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PATENTED AUG. 28, 1906.

L. B. DOMAN.  
MECHANICAL MUSICAL INSTRUMENT.

APPLICATION FILED JULY 28, 1904.

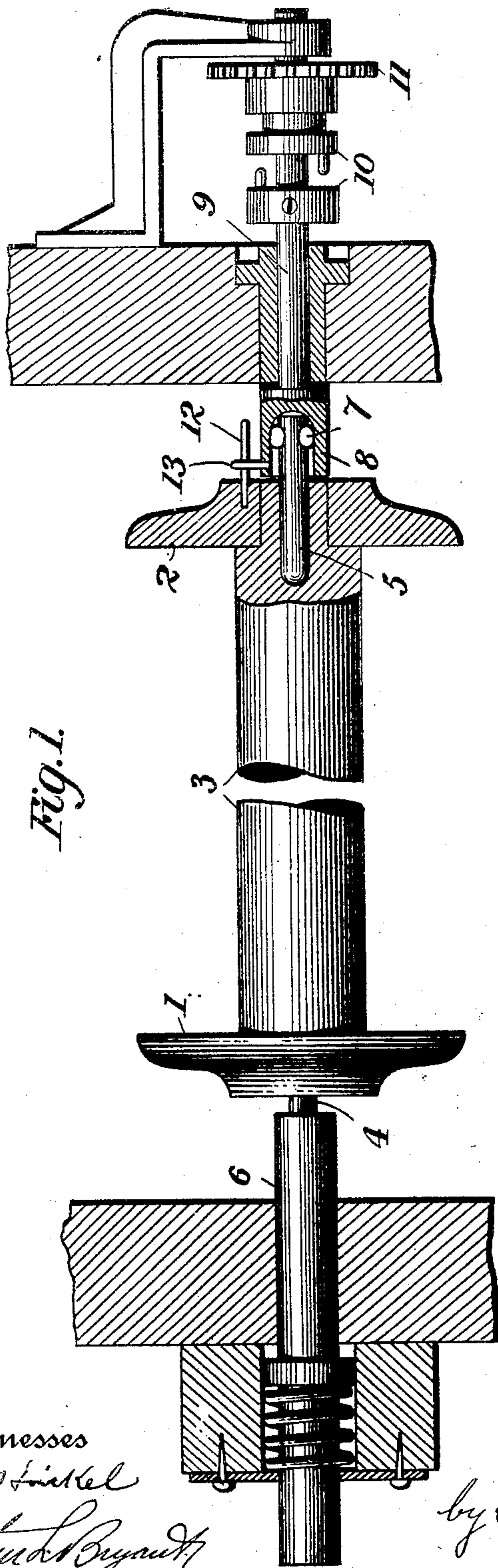


Fig. 1.

