

(No Model.)

F. SCHAUB.

NOTE PROJECTION FOR MUSICAL INSTRUMENTS.

No. 567,007.

Patented Sept. 1, 1896.

Fig: 1.

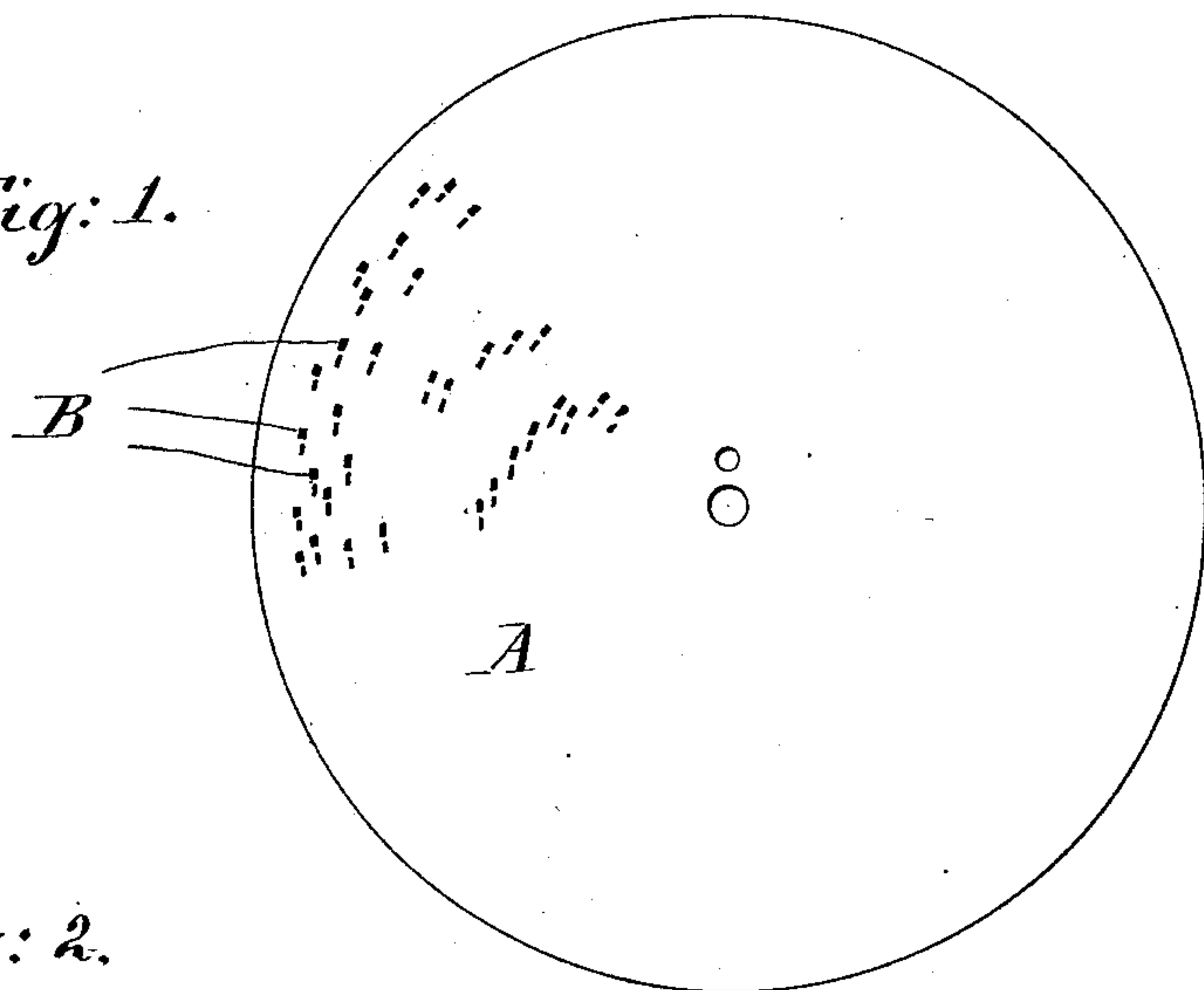


Fig: 2.

