July 21, 1931. H. J. CARLISLE 1,815,830

CONTAINER FOR STORING GRAMOPHONE RECORDS

Filed July 20, 1929 2 Sheets-Sheet 1

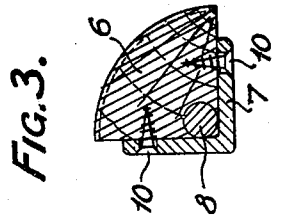


FIG. 3.

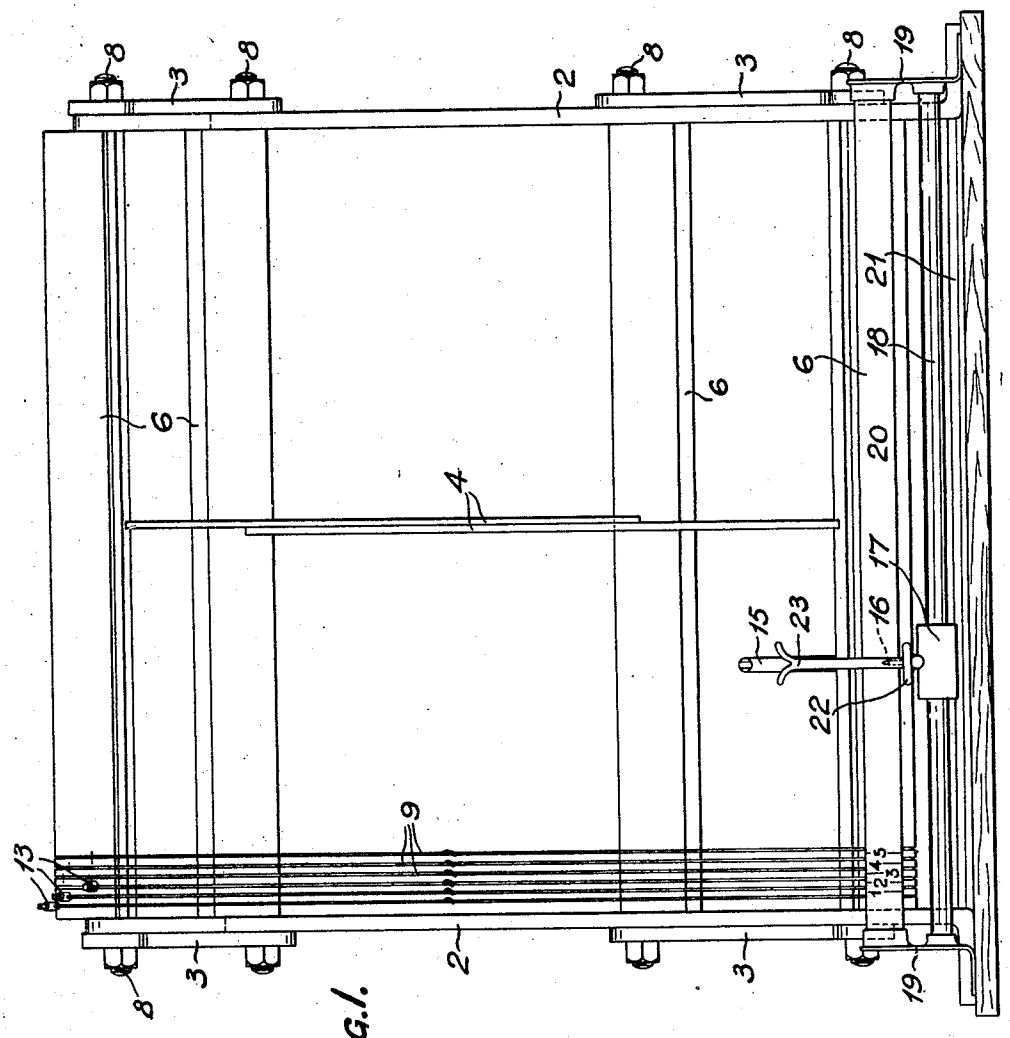


FIG. 1.

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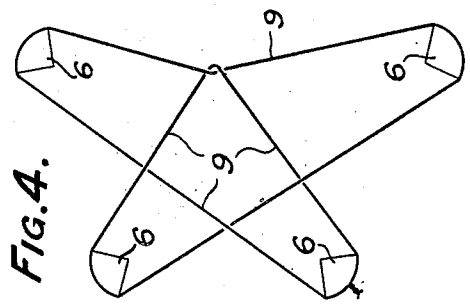


FIG. 4.