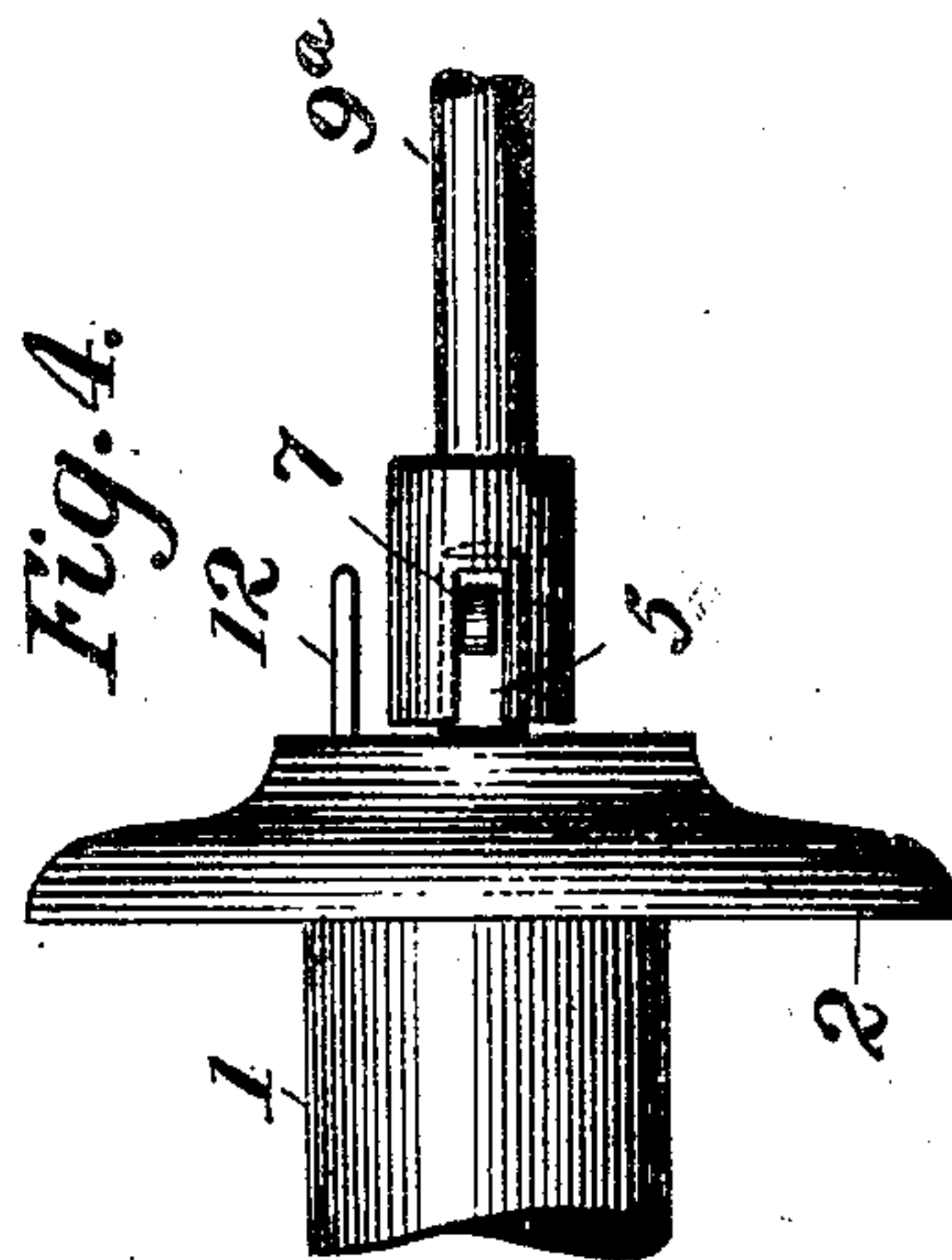


Fig. 4.

