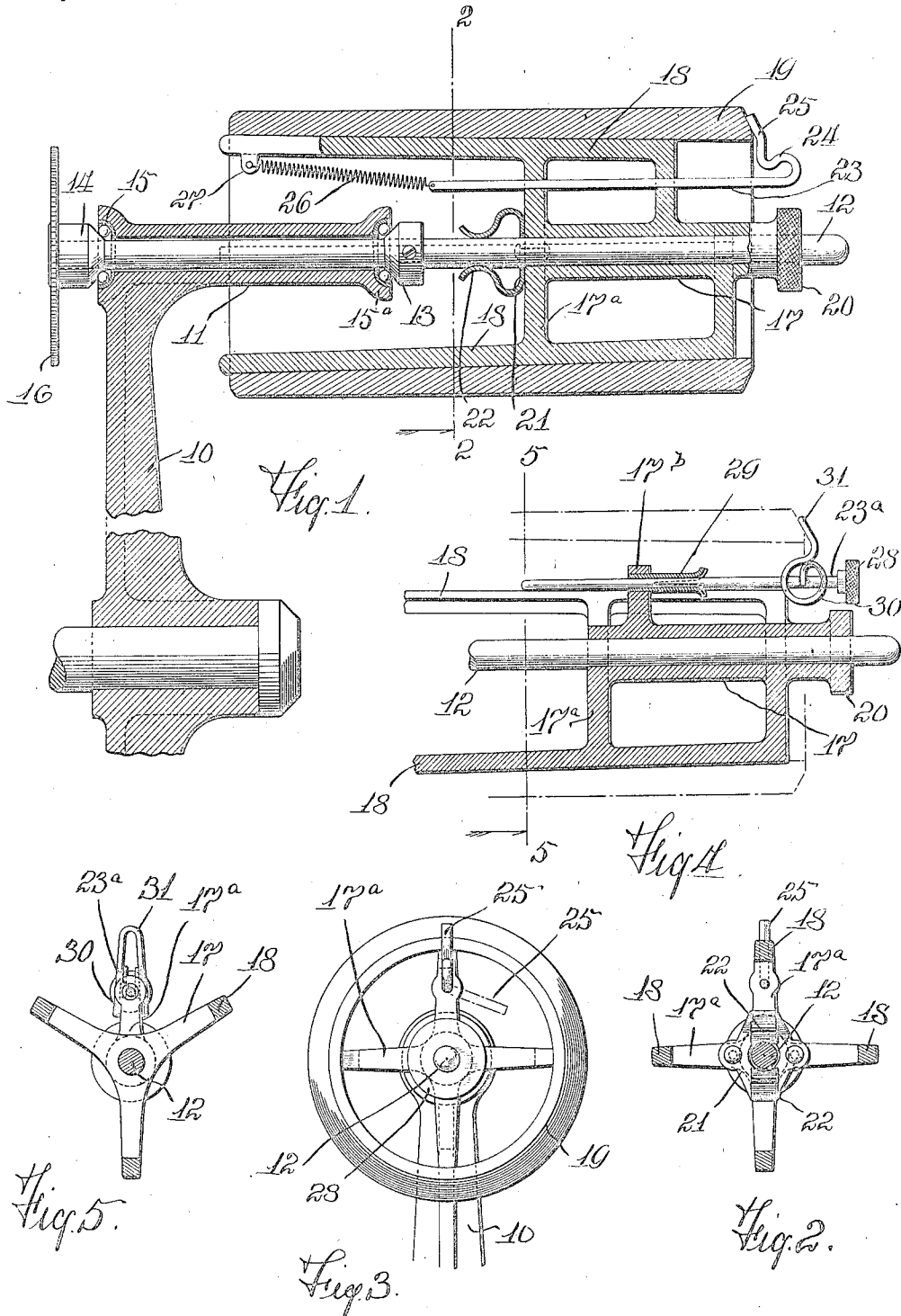


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RECORD HOLDER.
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RECORD-HOLDER.

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Specification of Letters Patent.

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To all whom it may concern:

Be it known that I, JULIUS ROEVER, of the city of New York, county of Kings, and State of New York, have invented a new and useful Improvement in Record-Holders, of which the following is a full, clear, and exact description.

My invention relates to improvement in record holders for phonograph records. These come in cylindrical form, and my invention relates especially to that class of holders which hold a series of records on a wheel or other rotary device so that the records can be brought into successive operation. In record holders of this kind it has been found difficult to get a structure which would permit a record to be easily slipped on or removed, and which would hold the record lightly yet securely and permit it to be easily adjusted so that the needle of the machine will strike exactly the right point. Most record holders have devices which while entering the record, also grip the ends of it, and these are objectionable because they do not allow sufficiently for the contraction and expansion, and they are awkward to handle and manage.

The object of my invention is to produce a simple form of record holder which is cheap, and to which a record can be easily applied, and further to produce a record holder which will hold the record in a manner to permit it to be adjusted with the utmost nicety, which will not interfere with the contraction and expansion of the record, and which will have no parts gripping the ends of the record.

Another object of my invention, and the main object in fact, is to produce a satisfactory record holder which will permit a record to be instantly slipped on endwise over the holder, without the necessity of adjusting or operating any mechanism. In my invention the only part that touches the end of the record is a light finger connected with a tension spring, and this touches merely one point on one end of the record.

Reference is to be had to the accompanying drawings forming a part of this invention, in which similar reference characters indicate corresponding parts in all the views.

