

No. 620,037.

Patented Feb. 21, 1899.

F. L. JOHNSON.

WHISTLE.

(Application filed Oct. 27, 1898.)

(No Model.)

Fig. 1.

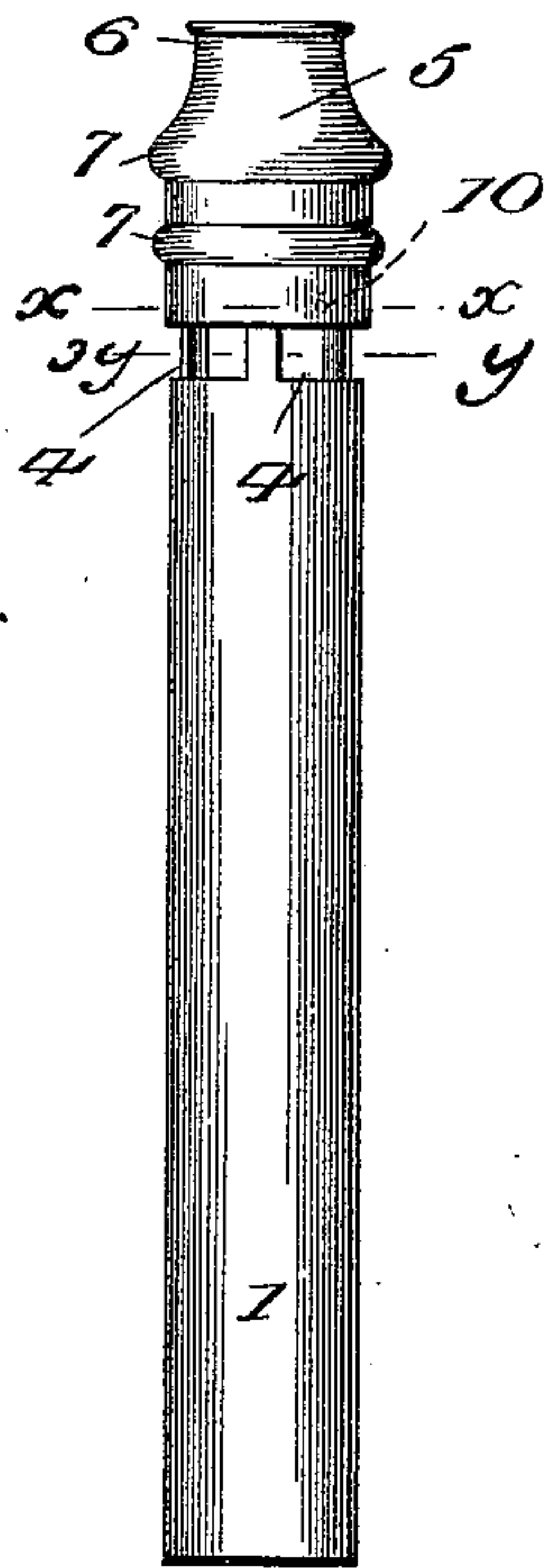


Fig. 2.

