Oct. 9, 1951 V. R. KIMPLE 2,570,816

MUSICAL INSTRUMENT

Filed May 1, 1946

Fig. 1.

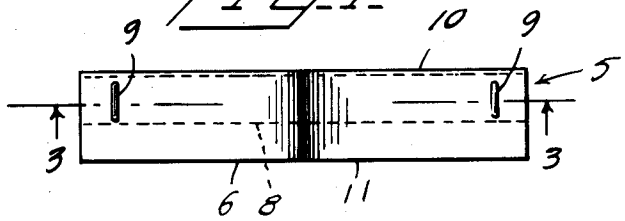


Fig. 2.

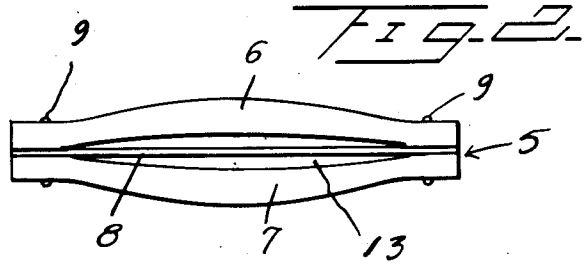


Fig. 3.

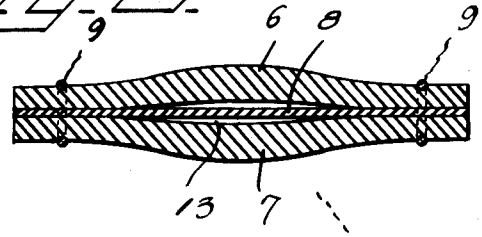
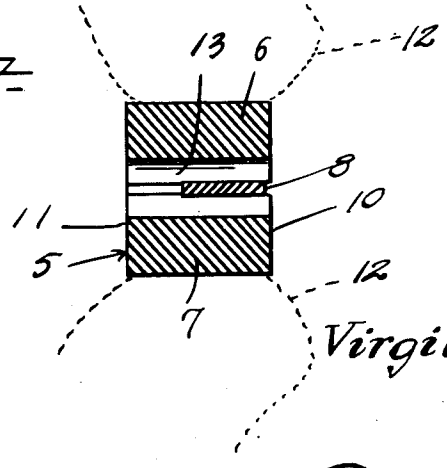


Fig. 4.



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MUSICAL INSTRUMENT

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Application May 1, 1946, Serial No. 666,367

5 Claims. (Cl. 84—330)

1

This invention relates to a novel musical instrument of extremely simple construction which is capable of a wide pitch range.

More particularly, it is an object of the invention to provide a wind instrument which is primarily intended for use as a toy and which is capable of being operated by the exhaling of air from the mouth and the manipulation of the lips to produce various tones, so that through manipulation of the lips and regulation of the exhalation of the breath, tunes may readily be played with the instrument.

A further aim of the invention is to provide an instrument of extremely simple construction, which is capable of being economically manufactured and sold, which is durable, which can be readily maintained in a sanitary condition and which is simple to operate.

Various other objects and advantages of the invention will hereinafter become more fully apparent from the following description of the drawing, which illustrates a preferred embodiment thereof, and wherein:

Figure 1 is a plan view of the musical instrument;

Figure 2 is a side elevational view of the same;

Figure 3 is a longitudinal sectional view thereof taken substantially along a plane as indicated by the line 3—3 of Figure 1 and illustrating the instrument partially compressed, and

Figure 4 is a cross sectional view thereof, and showing the instrument in an applied position.

Referring more specifically to the drawing, 5 designates generally the musical instrument in its entirety which comprises corresponding elongated strips 6 and 7, and an elastic membrane 8 and two connecting staples 9.

The strips 6 and 7 are thicker adjacent their intermediate portions than adjacent their ends and are connected together adjacent their ends by the staples 9. The strips 6 and 7 may be formed of rubber or other materials possessing a limited amount of flexibility and elasticity so that the outwardly bowed intermediate portions thereof may be pressed inwardly and toward one another, and in so moving, will cause the ends of the strips 6 and 7 to move in directions away from each other. The elastic membrane member 8 is also preferably formed of rubber or other elastic material and is secured adjacent its ends to the end portions of the strips 6 and 7 by having the staples 9 passed therethrough.

