

(No Model.)

L. G. LAWRENCE.
HARMONICA.

No. 478,514.

Patented July 5, 1892.

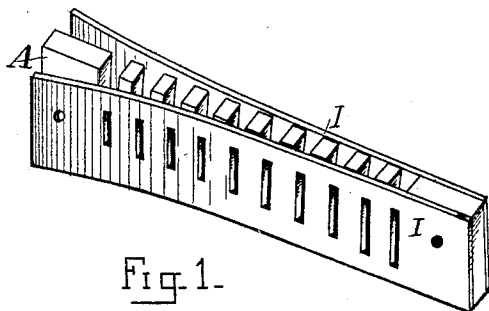


Fig. 1.

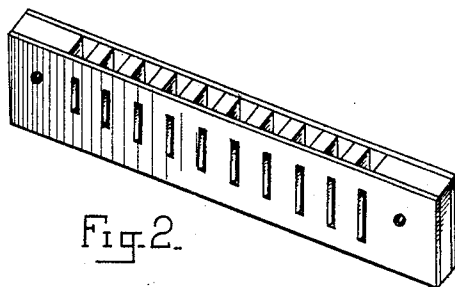


Fig. 2.

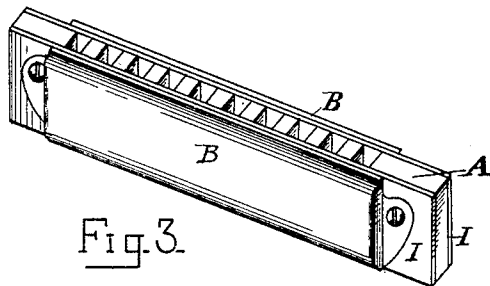


Fig. 3.



Fig. 4.

WITNESSES:

Thomas Long, Jr.
Mary O. Brian.

INVENTOR

Dexter G. Lawrence

PER *G. L. Chapin*

ATTORNEY.

UNITED STATES PATENT OFFICE.

LESTER G. LAWRENCE, OF CHICAGO, ILLINOIS, ASSIGNOR OF TWO-THIRDS
TO A. O. COOPER AND ED. L. BRADBURY, OF SAME PLACE.

HARMONICA.

SPECIFICATION forming part of Letters Patent No. 478,514, dated July 5, 1892.

Application filed October 1, 1891. Serial No. 407,433. (No model.)

To all whom it may concern:

Be it known that I, LESTER G. LAWRENCE, a citizen of the United States, and a resident of Chicago, county of Cook, and State of Illinois, have invented new and useful Improvements in Harmonicas, of which the following is a specification, reference being had to the annexed drawings, illustrating the invention, in which—

Figure 1 is a perspective representation of the frame-plate and the reed-plates, the latter being partly detached. Fig. 2 is a perspective representation of the frame-plate and the reed-plates attached thereto; Fig. 3, a perspective view of the harmonica complete with the case attachment thereon; Fig. 4, a plan view of the frame-plate removed from the other parts.

It has heretofore been the custom to form the reed-plates of harmonicas flat to fit the flat sides of the reed-frame; but such construction leaves the reed-plates substantially free from the reed-frame, except where the plates are held to the frame by screws or rivets. The holes drilled through the reed-plates in the region of the reeds weakens the plates and hinders the action of their unity with the frame-plate, and when the reed-plates are secured to a metal frame-plate by screws or rivets, except at the ends, there occur vibrations of the reed-plates independent of the vibrations of the metal frame-plate, and as a result the tone of the instrument is not distinct and clear.

The purpose of this invention is therefore to set the reed-plates with a continuous spring force onto the metal frame-plate without any rigid fastenings except at the ends of the plates, which lie outside of the reeds.

In carrying out this construction the sides of the frame-plate are formed flat and smooth and the reed-plates are formed of suitable

spring metal—such, for instance, as rolled-brass plate—and with an even strength of metal throughout and with flat smooth surfaces. Then by means of dies or otherwise the reed-plates are bent longitudinally, so that the sides, which are to have a spring force on both sides of the metal frame, will have convex contours, as shown at Fig. 1. The metal frame at its ends and the reed-plates at their ends are provided with corresponding holes, as are also the cases at their ends, whereby when the convex sides of the reed-plates are bent flat on the sides of the frame-plate one nut and screw at each end of the harmonica will hold all the parts together, and the reed-plates will be held throughout the distance between the nuts and bolts closely to the frame-plate by virtue of the spring force retained in them, and as a result a very superior instrument is produced, as demonstrated by instruments constructed in accordance with this specification. It is not essential that the bolts which hold the case in place should also hold the reed-plates to the frame-plate, inasmuch as the reed-plates may be secured to the frame-plate by separate screws.

Having thus described my invention, I claim as new—

As an improvement in harmonicas, which are provided with metal frame-plates, the combination, with such metal frame-plates, of reed-plates, which are bent longitudinally to give the faces which are to lie on the frame-plate convex contours, the convex faces being sprung flat on the opposite sides of the frame-plate and secured to the ends of said plate by screws or bolts, as and for the purpose specified.

LESTER G. LAWRENCE.

Witnesses:

G. L. CHAPIN,
M. E. LAMB.