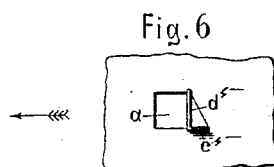
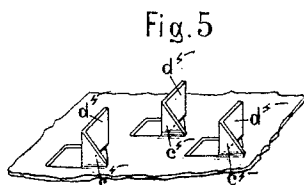
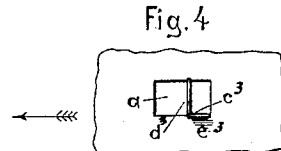
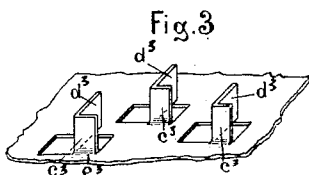
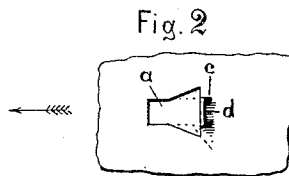
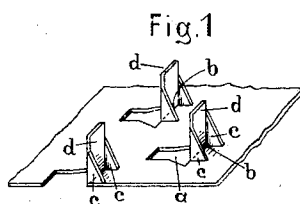


(No Model.)

A. RICHTER.
TUNE DISK.

No. 533,495.

Patented Feb. 5, 1895.



Witnesses:
L. M. Hacheklager,
Charles E. Smith.

Inventor
Adolf Richter,
By *Brisson & Stuart*
his Attorneys.

UNITED STATES PATENT OFFICE.

ADOLF RICHTER, OF RUDOLSTADT, GERMANY.

TUNE-DISK.

SPECIFICATION forming part of Letters Patent No. 533,495, dated February 5, 1895.

Application filed September 18, 1894. Serial No. 523,330. (No model.)

To all whom it may concern:

Be it known that I, ADOLF RICHTER, a subject of the King of Bavaria, residing at Rudolstadt, Germany, have invented certain new and useful Improvements in Tune-Disks, of which the following is a specification.

The present invention relates to metallic note disks having raised notes formed thereon, and consists in forming the note in such manner that the stays for supporting the said raised or elevated note shall not hinder the free and proper operation of the contact wheel, as is at present the case.

The note disks, bands or sheets, at present in use have the disadvantage that when playing by means of the same, the contact wheel gets caught in the stays with which these notes are provided, causing an unpleasant noise and frequently stopping the progress of the said disk, band or sheet. These disadvantages are entirely obviated by means of the present invention, according to which the notes are so formed that a flat metallic surface only is presented to the contact wheel. The metallic tongues are formed to stand vertically on the sheet, band or disk, being supported at the rear side, *i. e.*, the rear side with respect to their direction of longitudinal or rotary motion, by lateral stays, formed integral with the said tongue, which together with the same are stamped out of the said sheet, disk or band. These stays may be curved, straight or of any desired formation; and in order to make the present invention more easily intelligible reference is had to the accompanying drawings in which similar letters denote similar parts throughout the several views.

Figure 1 is a perspective elevation of a part of a note sheet made according to the present invention; Fig. 2, a detail plan view of the raised portion or note; Fig. 3, a perspective view of a modified form of note, and Fig. 4 a detail plan view of the raised note. Figs. 5 and 6 are perspective and detail plan views respectively of a further modification of my invention.

In Figs. 1 and 2 the note tongue *d* is shown as stamped or cut out of the sheet together with the two lateral stays *c c* (which form extensions of the sides of the note when bent into shape) leaving a perforation in the sheet

of the form shown at *a*. The body of the tongue *d* is then bent up so as to stand vertically on the sheet, while the lateral triangular stays *c c* are bent round to the rear face of the said tongue *d* supporting the same by resting with their base upon the sheet, the whole tongue being in one with the sheet at *b*. These lateral stays will be found to support the tongue *d* effectually against bending, while as the tongue presents a flat front and rear surface to the contact wheel, no hindrance is offered to the action of the same, and none of the unpleasant circumstances previously mentioned can occur.

In the modification shown in Figs. 3 and 4, the form of the tongue *d*³ is altered somewhat and the stay *c*³ is as before an extension of the side of the note and is made rectangular, being integral with the sheet at *e*³ and the tongue *d*³ being bent round to extend over the orifice formed in the said sheet in a direction at right angles to the direction of motion of the contact wheel or pinion. As the latter touches the said tongue at about the middle, it will not have force enough to bend the same back, the leverage being too short and the effect of the stay *c*³ too powerful. In Figs. 5 and 6 a similar arrangement is shown but the stay *c*⁵ is triangular instead of rectangular.

In both the two latter forms of the invention the tongues *d*³ *d*⁵ should be sufficiently long to extend across the perforation made in the sheet and rest upon the latter at the farther side of the said perforation.

The arrangement shown in Fig. 5 enables the notes to be placed closer together.

I claim as my invention—

1. In a metallic note band, disk or sheet, the combination of a vertical tongue as *d* stamped out of the said sheet band or disk, and having lateral stays integral therewith and forming extensions of the sides thereof in the manner and for the purpose substantially as described.

2. In a note sheet, band or disk, the combination of a vertical tongue stamped or cut out of the said sheet, band or disk and integral therewith, and having a lateral stay integral with the side thereof, substantially as described.

3. In a metallic note band, sheet or disk, the combination of a vertical tongue as *d*,

stamped or cut out of said disk band or sheet,
and lateral stays as *c c* integral with the sides
of said vertical tongue and supporting the
same at the rear with regard to the direction
5 of rotary or longitudinal motion of the said
disk band or sheet, substantially as described.

4. A note band, disk or sheet having tongues
or teeth struck up therefrom and substan-
tially perpendicular thereto, said teeth hav-
10 ing stays formed integral with the sides be-
tween the base and the upper working edges
thereof, which stays are adapted to reach con-
tact with the body of the band, disk or sheet,
substantially as described.

5. A note band, disk or sheet, carrying 15
teeth or projections that project from its face
and are integral therewith, said teeth carry-
ing braces which project from the sides of
said teeth and reach contact with the disk,
band or sheet, substantially as described. 20

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

ADOLF RICHTER.

Witnesses:

CHAS. H. DAY,
W. HAUPT.