

(No Model.)

W. KAISLING.

RECORD CYLINDER FOR GRAPHOPHONES, &c.

No. 581,728.

Patented May 4, 1897.

Fig 1

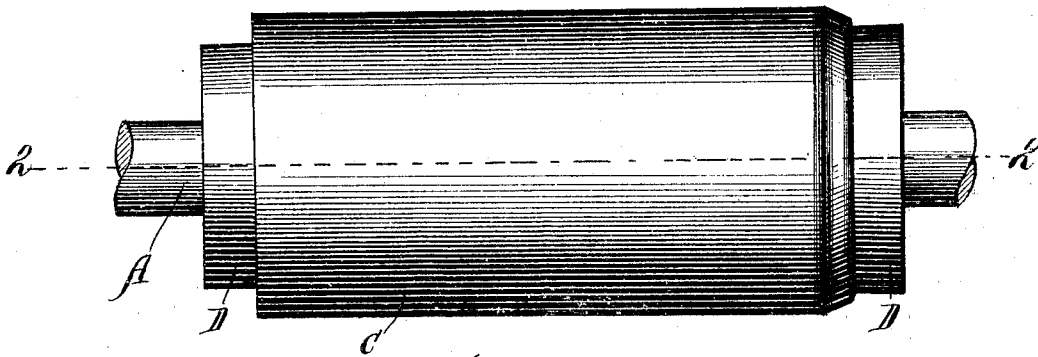


Fig 2

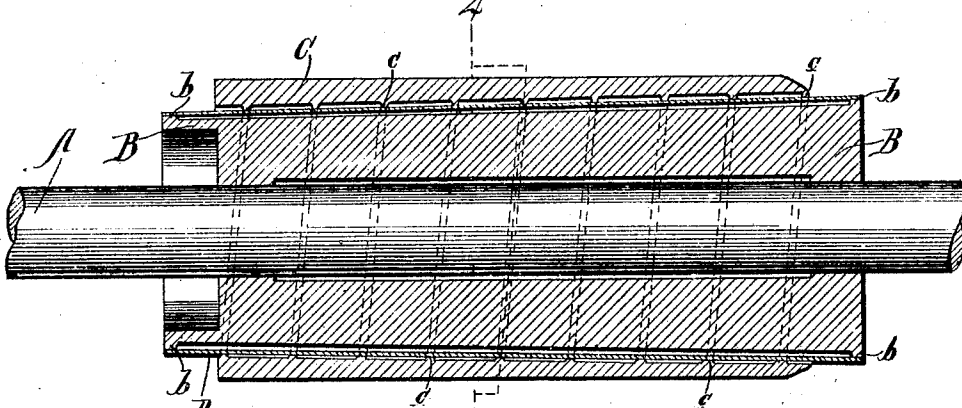


Fig 3

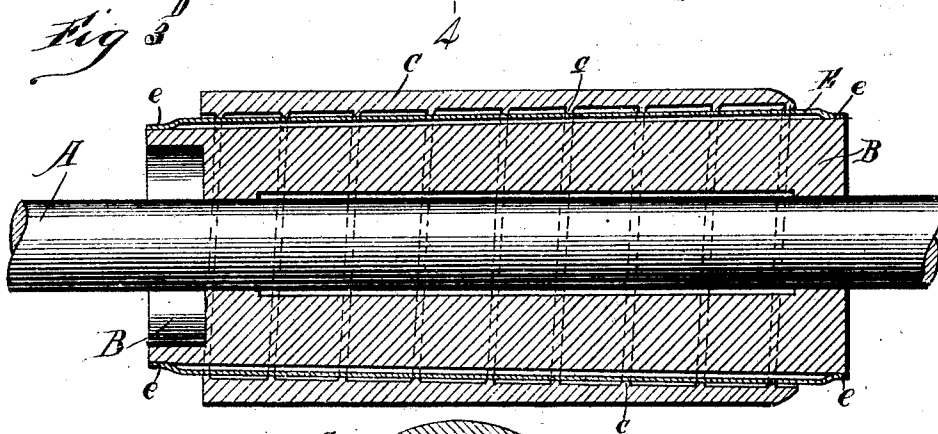
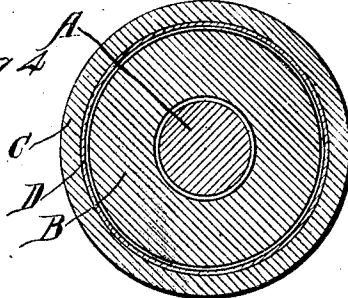


Fig 4



Witnesses

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RECORD-CYLINDER FOR GRAPHOPHONES, &c.