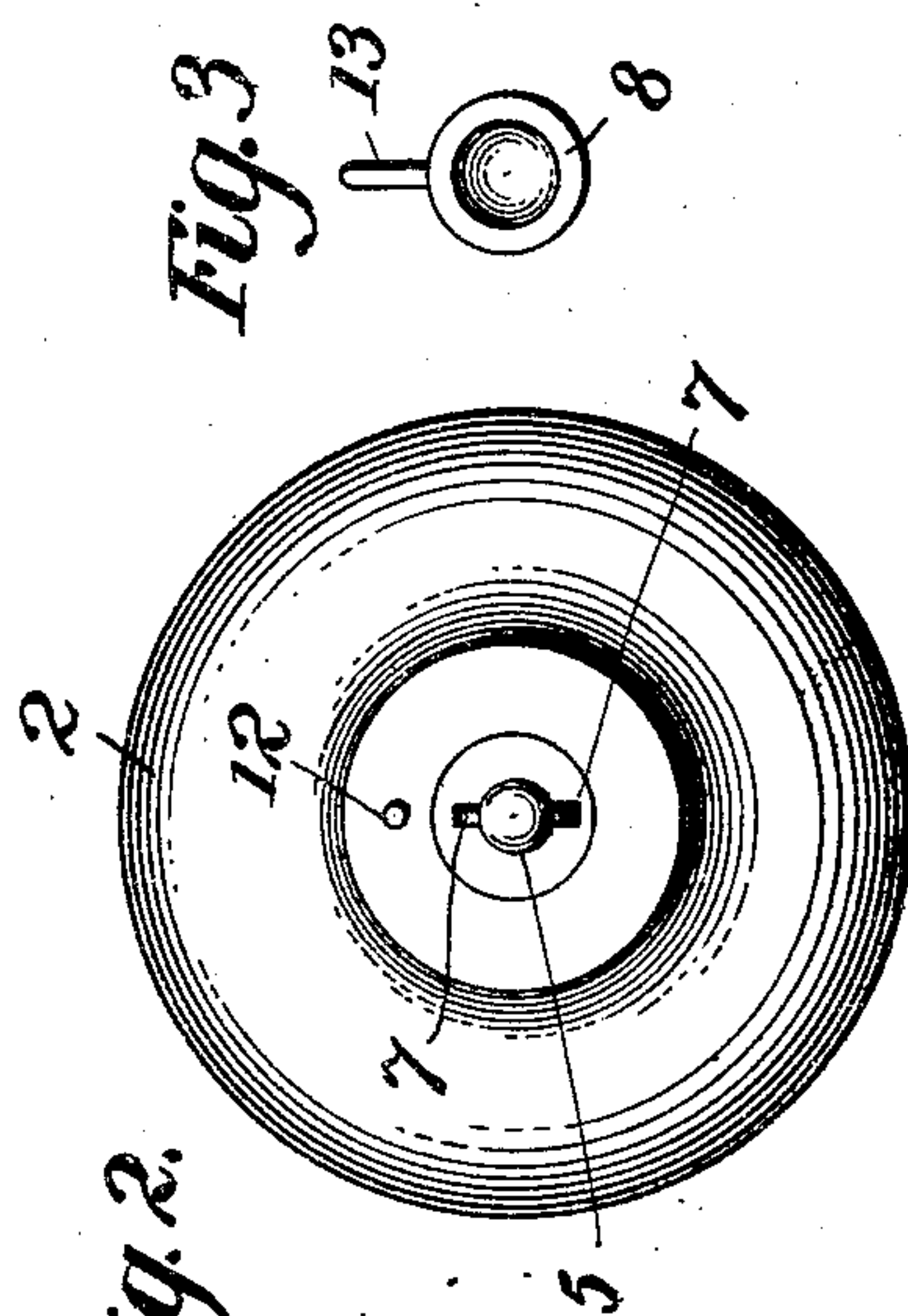


Fig. 2.

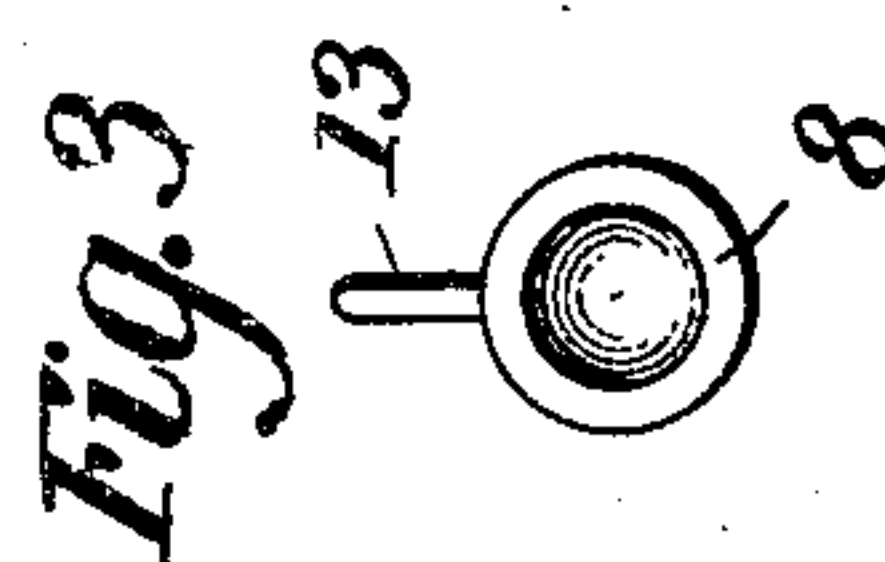


Fig. 3.

Witnesses  
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# UNITED STATES PATENT OFFICE.

LEWIS B. DOMAN, OF ELBRIDGE, NEW YORK, ASSIGNOR TO AMPHION PIANO PLAYER COMPANY, OF ELBRIDGE, NEW YORK, A CORPORATION OF NEW YORK.

## MECHANICAL MUSICAL INSTRUMENT.

No. 829,857.

Specification of Letters Patent.

Patented Aug. 28, 1906.

Application filed July 28, 1904. Serial No. 218,538.

