stated that the latch and dog are continuously influenced by the spring regardless of the tension of the said spring. The spring pulling on 52 keeps the dog 49 in an upward position regardless of the latch, the latch merely keeping the dog from being depressed by a record unless the handle is brought under the latch and the arm of the handle pressed down. If this should occur at a vacant space a record can be inserted, if this occurs at a space occupied by a record the said record may be removed. Thus we can reinsert a record in the last vacated space without the use of the crank shaft 26, as the weight of the record pushes down on number 17 and disengages the teeth 6 and 21. The crank shaft 26 is to be used when other records are to be removed without replacing the last vacated record in the last vacated space.

It is believed that the simplicity and advantages of my improvement will be perfectly apparent to those skilled in the art to which such inventions relate, and while I have herein set forth a satisfactory embodiment of my improvement, it is to be understood that such changes therefrom as fall within the scope of my claims may be resorted to when desired.

Having described the invention, I claim:—

1. The combination with a cabinet for disc records or the like, divided into compartments, and each of said compartments wholly receiving a disc record of the like therein, a pivotally supported spring in-

fluenced dog in each compartment serving as an obstruction to prevent the withdrawal of any of the records, latching means for holding the dogs in record obstructing position, means, slidable longitudinally on the cabinet and swingable to engage with a selected record, and likewise engageable with the latching means of the holding dog in the said compartment, to permit of the withdrawal of such record, means for locking the latching means in such position and for sustaining the latching means out of engagement with the dog, whereby the withdrawn record may be reinserted in only its proper compartment, and releasing means for the locked ejecting means, permitting the latter to return to normal position and to release the latching means to allow its reengagement with the dog.

2. The combination with a cabinet for disc records, or the like, divided into a plurality of superimposed compartments, each designed to wholly receive a record or the like therein, ejector means slidable longitudinally of each of the compartments, and swingable to eject a single record from a selected compartment, and means, providing upper and lower pivotally connected pairs of dogs on the opposite ends of the cabinet engageable with the ejecting means, whereby one of such ejector means must be moved the full length of the cabinet to engage with the dog therein and to release the dog thereabove before the second and upper ejector means can be operated.

3. The combination with a cabinet divided into separate compartments, each providing a receptacle for an element, means for selectively projecting the elements from their compartments, comprising a swingably supported longitudinally movable lever, and ejector pivoted to the lever and designed to be turned on its pivot by the contacting engagement of the ejector with a selected element when the lever is swung to bring the ejector against such element, and whereby the ejector will impart an initial ejecting movement to the element, means engageable with the ejector for locking the same when so turned and means for releasing the ejector to permit of the ejector and lever returning to their initial position.

4. The combination with a cabinet divided into separate compartments, each providing a receptacle for an element, means for selectively projecting the elements from their compartments, comprising a swingably supported longitudinally movable lever, an ejector pivoted to the lever and designed to be swung thereon when brought into contact with a selected element by the swinging of the lever in one direction to impart an initial ejecting movement to the element, means engageable with the ejector for locking the same in the last mentioned position, means

for releasing the ejector from such engagement to permit of the same and the lever returning to initial position and means for rendering said releasing means inoperative.

5. The combination with a cabinet divided into separate compartments, each providing a receptacle for an element, of means for selectively projecting the elements from their compartments, comprising an ejector movable opposite an element and swingable to contact with the element to partly project the same through its compartment, and record obstructing means movable to non-obstructing position by the actuation of the ejecting means.

6. The combination with a cabinet divided into separate compartments, each providing a receptacle for a disc record or the like, of means for selectively projecting the records from their compartments, comprising a lever, a carriage fixed on the lever, a track for the carriage, a pivotally supported spring influenced ejector on the lever designed, when the lever is swung to one position, to contact with a disc record and by virtue of such contact to be turned on its pivot to impart an initial ejecting movement to the record, said spring influencing the ejector spring in a second direction when the ejector is relieved of the weight of the record, means engageable with the ejector for locking the same when the said ejector has been thus influenced by the spring, and means for releasing the ejector to permit the ejector and lever returning to initial position.

7. The combination with a cabinet divided into separate compartments, each providing a receptacle for a disc record or the like, of means for selectively projecting the records from their compartments, comprising a lever, a carriage fixed on the lever, a track for the carriage, a pivotally supported ejector on the lever, a spring influencing the ejector in one direction, said ejector designed upon the swinging of the lever to be brought against a disc record and by virtue of the contact therewith to be swung on its pivot to a position to partially eject the record, said spring influencing the ejector in an opposite direction when the said lever has been relieved of the contact of the record thereon, means engageable with and locking the ejector thereto when said ejector has been swung to its last mentioned position, record obstructing means, comprising a normally latched dog adapted to be released by the swinging of the lever in record ejecting direction, means permitting the release of the lever to return the same with the ejector to initial position and the like return of the dog.

8. The combination with a cabinet divided into separate compartments, each providing a receptacle for a disc record or the like,

means for selectively projecting the records from their compartments; said means including a rail, a carriage movable on the rail, a lever fixedly secured to the carriage, a rack having its teeth disposed in a line with the dividing walls of the compartments and between which the lever is swingable, a pivotally supported ejector on the lever, a tooth on the ejector, a tooth in each compartment, a depending finger on the ejector, a spring connection between the finger and the ejector whereby to influence the tooth of the lever to engage with the tooth in the compartment when a record has been ejected, and means engageable with the finger to bring the ejector out of engagement with the tooth to permit of the ejector and lever returning to initial position.

9. The combination with a cabinet divided into separate compartments, each providing a receptacle for a disc record or the like, means for selectively projecting the records from their compartments, said means in-

cluding a rail, a carriage movable on the rail, a lever fixedly secured to the carriage, a rack having its teeth disposed in a line with the dividing walls of the compartments and to which one end of the lever is swingable, a pivotally supported spring influenced toothed ejector on the lever, a tooth in each compartment, a depending finger on the ejector, a spring influenced crank shaft swingable for contacting engagement with the finger, a pivoted dog, a pivoted latch, a spring connecting the dog and latch, and said latch designed for contacting engagement with the carriage, when the latter is swung to record ejecting position to free the dog from latch engagement to permit the record riding thereover, means locking the ejector in its last mentioned position and means for releasing the ejector to permit all of the parts returning to initial positions.

In testimony whereof I affix my signature.

FERDINAND NIGRA.