SPECIFICATION forming part of Letters Patent No. 581,728, dated May 4, 1897.

Application filed February 15, 1897. Serial No. 623,526. (No model.)

To all whom it may concern:

Be it known that I, WILLIAM KAISLING, a citizen of the United States, residing at Chicago, in the county of Cook and State of Illinois, have invented certain new and useful Improvements in Record-Cylinders for Graphophones and the Like; and I do declare the following to be a full, clear, and exact description of the invention, such as will enable others skilled in the art to which it appertains to make and use the same, reference being had to the accompanying drawings, and to the letters of reference marked thereon, which form a part of this specification.

In the drawings, Figure 1 is a side elevation of a complete cylinder. Fig. 2 is a central longitudinal section on the line 2 2 of Fig. 1. Fig. 3 is a central longitudinal section showing a modified form of construction, and Fig. 4 is a transverse section on the line 4 4 of Fig. 2.

The impression or record cylinder proper of a graphophone or similar device is ordinarily made of a material which is quite brittle, and hence easily fractured. It is customary to make these cylinders tubular and mount them on a slightly-tapered mandrel, the bore of the cylinder having a corresponding taper, so that the parts are held together by friction only. The mandrel is of a rigid material, usually wood or metal, and is subject to but slight variations in size as a result in changes of temperature. The material of which the record-cylinder is composed expands and contracts under the influence of changes of temperature to a much greater degree than that of the mandrel, and hence it becomes necessary to exercise great care that the cylinder is removed from the mandrel after using and before there has been any material variation in the temperature of the apartment in which the instrument is situated. There is great danger also of fracturing the cylinder in adjusting it to the mandrel, as the latter has been heretofore made, by applying more force than is necessary to bring the parts into proper relation, the taper being so slight that a powerful wedge action results.

The object of this invention is to provide a slightly yielding and compressible seat for

the record-cylinder, yet one which will hold it firmly in place while in use; and to this end the invention consists in constructing the mandrel with a slightly-compressible surface, as hereinafter described.

In the drawings I show at A a conventional shaft for carrying the complete cylinder, and upon which the mandrel B is mounted. In one form of construction, as shown in Fig. 2, the mandrel B is provided at each end with an annular rib *b* and is inclosed within a sleeve D, preferably of stiff paper. The internal diameters of the two ends of the sleeve correspond with the external diameter of the two ribs *bb*, so that the sleeve fits snugly upon these ribs, to which it may be secured by the use of glue. The sleeve D is in this form of construction of uniform taper, so that intermediate of the ribs *bb* it is spaced apart from the body of the mandrel.

The impression-cylinder C is of ordinary construction, having the usual internal spiral rib *c*, and is of less length than the mandrel and when applied thereto fits upon the sleeve D and is located intermediate of the ribs *bb*.

In the construction shown in Fig. 3 the mandrel B is of uniform taper throughout its entire length, having no ribs, and to it is applied a sleeve E, of greater diameter than the mandrel, but having its ends contracted, as shown at *ee*, so as to fit snugly upon it to provide for the secure attachment of the two parts by the use of glue or other cement. The sleeve E, intermediate of its contracted ends, is of uniform taper and receives the mandrel-cylinder C in exactly the same manner as does the sleeve D.

When the sleeve D or E is made of a stiff fiber paper and of a length exceeding but little the length of the impression-cylinder, it forms a firm support for the latter and yet yields sufficiently under the pressure due to the contraction of the latter to remove all danger of its fracture. In applying the cylinder to the mandrel it may be safely forced thereupon sufficiently to somewhat contract the sleeve, and in the event of its expansion by the warming of the apartment the sleeve will expand to its normal size, and hence does not lose its hold upon the cylinder.

It is of course entirely immaterial whether the mandrel, intermediate of its ends, is of uniform taper or not, and if desired its body portion may be made much smaller in order
5 to lessen its weight.

I claim as my invention—

1. The combination of a rigid mandrel, with a flexible sleeve superimposed upon the mandrel but in contact therewith at its ends only,
10 and an impression-cylinder fitting upon the sleeve and being located wholly between the lines of contact of the sleeve with the mandrel.

2. In a mandrel for record-cylinders for graphophones or the like, the combination
15 with a rigid core, of a flexible sleeve super-

imposed upon the core and in contact there with at its ends only.

3. In a mandrel for record-cylinders for graphophones and the like, the combination with a core having an annular rib at each
20 end, of a flexible sleeve inclosing the core and being mounted upon its ribs and spaced apart from its intermediate portions.

In testimony whereof I affix my signature in presence of two witnesses.

WILLIAM KAISLING.

Witnesses:

LOUIS K. GILLSON,
HESTER BAIRD.