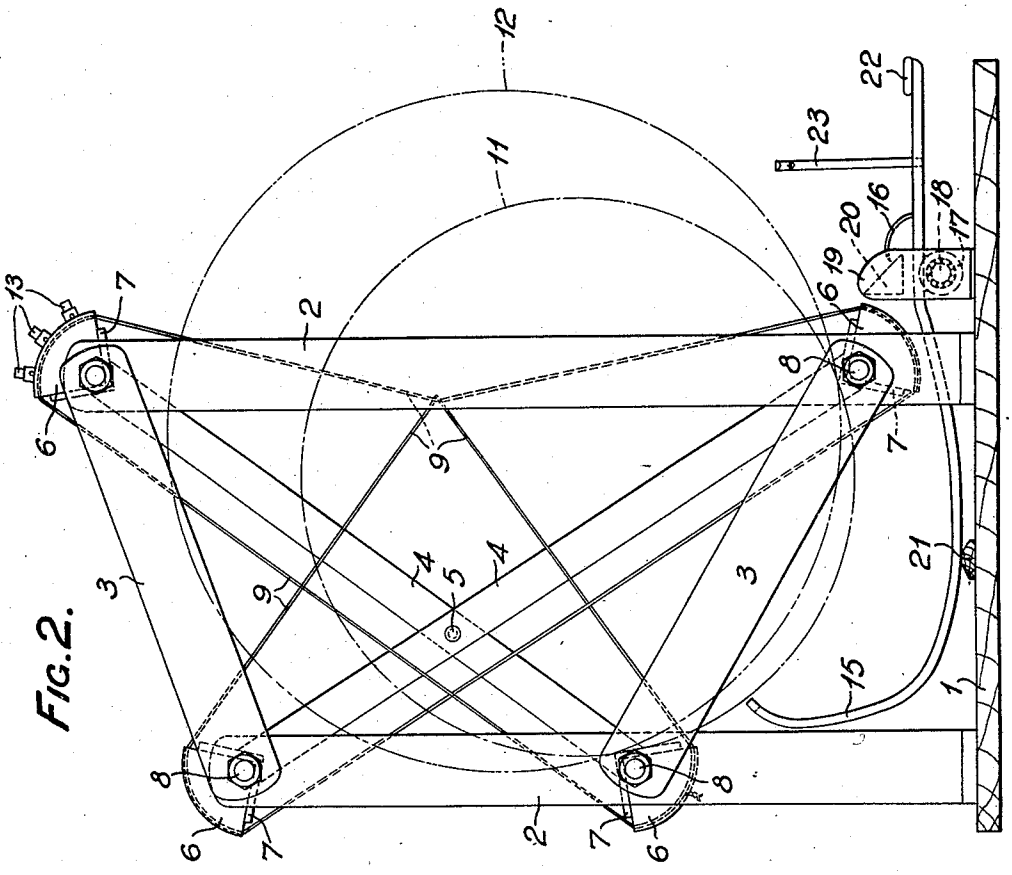


FIG. 2.

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Patented July 21, 1931 1,815,830

UNITED STATES PATENT OFFICE

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CONTAINER FOR STORING GRAMOPHONE RECORDS

Application filed July 20, 1929, Serial No. 379,766, and in Great Britain July 27, 1928.

This invention relates to containers in which to store gramophone records and which are of the kind divided into compartments with partitions formed by wires stretched between grooved spacing bars or rods fitted inside the containers which have also mechanism for extracting or ejecting the individual records, comprising separate finger-keys for each record or one push-bar slidable on guide rods to a position from which it can eject any record.

The present invention provides a multi-compartment container of improved construction having frame members, partition wires and record selecting and withdrawing means, whereof the former consists of uprights, side-pieces, cross-stays and spacing bars arranged to support, and resist the tension of the partition wires, each of which has means for individual tightening by one operation and is arranged in spans of which some are so interlaced as to mutually support and tighten each other directly whilst indirectly increasing the tension on the other spans, and the record selecting and withdrawing means consists of a key-rod mounted on a ball-bearing slidable on a shaft held in brackets below and in front of the lowest of the aforesaid spacing bars.

The means provided for tightening the partition wires and for selecting and withdrawing any record will be made clear as the description proceeds.

The invention is illustrated by the accompanying drawings wherein:—

Figure 1 is a front elevation of a container suitable for a large number of records.

Figure 2 is an end elevator of Figure 1.

Figure 3 is a cross-section of a spacing bar suitably mounted in an L-shaped bed.

Figure 4 is a diagram of the preferred arrangement of wire forming one side of a storage compartment.

In the drawings, the baseboard 1 is made of hardwood, and the four uprights 2 and side pieces 3 of the frame are metal castings or preferably stampings in order to reduce the overall length as the stampings need not be so thick as castings. The cross-stays 4 are two pieces of flat metal riveted together at 5 and fixed to the longitudinal spacing bars 6 intermediately between the uprights 2. The cross-stays serve to keep the spacing bars 6 at the correct angles to each other and also to prevent them from bending on their L-shaped beds 7 and tie-rods 8, under the stress of the partition wires 9.

The spacing bars 6 are of hardwood and are conveniently of quadrant shape in cross-section being cut from a cylinder after the circumferential grooves for the wires 9 have been cut thereon all along the length of the cylinder according to the number of records to be accommodated in the container. The apex of each quadrant bar 6 is then cut away to receive the tie-rod 8 and the bar is then secured in the bed 7 with screws 10 as shown clearly in Figure 3.

The tie-rods 8 are of round iron or steel, screw-threaded at both ends, which ends are passed through holes in the uprights 2 and side pieces 3, and screwed with nuts.