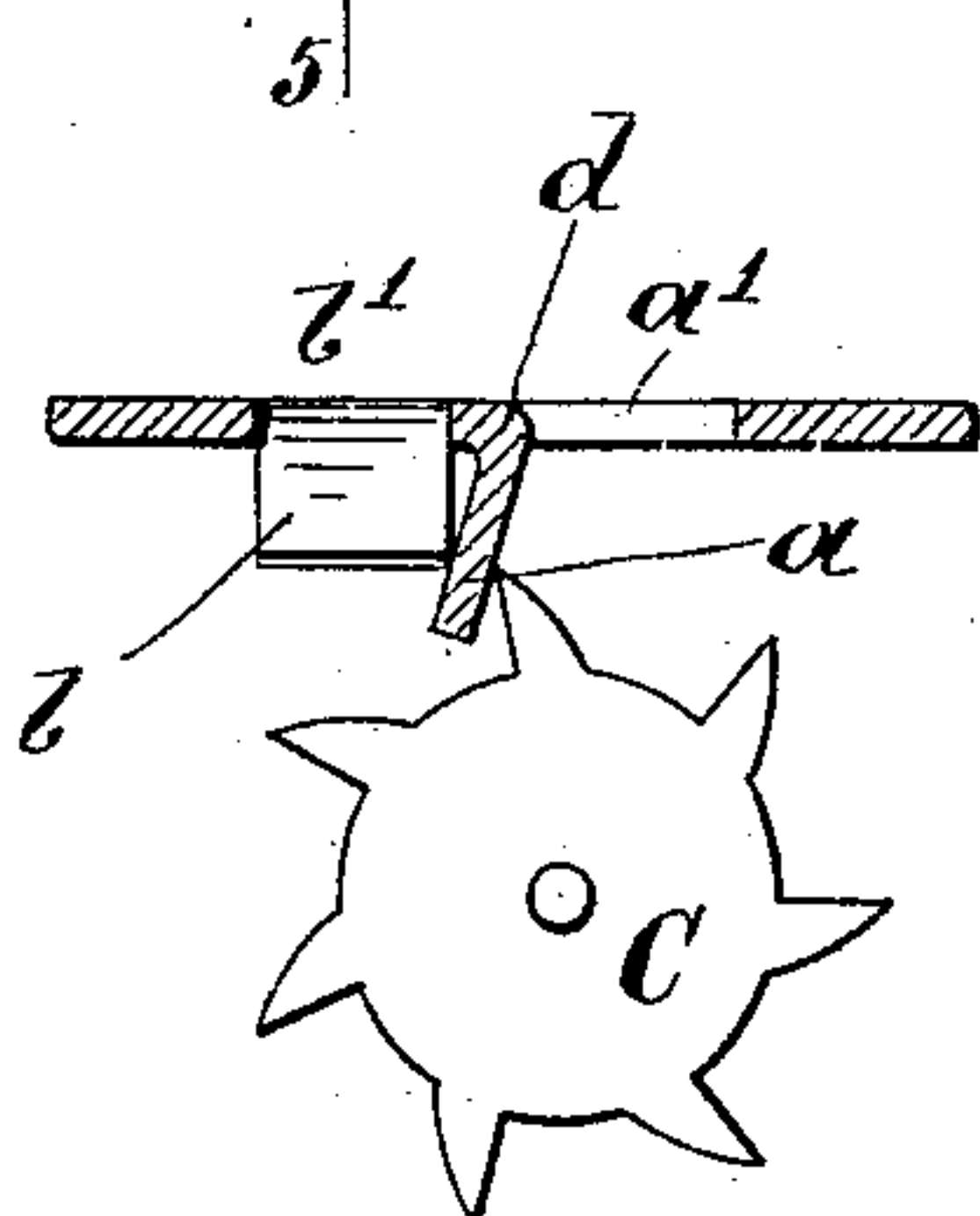
