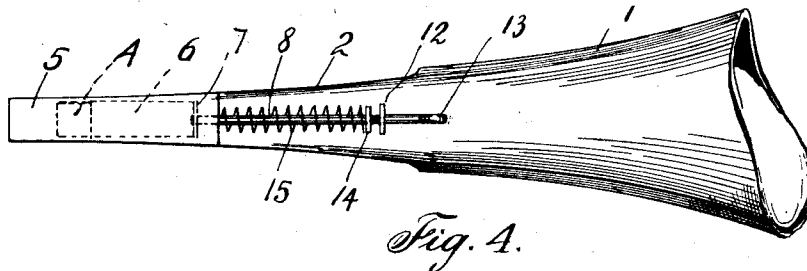
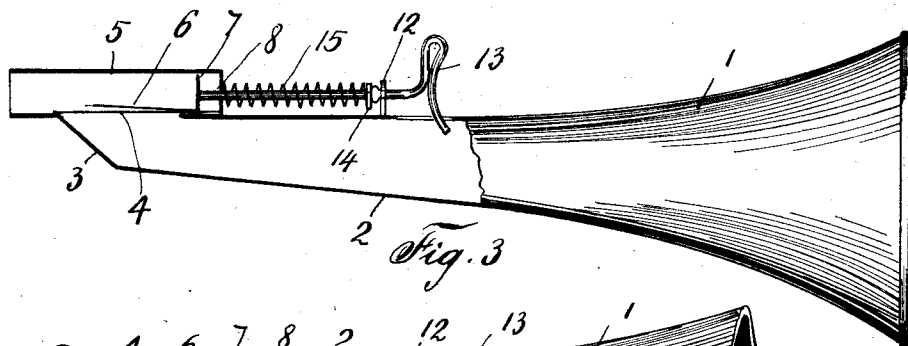
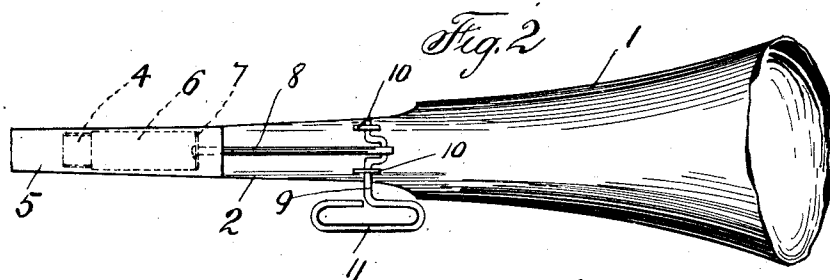
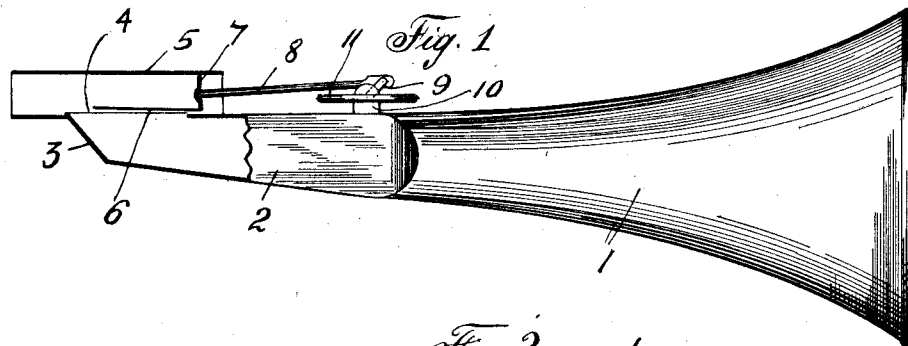


E. C. SCHMIDHOFER.
HORN.
APPLICATION FILED MAR. 25, 1911.

1,022,509.

Patented Apr. 9, 1912.



WITNESSES
E. S. Loneragan
Aug. Wagner

INVENTOR
Ernst C. Schmidhofer
By Robt. Hlotz
Atty.

UNITED STATES PATENT OFFICE.

ERNST C. SCHMIDHOFER, OF MINNEAPOLIS, MINNESOTA.

HORN.

1,022,509.

Specification of Letters Patent.

Patented Apr. 9, 1912.