Figure 1 is a longitudinal section of a record holder embodying my invention, showing a record thereon, and showing the holder attached to a machine. Fig. 2 is a

cross section on the line 2—2 of Fig. 1 through the record holder, the record being removed. Fig. 3 is an end view of the record holder with the record thereon. Fig. 4 is a broken longitudinal section of a slightly modified form of record holder, and Fig. 5 is a cross section on the line 5—5 of Fig. 4.

The means for carrying the record holder is immaterial and forms no part of the invention. In order that the invention may be understood, however, I have illustrated a wheel having spokes 10, each of which has a bearing sleeve 11 arranged parallel with the axis of the wheel, and in this is held a shaft or spindle 12 having cones 13 and 14 thereon which form parts of the ball bearings 15 and 15^a. At one end the shaft has also a friction wheel 16 to drive it, but any form of rotary support can be substituted for the wheel spokes 10, any desirable bearings can be used for carrying the shaft 12, and any preferred means can be employed for driving the shaft without in the least affecting the principle of my invention.

The record holder proper is carried on the shaft or spindle 12, and it comprises an elongated hub or sleeve 17 having radial spokes 17^a, and longitudinal ribs 18 at the ends of the spokes, these ribs being spaced apart so that they will fit snugly against the inner wall of a record 19, and the parts 17, 17^a and 18 thus form a spider which can be slightly smaller in cross section at one end than at the other, so that the record 19 which has a similar inner conformation, can be readily slipped on the spider and will be frictionally held by the ribs 18. Obviously there can be any desired number of these ribs 18 and corresponding spokes 17^a, and in Fig. 2 I have shown four such parts, and in Fig. 5, three. For convenience the spider of the record holder has at the outer end a handle 20 which can conveniently be in the form of a milled wheel as shown, and by this the spider can be moved longitudinally. The spider is easily adjustable lengthwise on the shaft 12, but it must also stay in the place where it is fixed, and I use a spring drag for this purpose, which is preferably in the form of a plate spring 21 attached to the inner end of the hub 17, and the shaft 12 extends through the spring. The spring has outwardly extending curved arms 22 which have a tendency to come together, and which thus grip fric-

tionally the shaft 12, but the ends of the spring arms 22 are curved outward so that the spider can be readily pushed on the shaft. Obviously the particular construction of the spring drag or friction device

can be changed without affecting the principle of the invention, although I claim the structure of it as shown, and prefer this arrangement.

It is sometimes necessary to provide a nicer adjustment of the record 19 on the holder than is afforded by simply pushing it upon the holder as already described, and to this end I use the following device. A light rod 23 extends longitudinally through the spokes 17^a of the spider, and at its outer end the rod is curved to give it a spring action as shown at 24, and it terminates in a light finger 25 which presses against the outer end of the cylinder or record 19. The inner end of the rod 23 connects by a light tension spring 26 with one of the ribs 18 of the record holding spider, and the connection can be conveniently made by having a lug 27 on the rib. It will be seen that after the record is placed on the record holder, it can be nicely adjusted thereon by moving it one way or the other against the tension of the spring 26, and this tension is so light that it will not of itself move the record when the latter is adjusted. When the record is to be removed, the finger 25 is turned over to the position shown by dotted lines in Fig. 3.

In Figs. 4 and 5 I have shown this adjusting device on the record holder in a manner which will permit of a rather nicer adjustment, and in which the tendency of the spring 26 to slightly shift the adjustment is overcome to a great extent. The principle is the same, however, and in it I illustrate a split sleeve 29 which is supported on a short spoke 17^b of the record holder, and the rod 23^a which corresponds to the rod 23 already described, is moved in and out in this split or friction sleeve. For convenience the rod is provided with a handle 28 which can be a milled wheel. Near the outer end of the rod 23^a is a coiled spring 30, preferably doubled, and this has a terminal finger 31 which engages the end of the record 19, and like the finger 25, the finger 31 can be turned over with the rod 23^a so as to clear the record 19 when the latter is to be pushed on and off.

From the foregoing description it will be seen that when the engaging finger of the adjusting device is simply turned to one side, the record 19 can be readily slipped on and off the record holder, that the record holder as a whole can be instantly and nicely adjusted by simply grasping the handle 20 and moving it in or out on its spindle 12, and that a still nicer adjustment can be effected by moving the record on the record holder. Further, that the spring fingers 25 or 31 serve to hold the record against any displacement, and that the ends of the record are left entirely clear except for the slight bearing of the spring finger referred to. It will also be noticed that the record holder can be applied to any type of multiple phonograph or even to a single record machine, if desired.

Having thus fully described my invention, I claim as new and desire to secure by Letters Patent:—

1. A record holder comprising a supporting shaft, a spider having a central sleeve to slide on the shaft, and longitudinal ribs rigidly connected with the sleeve and fitting the walls of a record, a friction device securing the sleeve slidably on the shaft, and an auxiliary yielding tension device arranged longitudinally of the spider and engaging one end of the record.

2. A record holder comprising a supporting shaft, a rigid spider having ribs to engage the wall of a record, and a sleeve to slide on the shaft, a friction spring secured to the spider and engaging the shaft, a sliding tension rod mounted on the spider and engaging one end of the record, and a spring having less tension than the first mentioned spring connecting the tension rod with the spider.

3. A record holder, comprising a supporting shaft, a rigid spider longitudinally movable thereon, and in frictional engagement therewith, said spider being adapted to engage the inner wall of a cylindrical record, and a spring-pressed tension rod arranged longitudinally in the spider and adapted to turn on its axis, said rod having a finger to engage the end of a record.

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