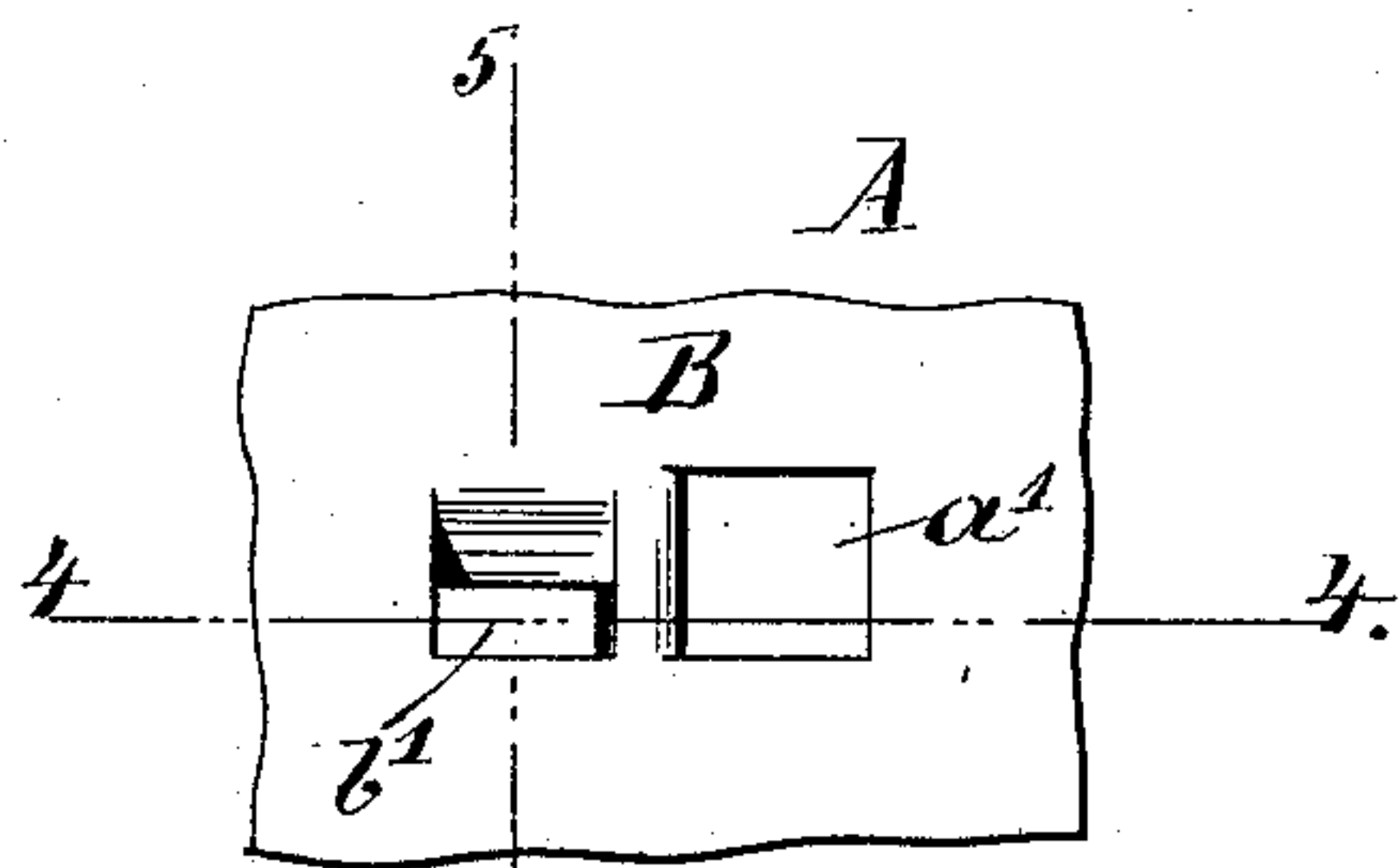