It will be noted that the membrane 8, as clearly illustrated in Figures 1 and 4, is considerably narrower than the strips 6 and 7 and is located adjacent to the front edge 10 and remote to the rear edge 11 of the instrument 5. The instrument 5 is adapted to be positioned between the lips, as indicated at dotted lines in Figure 4 at 12 and when so disposed, the outer edge 10 and the elastic membrane 8 are positioned away from the mouth. By exhaling through the mouth with the lips closed around the strips 6 and 7, the air will be expelled through the opening 13, between strips 6 and 7, to thereby actuate the membrane 8 in a manner similar to a reed of a conventional wind instrument. The vibration of the membrane 8 will produce tones, the pitch of which can be varied by compressing the lips 12 to move the intermediate portions of the strips 6 and 7 toward one another. As the strips 6 and 7 are moved toward one another, the length of the instrument 5 is increased to thereby increase the tension of the membrane 8, so that the vibration thereof will then produce tones of a higher pitch. Furthermore, as the strips 6 and 7 are moved toward one another from their positions of Figure 2 to their positions of Figure 3, a greater portion of the membrane 8 is clamped between the end portions of the strips 6 and 7 thereby shortening the length of the free intermediate portion of said membrane 8. This shortening of the length of the free portion of the membrane 8 will produce tones of higher pitch so that as the strips 6 and 7 are moved toward one another tones of higher pitch are produced and as said strips are permitted to move away from one another tones of lower pitch will be produced, similar to the variation in tone of a string of a stringed instrument produced by pressing the string to contact a fret of the instrument for shortening the free length of the string. Thus, by manipulation of the lips and regulation of the rate of exhalation of air through the opening 13, the user of the instrument 5 may play simple tunes thereon, after a little practice.

Various modifications and changes are contemplated and may obviously be resorted to without departing from the spirit and scope of the invention as hereinafter defined by the appended claims.

I claim:

1. In a musical instrument, a pair of elongated flexible and relatively elastic strips, means connecting said strips together adjacent their ends, said strips having intermediate portions bowed outwardly with respect to one another, an elongated elastic element forming a membrane disposed longitudinally of said strips and positioned therebetween, said membrane being clamped ad-

jacent its ends to the end portions of the strips, and said strips being thicker adjacent their intermediate portions than adjacent their ends.

2. A musical instrument of the wind type comprising a pair of super-imposed elongated strips, fastening means connecting said strips adjacent their ends, the intermediate portions of said strips being bowed outwardly with respect to one another from side to side thereof to form an elongated opening therebetween, and an elongated elastic membrane element disposed between said strips and secured to the end portions thereof by the fastening means, said membrane element extending lengthwise through the elongated opening and having its intermediate portion spaced from the intermediate portions of said strips, said strips being formed of flexible relatively elastic material to permit the intermediate portions thereof to be moved toward one another for extending said strips to tension the membrane.

3. A musical instrument comprising a pair of elongated and relatively elastic strips, an elongated elastic membrane disposed longitudinally between said strips and under tension, and means connecting the strips together adjacent their ends and clamping the ends of the membrane thereto, the intermediate portions of the strips being bowed outwardly of one another from side to side and being urged outwardly by the membrane, said outwardly bowed portions forming a mouthpiece and defining an opening therebetween forming the instrument throat, said mouthpiece being adapted to be compressed to extend the strips to vary the tension on the membrane.

4. A musical instrument comprising a pair of elongated and relatively elastic strips, an elongated elastic membrane disposed longitudinally between said strips when under tension and means connecting said strips together adjacent their ends and for clamping the end portions of the membrane therebetween, the intermediate portions of the strips being bowed outwardly of one another from side-to-side thereof and being urged outwardly by the elasticity of the membrane, said outwardly bowed portions of the strips

forming a mouthpiece and defining an opening therebetween forming an instrument throat, said mouthpiece being adapted to be compressed to extend the strips to vary the tension on the membrane and to cause additional portions of the ends of the strips to engage additional end portions of the membrane for reducing the length of the intermediate, free portion of the membrane.

5. A musical instrument comprising a pair of elongated flexible strips of an elastic material, means connecting said strips together adjacent their ends, said strips having intermediate portions bowed outwardly relatively to one another and defining an elongated throat opening outwardly of opposite sides of the instrument and diminishing in size toward the ends of the strips, an elongated elastic element forming a membrane disposed longitudinally of said strips and positioned therebetween under tension, said membrane being clamped adjacent its ends to the end portions of the strips, said intermediate strip portions being sufficiently elastic to be displaced toward one another by lip pressure to restrict the throat and thereby extend the strips and tension the membrane.

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REFERENCES CITED

The following references are of record in the file of this patent:

UNITED STATES PATENTS

Number	Name	Date
550,500	Gay	Nov. 26, 1895
918,835	Fawkes	Apr. 20, 1909
1,052,525	Smith	Feb. 11, 1913
1,417,343	Michalicek	May 23, 1922
1,542,147	Kragiel	June 16, 1925
2,182,692	Harbin	Dec. 5, 1939
2,274,897	Horne	Mar. 3, 1942

FOREIGN PATENTS

Number	Country	Date
32,605	Germany	1885
381,547	Germany	Sept. 21, 1923