Application filed March 25, 1911. Serial No. 616,946.

To all whom it may concern:

Be it known that I, ERNST C. SCHMIDHOFER, a citizen of the United States, and residing at Minneapolis, in the county of Hennepin and State of Minnesota, have invented a new and useful Improvement in Horns, of which the following is a complete specification.

The main objects of this invention are to provide a horn having improved mechanism adapted to provide tones of varying pitch; to provide a toy wind instrument having very simple and durable means for varying its tone; and to provide a very cheap and simple device adapted for use as a toy to provide varying sounds, and which is equally well adapted to use as a sounding horn for vehicles.

The invention consists of the matters hereinafter described in the specification and more fully pointed out and defined in the appended claims.

In the drawings: Figure 1 is a view partly in side elevation and partly in section, of a device embodied in this invention. Fig. 2 is a fragmentary, top plan view of the same. Fig. 3 is a view partly in section and partly in side elevation of a slightly modified form of the device. Fig. 4 is a fragmentary, top plan view of the device shown in Fig. 3.

As shown in said drawings, the body 1 of the horn is bell or funnel shaped to near its rear end, and the rear portion 2 is flattened at its sides to a more or less rectangular form. The rear end 3 is preferably inclined upwardly and rearwardly from the bottom side, and in the top side of the rear portion is a wind aperture 4 through which the wind enters the instrument.

Rigidly secured on the top of the portion 2, and extending from a point forwardly of the aperture 4 to a point rearwardly of the end 3 is a box 5, which is open at its rear end, and is provided with an opening in its bottom which registers with the aperture 4.

Slidably mounted in the box 5 and adapted to overlap the aperture 4 from its forward end is a vibrator plate 6 which is provided with an apertured flange 7 at its forward end in which is swiveled one end of a push rod 8. The push rod extends forwardly through an aperture in the front end

of the box, and, as shown in Figs. 1 and 2, has its forward end connected with the crank of a crank shaft 9, which is journaled in bearings 10 on the body of the horn. The shaft 9 is provided on one end with a handle 11 by means of which it may be rotated to shift the vibrator plate with respect to the aperture 4. In this construction the plate is adapted to remain where it is adjusted by the shaft, until the shaft is again turned.

In the construction shown in Figs. 3 and 4, the rod 8 is slidably mounted near its forward end in an ear 12 on the body of the horn, and is provided with a handle 13 at its forward end by means of which it may be pushed rearwardly. Rearwardly of the ear 12 the rod is provided with a stop or lug 14, and a coiled spring 15 is carried on the rod and abuts at one end against said stop and at its other end against the box 5.

The operation is as follows: When wind is blown into the open end of the box 5 it passes through the aperture 4 into the body of the horn and causes the rear end of the vibrator plate to vibrate and produce sound. As the plate is adjusted to or from the rear end of the aperture 4 its vibrations are varied and the tone is changed. In the construction shown in Figs. 1 and 2, the shaft can be adjusted to set the plate to produce the desired tone, or the tone can be constantly varied by rotating the shaft backward and forward. In the construction shown in Figs. 3 and 4, the spring 15 normally holds the plate at its forward limit of movement, and the plate is shifted by rearward pressure on the handle 13.

Obviously many details of the device as shown may be varied or omitted without departing from the scope of the claims.

I claim:

1. A horn, comprising a body having a wind aperture at its rear end, a vibrator plate slidably mounted over said aperture, a rod connected with said plate and adapted to move it with respect to the aperture and a crank shaft mounted on the body and connected with said rod.

2. A wind instrument, comprising a horn shaped body having an aperture near its rear end, a box secured on the rear portion of the body and having an opening in its

rear end and an opening registering with
said aperture, a vibrator plate slidably
mounted in said box, a rod secured on said
plate and extending through the forward
5 end of the box, and a crank shaft journaled
on the body and connected to the forward
end of said rod.

In witness whereof I have hereunto sub-
scribed my name in the presence of two wit-
nesses.

ERNST C. SCHMIDHOFER.

Witnesses:

EDMUND P. EICHHORN,
ARTHUR E. EICHHORN.

Copies of this patent may be obtained for five cents each, by addressing the "Commissioner of Patents,
Washington, D. C."