Fig: 4.

Fig: 3.

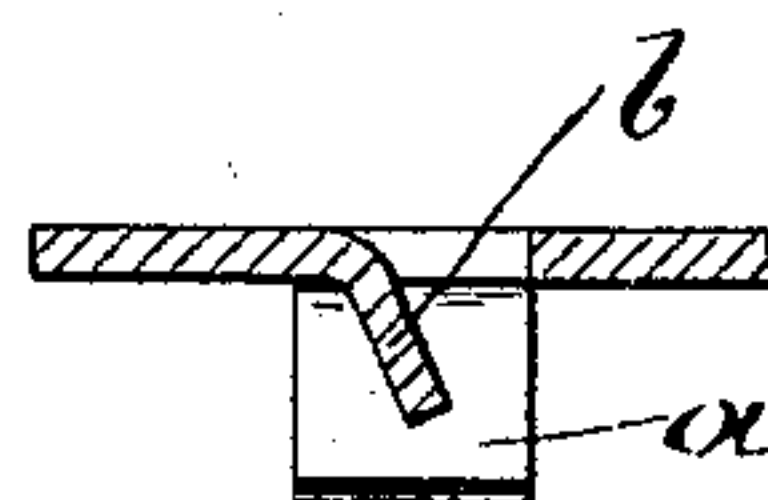
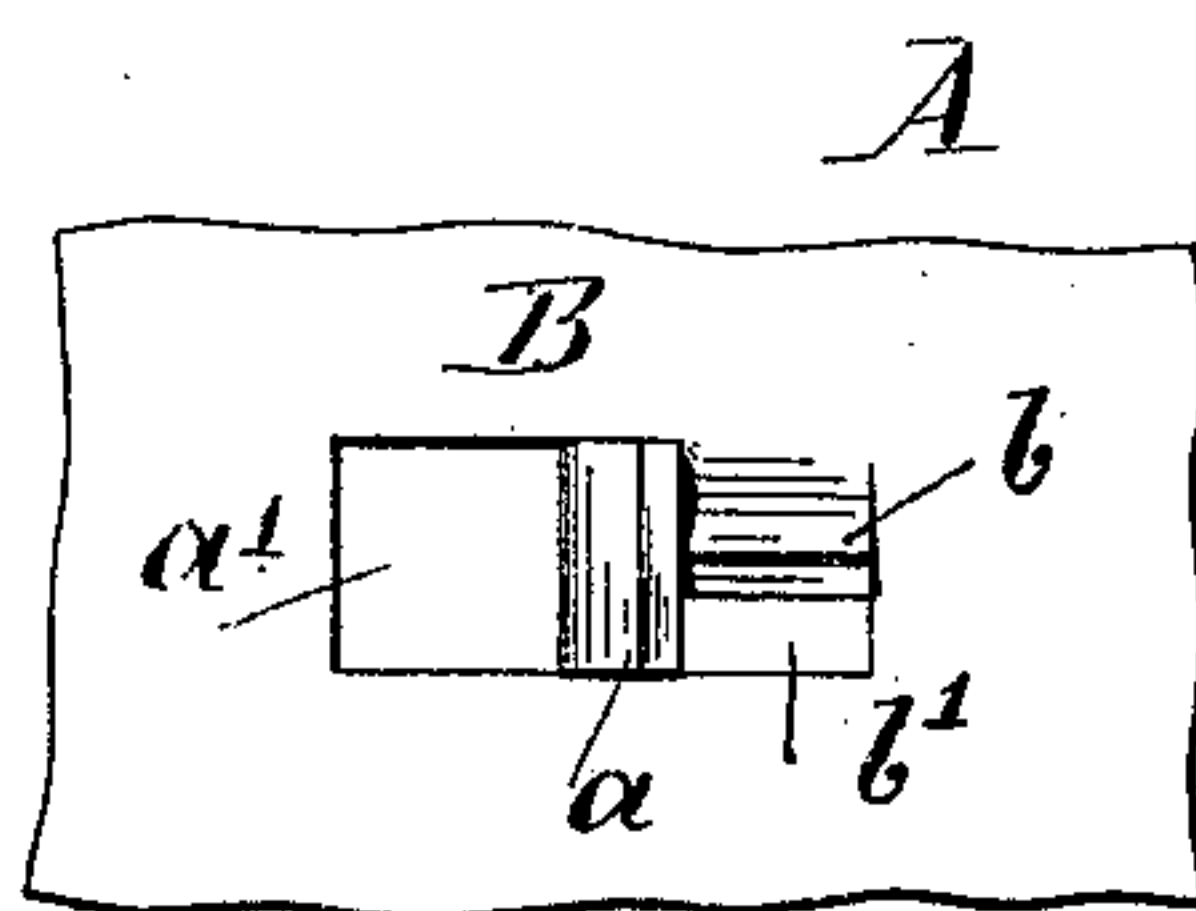


Fig: 5.

WITNESSES:

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# UNITED STATES PATENT OFFICE

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## NOTE PROJECTION FOR MUSICAL INSTRUMENTS.

SPECIFICATION forming part of Letters Patent No. 567,007, dated September 1, 1896.

Application filed January 31, 1896. Serial No. 577,602. (No model.)

*To all whom it may concern:*

Be it known that I, FERDINAND SCHAUB, a citizen of the United States, and a resident of Jersey City, in the county of Hudson and State of New Jersey, have invented certain new and useful Improvements in Note Projections for Musical Instruments, of which the following is a specification.

This invention relates to new and useful improvements in the note projections on disks, cylinders, cones, or sheets used in mechanical musical instruments, especially in that class in which sprocket-wheels are used, which are acted upon by said note projections and in turn act on the music-producing devices.