*To all whom it may concern:*

Be it known that I, LEWIS B. DOMAN, a citizen of the United States, and a resident of Elbridge, Onondaga county, New York, have invented certain new and useful Improvements in Mechanical Musical Instruments, of which the following is a specification.

The present invention relates to improvements in mechanical musical instruments, and particularly to the construction of the spool or support on which the perforated music-sheets are wound after use and the means for rotating such spool.

As commonly constructed such spools are provided at one end with a spindle or pin provided at diametrically opposite points with projecting wings adapted to be received in suitable slots formed in the wall of a socketed coupling-head which is rotated by suitable means to wind the music-sheet on the spool connected therewith when desired. To connect the spool and such coupling-head, it is necessary that the parts be arranged in such a manner that the fins or wings on the spool-spindle are in alinement with the slots in the socket of the coupling-head, and as said head is often so arranged that the slots therein are not clearly or readily seen by the operator considerable time is frequently required to adjust the spool into such position that it may be engaged by said coupling.

One of the objects of this invention is to provide a construction by which the spindle of a music-spool may be inserted in the socket of the coupling on the rewinding-shaft without requiring the operator to first adjust its position relative to said socket with the care and precision necessary when using the constructions heretofore in use.

A further object of the invention is to provide a spool for a mechanical musical instrument which can be employed in connection with the common or ordinary rewinding means as well as with those especially designed for it.

The invention is illustrated in the accompanying drawings, referring to which,—

Figure 1 is a side view of a music-spool and its rewinding mechanism, constructed in accordance with the present invention, showing the same in playing position. Fig. 2 is an end elevation of the spool. Fig. 3 is an elevation of the end of the rewinding-shaft

adjacent the spool. Fig. 4 is a view illustrating the manner of using the spool with a rewinding mechanism of the ordinary form.

Referring to the drawings, it will be seen that the spool comprises two heads 1 2, connected by a central body 3 and provided with spindles 4 5. The means for supporting the spindle 4, as shown, is a spring-pressed bearing 6, into which said spindle extends, as is common, and the spindle 5 is shown as provided with the usual fins or wings 7, arranged at diametrically opposite points. The spindle 5 is adapted to extend into the socket of a coupling-head 8, arranged at the inner end of a shaft 9, which by means of a suitable clutch (conventionally illustrated at 10) may be connected with a power mechanism including a gear 11.

It will be seen that the bore or chamber of the socket in the coupling-head 8 is of such diameter that the spindle 5 and wings 7 can move freely therein and that the slots commonly formed in the walls of said coupling-head to receive said wings or fins are dispensed with.

In order that the spool may be positively driven from the shaft 9, the head 2 thereof is provided with a projection (shown as a pin 12) which extends parallel to the spindle 5 at one side thereof and into the path of a radially-projecting lug or pin 13 on the coupling-head 8. It will thus be seen that the spool and shaft 9 will rotate together, and when power is applied to said shaft the spool will be positively rotated to wind thereon the music-sheet.

Owing to the proportions of the parts the spindle 5 may be readily inserted in or removed from the coupling 8, no care being required to properly position the fins or wings 7, as is necessary where the ordinary connection between the spool and its rewinding-shaft is employed. However, the spool above described can be used with rewinding devices of the common form, if so desired. This is illustrated in Fig. 4, in which is shown a rewinding-shaft 9<sup>a</sup>, provided at its inner end with a socket-piece of common construction—that is, having slots such as indicated formed therein to receive the fins or wings 7 on the spindle 5 of the music-spool. In such a construction the pin or projection 12 on the spool lies at one side of the coupling, and con-



nection between said coupling and the spool is effected by the wings or fins 7 engaging slots in the coupling instead of a radial projecting lug 13 on the coupling engaging the projection 12, as in the form first described.

Having thus described the invention, what is claimed, and desired to be secured by Letters Patent, is—

The combination with a music-roll having flanges and spindles at its ends and having a pin projecting from one of its flanges adapted to cooperate with a driving member, of a mechanical musical instrument having roll-car-

rying journals provided with sockets for said spindles, and a driving member for the roll carried by one of said journals and adapted to cooperate with said pin on one of the roll-flanges, for the purpose set forth.

In testimony whereof I have signed my name to this specification in the presence of two subscribing witnesses:

LEWIS B. DOMAN.

Witnesses:

Mrs. THOMAS ELLIOTT,  
NETTIE A. BIBBENS.