The spacing bar beds 7 are of angle iron or steel with holes drilled and countersunk for the screws 10 which hold the bars 6 in the beds 7. The two lower beds are preferably covered with felt or leather.

To form the partitions for supporting the records which are represented in Figure 2 by circles 11 and 12 for records of 10 inches and 12 inches diameter respectively, fine piano wires are used, by preference, in order to withstand the tension when tightening them without unduly increasing their diameter and consequently the overall length of the container.

The records rest with their peripheral edges on the two lower spacing bars which are at the front and back of the container whilst the circular surfaces of the records are

supported by the wires at each side of the compartments.

The partition wires 9 are tightened by means of wrest pins 13 driven into holes drilled at correct intervals in the top front spacing bar and numbered to correspond with the compartments or records. The heads of the pins 13 are holed or may be slotted and the sharp edges of the holes or slots are chamfered to prevent them from cutting the wires.

The preferred method of stretching the partition wires 9 is as follows:—Each wire 9 forming a partition is fixed at one end on the bottom rear bar 6 then the first span is passed diagonally over to the front top bar into groove and through the wrest pin 13 thereon, the second span is loosely taken down to the front bottom bar around the groove, the third span is then passed diagonally up to and around the groove in the top rear bar, whilst the fourth span is taken down to the bottom rear bar being interlaced on the way with the slack left in the second span and the running end is then joined by twisting or otherwise to the fixed end on the bottom rear bar.

By turning the wrest pin 13 with a key or with a pair of pliers (flats are provided on the head of each wrest pin for the purpose) the stretched wire receives the necessary tension and the second and fourth spans, i. e. those between the top and bottom front bars and between the top and bottom rear bars are so interlaced as to mutually support and tighten each other directly whilst indirectly increasing the tension on the remaining diagonal spans.

By this method the wires forming each partition are separate from the other wires and the replacement of a broken wire (if such should occur) is easily effected.

The means provided for selecting and withdrawing the records consists of a key-rod 15 with selecting pointer 16 mounted on a ball-bearing 17 slidable on a shaft 18 which is parallel with the spacing bars and is supported at the ends by brackets 19 from the base-board 1. These brackets 19 also support a plate 20 which is placed under the front edges of the records and is numbered to correspond with the numbers of the compartments or records.

The key-rod 15 is mounted at right angles to the shaft 18 and extends under the bottom front spacing bar and numbered plate 20. The key-rod is bent upwards so that its inner end which is slotted or forked to embrace the edge of a record, just clears the lower edge of a 10 inch record as shown clearly in Figure 2. This clearance is maintained by fixing a wood strip 21 of correct thickness to the baseboard 1 and parallel with the spacing bars.

The front end of the key-rod is fitted with a finger pad 22 and a catching fork 23.

To select and withdraw any record from the container, the key-rod is moved along the shaft 18 until the pointer 16 is opposite the number of the record required, the pad 22 is depressed causing the inner forked end to engage the lower edge of the record and push the latter forward so that it falls with its front edge into the catching fork 23 from which it is lifted by hand. When returning the record to the container its top is inserted in the correct compartment (by means of the top row of numbers) and then (with the catching fork pushed to one side) the record is pushed home by hand.

I claim:—

1. A plural compartment container for disk records comprising a pair of end frames, front and rear pairs of spacing bars connecting said end frames, and wire partitions mounted on said spacing bars, each partition consisting of a strand of wire extending from one of the front spacing bars over the other of the front spacing bars, then over one of the rear spacing bars, then across the span of wire extending between the front pair of spacing bars, then over the other rear spacing bar, and finally back to the first front spacing bar.

2. A plural compartment container for disk records comprising a pair of end frames, front and rear pairs of spacing bars connecting said end frames, wire partitions mounted on said spacing bars, each partition consisting of a strand of wire extending from one of the front spacing bars over the other of the front spacing bars, then over one of the rear spacing bars, then across the span of wire extending between the front pair of spacing bars, then over the other rear spacing bar, and finally back to the first front spacing bar, and means connected with each partition wire for placing same in tension.

3. A plural compartment container for disk records comprising a pair of end frames, front and rear pairs of spacing bars connecting said end frames, and wire partitions mounted on said spacing bars, each partition consisting of a strand of wire extending in spans between different of said spacing bars, one of said spans being looped through another of said spans.

4. A container for disk records comprising a base, a structure mounted on the base forming a plurality of record compartments, a rod mounted on said base, a record ejector slidably and rotatably mounted on said rod, and a record catching fork carried by said record ejector.

5. A container for disk records comprising a base, a structure mounted on the base forming a plurality of record compartments, a rod mounted on said base forwardly of said record compartments, and a lever pivotally mounted on said rod, said lever being inclusive of a record engaging arm underlying

the lower edges of records disposed in said compartments and a forwardly extending finger depressible arm adapted to be depressed to rotate said lever and thereby cause said first arm to effect ejection of a record from a compartment, said lever being slidable along said rod for use to effect ejection of any selected record from its compartment.

In testimony whereof I have affixed my signature hereto this 5th day of July 1929.

HARRY JOHN CARLISLE.