The object of my invention is to provide a new and improved note projection for such disks, cylinders, plates, &c., which is simple in construction, strong and durable, cannot be bent or distorted by the strain to which it is subjected by the mechanical instrument, and can be produced easily, rapidly, and cheaply by machinery, and which acts on the teeth of the sprocket-wheel in such a manner as to produce the best effects, and so as not to mar in the least the beauty, uniformity, or tone of the melody.

The invention consists in a note projection composed of two adjacent struck-up lugs, one behind the other and substantially at right angles to each other.

The invention also consists in the construction and arrangements of details as will be fully set forth hereinafter, and finally pointed out in the claims.

In the accompanying drawings, forming a part of this specification, like letters indicate like parts.

Figure 1 is a face view of a note-disk provided with my improved note projection. Fig. 2 is an enlarged detail plan view of one note projection as seen from the top surface of the disk or plate. Fig. 3 is a similar view as seen from the under side or working face of the disk. Fig. 4 is a vertical sectional view of the same taken in a plane parallel with the direction of movement of the projection when working in the musical instrument. Fig. 5 is a rear end view of the same.

The disk A or a cylinder, cone, plate, or

sheet is made of sheet metal, such as zinc, brass, steel, iron, plain or tinned, and the note projections B are struck up from the same by means of suitable dies, which are usually and, in fact, almost exclusively worked by machinery.

My improved note B is composed of two adjacent lugs *a* and *b*, which are struck from the sheet metal forming the body of the disk, one lug being substantially at right angles to the other, that is, the lug *a*, which acts directly on the teeth of a sprocket-wheel, or a lever used in place of the sprocket-wheel, is arranged transversely to the direction of movement which the projection has when working in a musical instrument and has the same position in regard to its direction of movement as have the note projections known, made, and used heretofore, while the second lug *b* of my improved note projection is substantially parallel with the direction of movement of the note projection and therefore substantially at right angles to the lug *a*, which rests against the front end of the lug *b*, so that the latter acts as a strut or brace for said lug *a*.

The two lugs are struck up together, leaving a rib *d*, of sheet metal, between the two holes *a'* and *b'*, formed by punching up said lugs, with one edge of which rib the base of the lug *a* is made integral, while the other lug, *b*, is entirely disconnected from said rib, so that the lug *a* can rest against the front edge of the lug *b*. Said lug *a* is inclined in a direction the reverse of the direction of movement of the note projection when working in the instrument, so that the bending strain to which the lug *a* is subjected when acting on the teeth of the sprocket-wheel C, Fig. 4, is taken up by the lug *b*. The lug *b* is slightly inclined transversely to its length, so that its upper edge is about at the center between the side edges of the lug *a*. The upper edge of the lug *b* is slightly below the top edge of the lug *a*.

The smooth front face of the lug *a* acts on the end of the sprocket-wheel tooth at a point slightly below the top of the lug *a*, thus insuring an even and steady action of the lug on said tooth. As the brace-lug *b* is made integral throughout its entire length at its



base with the body of the plate or disk, it has great resisting power and can most effectually prevent the bending of the lug *a*, which thus at all times retains the required height  
5 of projection from the working face of the disk or plate. In placing disks upon each other or handling them carelessly the brace-lug *b* also prevents bending of the lug *a*.

Having thus described my invention, what  
10 I claim as new, and desire to secure by Letters Patent, is—

1. A note projection for disks, cylinders or plates for musical instruments composed of two independent adjacent struck-up lugs at  
15 substantially right angles to each other, substantially as herein shown and described.

2. A note projection for disks, cylinders or plates for musical instruments, composed of two independent struck-up lugs one substan-  
20 tially at right angles to the direction of movement of the projection when working in the

instrument, the second lug being substantially parallel with said direction of movement and slightly inclined laterally, substantially as herein shown and described. 25

3. A note projection for disks, cylinders, or plates for musical instruments, composed of two adjacent struck-up lugs, one behind the other and substantially at right angles to each other, the top edge of the rear lug being at  
30 or near the center of the front lug between the side edges substantially as herein shown and described.

In testimony that I claim the foregoing as my invention I have signed my name, in pres-  
35 ence of two witnesses, this 30th day of December, 1895.

FERDINAND SCHIAUB.

Witnesses:

OTTO J. MEYER,  
GEORGE W. GRAHAM.