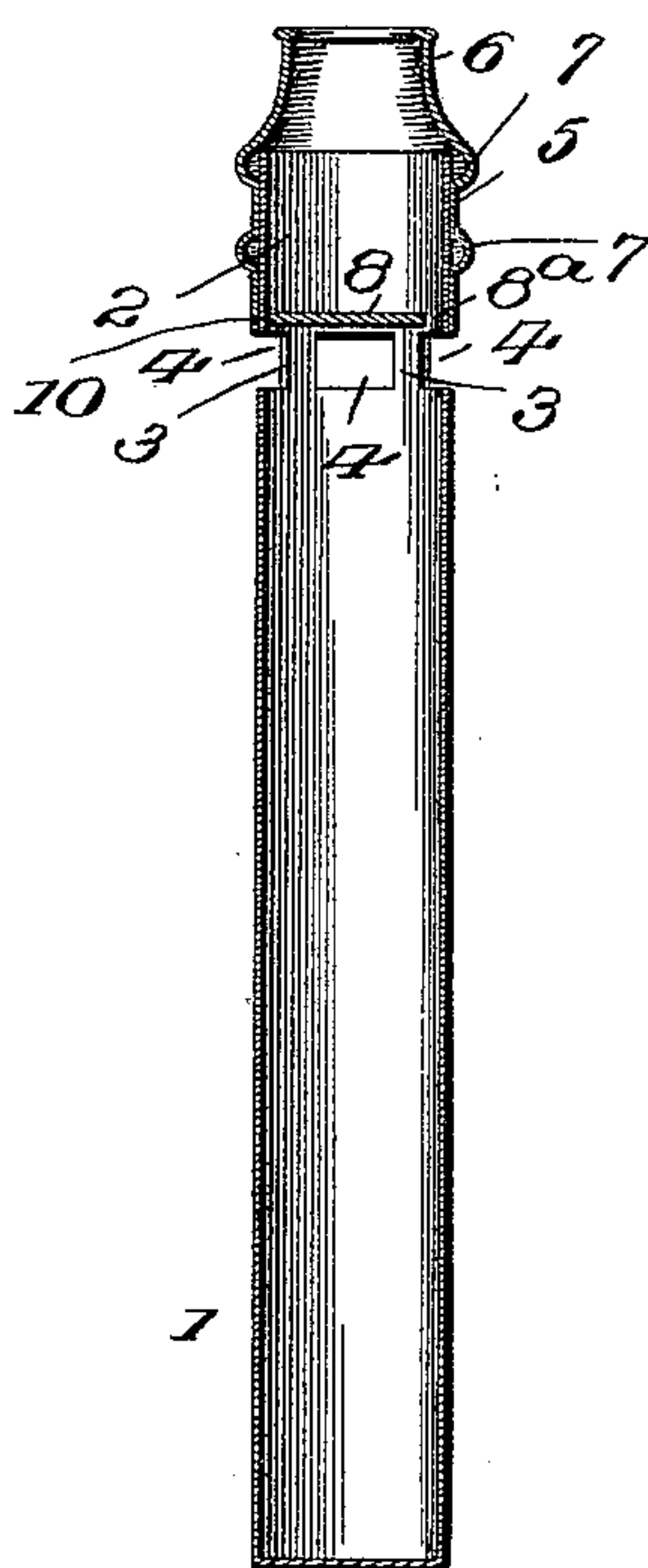


Fig. 3.

