

No. 880,109.

PATENTED FEB. 25, 1908.

F. STRAUSS.  
HARMONICA.

APPLICATION FILED DEC. 4, 1907.

Fig. 1.

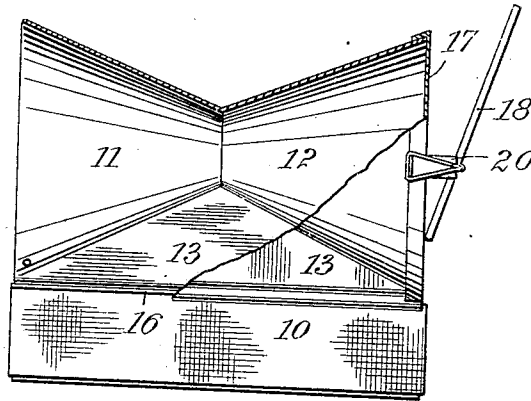


Fig. 2.

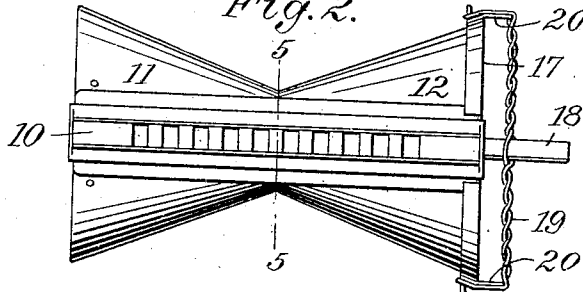


Fig. 3.

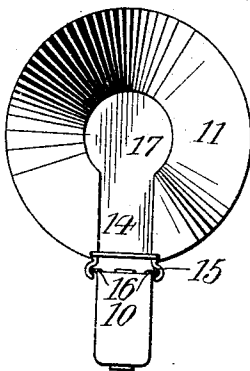


Fig. 5.

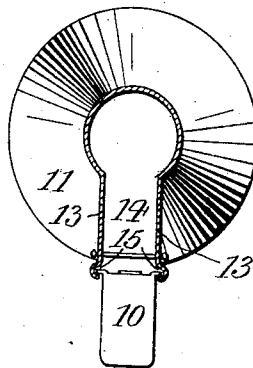
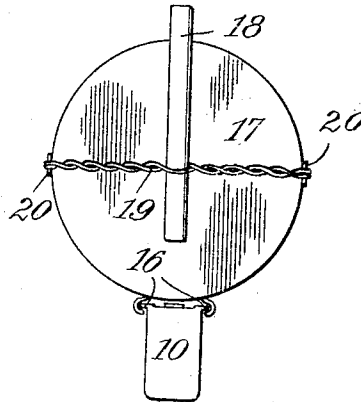


Fig. 4.



Witnesses:  
Arthur E. Zumpfer  
August Miner.

Inventor  
Ferdinand Strauss  
By his Attorney  
Frank P. Bieser

# UNITED STATES PATENT OFFICE.

FERDINAND STRAUSS, OF NEW YORK, N. Y.

## HARMONICA.

No. 880,109.

Specification of Letters Patent.

Patented Feb. 25, 1908.

Application filed December 4, 1907, Serial No. 405,030.

*To all whom it may concern:*

Be it known that I, FERDINAND STRAUSS, a citizen of the United States, residing at New York city, Manhattan, county and State of New York, have invented new and useful Improvements in Harmonicas, of which the following is a specification.

This invention relates to a harmonica provided with a resonating chamber of novel construction and adapted to produce a variety of pleasing tone effects.

In the accompanying drawing: Figure 1 is a side elevation, partly in section, of my improved harmonica; Fig. 2 a front view thereof; Fig. 3 a left hand end view; Fig. 4 a right hand end view, and Fig. 5 a section on line 5—5, Fig. 2.

The resonating chamber of the usual harmonica body 10 consists of two communicating hollow truncated cones 11, 12, placed point to point, the axis of the shell being parallel to that of the harmonica body. The triangular space between the cones and the body 10, is taken up by a pair of parallel side plates 13, integral with the cones and forming a chamber 14 that communicates with the chamber formed within the cones. Plates 13 are so spaced as to snugly encompass body 10 which projects into chamber 14 and is removably and reversibly secured to plates 13 by grooves 15 on the plates engaging flanges 16 on body 10. Cone 11 is open at its base, while cone 12 is closed at its base by a drum-head 17. This head is adapted to be engaged by a drum stick 18 connected by a spring 19 to a pair of lugs 20, projecting from cone 12.

In use, the sound waves generated by the harmonica will be emitted through the open base of cone 11, to form trumpet-like sounds. A very pleasing accompaniment to the music thus produced may be obtained by manipulating the drum stick. If a modulation of the trumpet sounds is desired, without drum effect, the shell is reversed to bring base of open cone 11 opposite the right hand of the player, and the hand is manipulated to regu-

late the emission of sound through such base. If the cone is closed entirely by the hand, organ-like tones will be emitted.

I claim:

1. A harmonica body provided with a communicating resonating chamber composed of a pair of hollow truncated cones placed point to point, substantially as specified. 50

2. A harmonica body provided with a communicating resonating chamber composed of a pair of hollow truncated cones placed point to point, and of intervening side plates adapted to engage the harmonica body, substantially as specified. 55

3. A harmonica body provided with a communicating tapering resonating chamber the axis of which is parallel to that of the harmonica body, a drum-head on the end of said chamber, and a drum stick adapted to engage said head, substantially as specified. 60

4. A harmonica body provided with a communicating resonating chamber composed of a pair of hollow truncated cones placed point to point, one of said cones being open, and the other cone being closed, substantially as specified. 65

5. A harmonica body provided with a communicating resonating chamber composed of a pair of hollow truncated cones placed point to point, a drum-head on the base of one of said cones, and a drum stick adapted to engage said head, substantially as specified. 70

6. A harmonica body provided with a communicating resonating chamber composed of a pair of hollow truncated cones placed point to point, intervening triangular side plates adapted to removably engage the harmonica body, a drum-head on one of the cones, and a spring-influenced drum stick adapted to engage said head, substantially as specified. 75

Signed by me at New York city, (Manhattan,) N. Y., this third day of December, 1907. 80

FERDINAND STRAUSS.

Witnesses:

FRANK V. BRIESEN,  
ARTHUR E. ZUMPE.