N° 14,450 A.D. 1896

Date of Application, 30th June, 1896—Accepted, 22nd Aug., 1896

COMPLETE SPECIFICATION.

Improvements in or connected with the Damping Devices of Mechanical Musical Instruments.

I, FRIEDRICH ADOLF RICHTER of Rudolstadt, in the Empire of Germany, Manufacturer, do hereby declare the nature of this invention and in what manner the same is to be performed to be particularly described and ascertained in and by the following statement :—

Heretofore the damping devices or dampers for the reeds of musical instruments have generally been operated by star wheels that serve to strike or vibrate the reeds, but according to the present invention, the damping apparatus is composed of a separate lever which is depressed or operated at the proper time by the teeth of the music sheet, and thereby effects the damping of the reed.

In order that my said invention may be readily understood I will now describe same with reference to Figs. 1 to 5 of the accompanying drawings, Figs. 1 to 3 illustrating damping levers, while Figs. 4 and 5 show same applied.

The damping lever (having forms such as shown at Figs. 1—3), is mounted on a pivot pin *h* (Figs. 1—5) at the side of the striking wheel *k*, in such a manner that the arm *b c* of the said damping lever takes into the notch in the wheel holder *a*, Figs. 4—5 (such notch serving also for the striking wheel). This damping lever is arranged by the side of the small star wheel *k*, and extends over the pin *i* on which the striking wheels are mounted.

If a reed that is struck from below (1, Figs. 4 and 5) is to be damped, then the damping lever is made in the form shown in Fig. 1. The damping spring *e* is attached to the arm *c* of the damping lever and the extension *f* of the spring serves at the same time, as a pressure spring.

If the reed is struck from above, (*m*, Figs. 4 and 5), the damping lever is made in the form shown in Fig. 2, and in this case the damping spring *g* is mounted on the arm *d* of the damping lever, and the arm *c* is only provided with the pressure spring *f* that bears against the wheel holder *a*. If two reeds situated opposite to each other, are to be damped at the same time, the damping springs *e* and *g* are arranged as shown in Fig. 3.

The damping of the reeds is effected as follows :—The pressure of the spring *f* bearing against the wheel holder *a*, acts to keep the lever always so high that its point *b* is on the same level as the teeth of the striking wheel *k* (Fig. 4). On a tooth *n* of the music sheet *o* coming along, the said tooth, before it comes in contact with the tooth of the striking wheel *k*—presses upon the point *b* of the damping lever. The latter is thereby moved into the position shown in Fig. 5, and it presses the damping springs *e* and *g* against the forward edge of the reeds until the note or musical character *n* has slipped or slidden off from the point *b*, and the lever has again assumed the position shewn in Fig. 4.

As soon as the note or projection *n* representing the note has left the point *b* the said note *n* engages with the tooth of the star wheel *k*, causes it to rotate forwards to the extent of one tooth and thereby plucks the reed. Thus the damping takes place immediately before the reed is struck, and independently of the striking wheel.

Having now particularly described and ascertained the nature of my said invention and in what manner the same is to be performed I declare that what I claim is :—

1. The damping lever provided with one or more damping springs, said lever

[*Price* 8*d*.]

being situated adjacent to or by the side of the striking wheel, and being operated directly by the teeth of the music sheet, independently of the striking wheel.

2. The general arrangement and combination of parts composing my improvements in apparatus for damping the reeds of mechanical musical instruments substantially as and for the purposes described and illustrated with reference to the accompanying drawings.

Dated this 30th day of June 1896.

BREWER & SON,
London and Leeds, Agents for the Applicant.

London : Printed for Her Majesty's Stationery Office, by Darling & Son, Ltd.—1896

Fig. 1

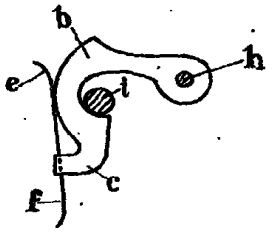


Fig. 2

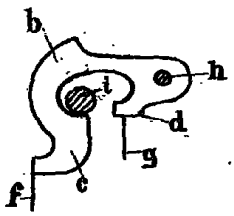


Fig. 3

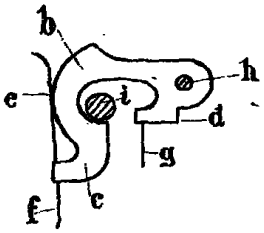


Fig. 4

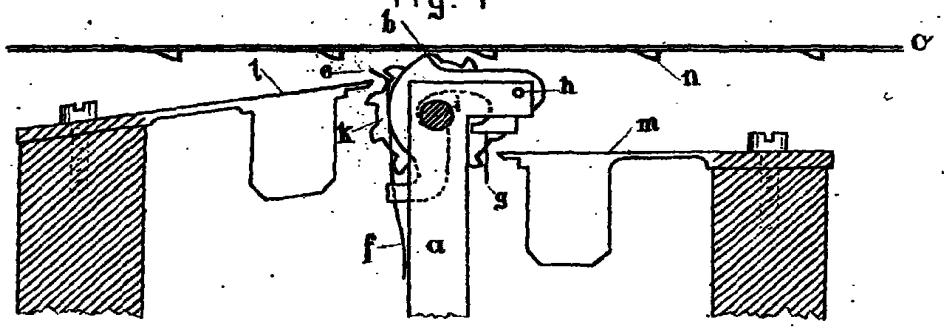
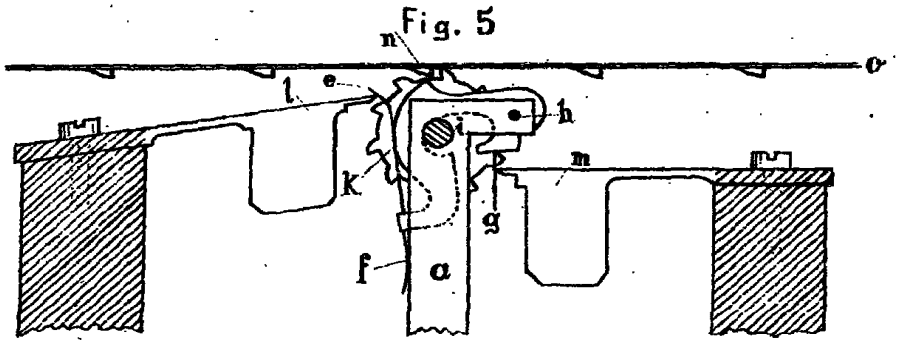


Fig. 5



[This Drawing is a reproduction of the Original on a reduced scale.]

LONDON: Printed by DARLING and SON Ltd.
for Her Majesty's Stationery Office. 1896.

Malby & Sons, Photo-Litho.