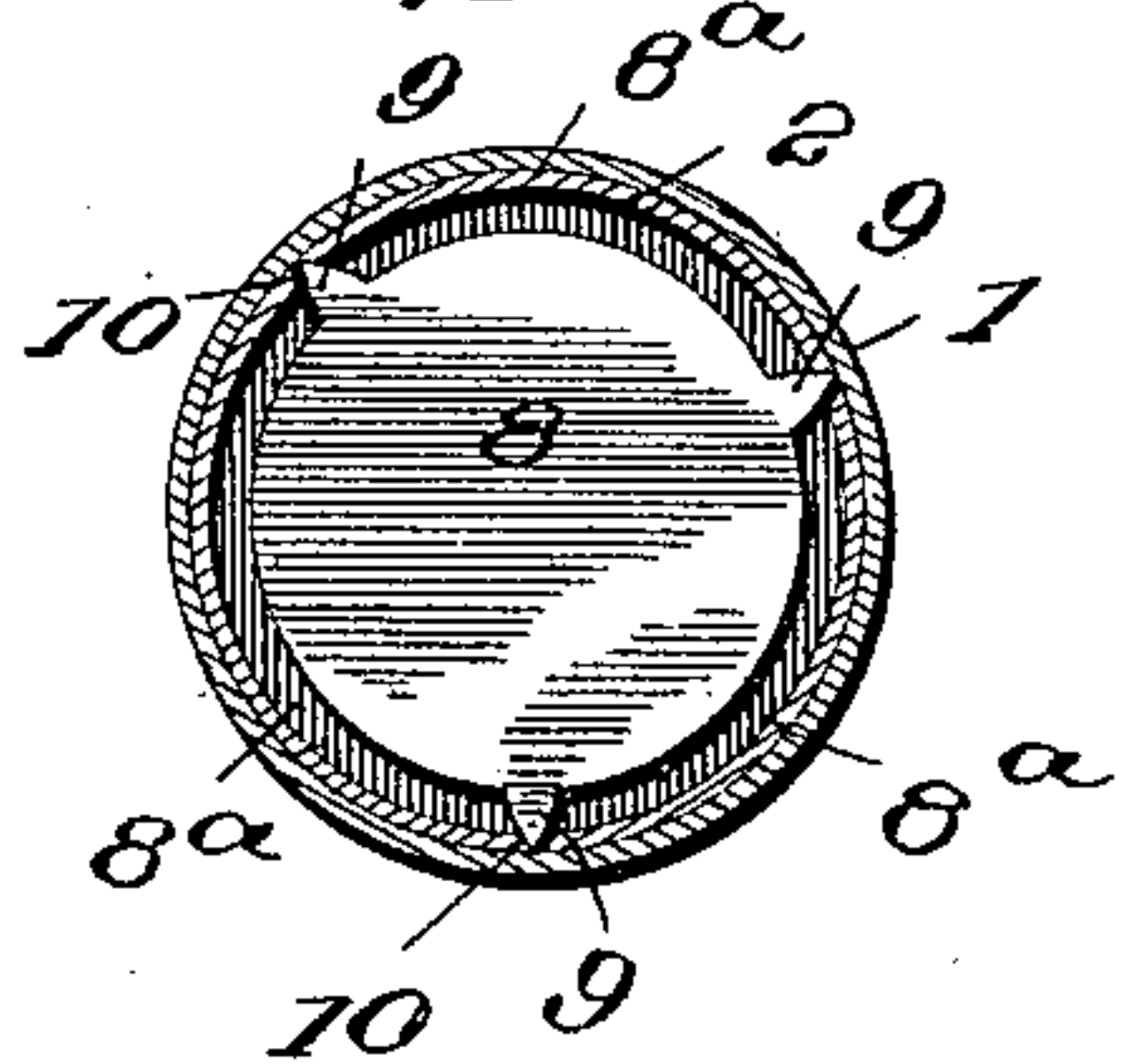


Fig. 4.

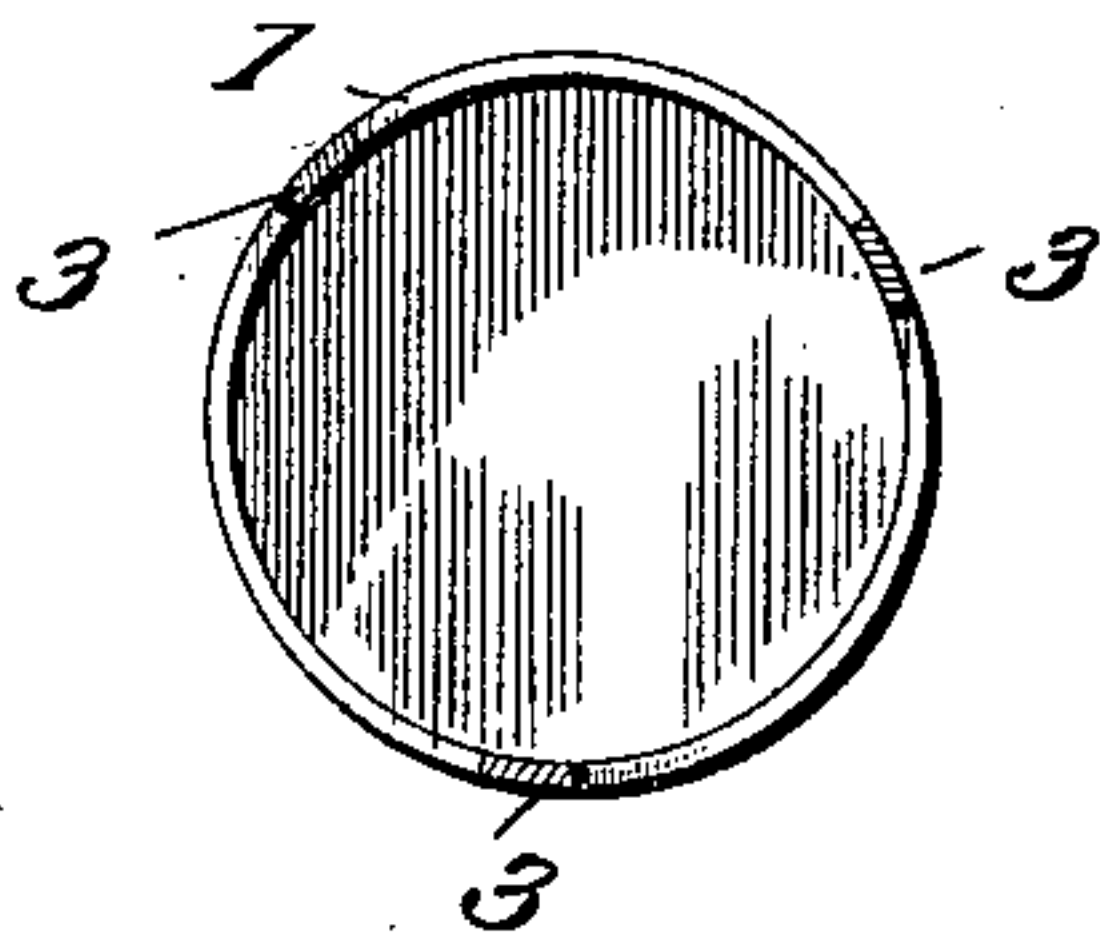
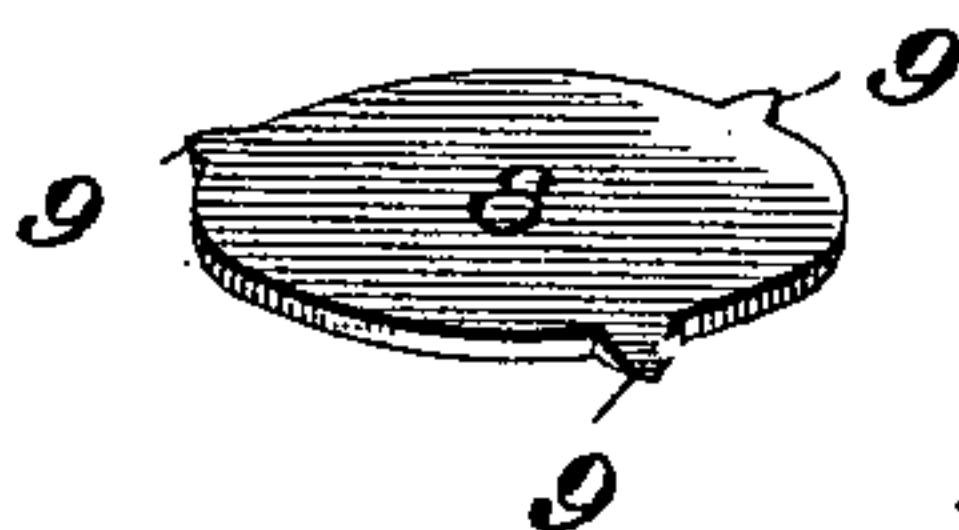


Fig. 5.



Witnesses

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FREDERICK L. JOHNSON, OF WALLINGFORD, CONNECTICUT.

WHISTLE.

SPECIFICATION forming part of Letters Patent No. 620,037, dated February 21, 1899.

Application filed October 27, 1898. Serial No. 694,701. (No model.)

To all whom it may concern:

Be it known that I, FREDERICK L. JOHNSON, a citizen of the United States, residing at Wallingford, in the county of New Haven and State of Connecticut, have invented certain new and useful Improvements in Whistles; and I do hereby declare the following to be a full, clear, and exact description of the invention, such as will enable others skilled in the art to which it appertains to make and use the same.

This invention relates to whistles; and the purpose of the same is to improve a device of this class and dispense with the use of solder in connecting the parts and also generally to simplify the construction.

The invention consists of the construction and arrangement of the several parts more fully hereinafter described and claimed.

In the accompanying drawings, Figure 1 is an elevation of the improved whistle. Fig. 2 is a central vertical section of the same. Fig. 3 is a horizontal view on the line *xx*, Fig. 1. Fig. 4 is a horizontal view on the line *yy*, Fig. 1. Fig. 5 is a detail perspective view of the valve.

Referring to the drawings, wherein similar numerals are utilized to indicate corresponding parts in the several views, the numeral 1 designates a barrel, which may be of any suitable length and diameter and is connected to the upper portion of a valve-chamber 2, which is of the same diameter and is held intact with said barrel by means of stays 3. The valve-chamber 2 is made from the original length of tubing employed to construct the barrel 1 by forming a series of openings 4, which are intersected by the stays 3. To form the said openings 4, the metal is removed, and a very simple method of constructing the valve-chamber is thus afforded. The openings 4 also serve to help produce and permit the emission of the whistle sound. Fitted on the valve-chamber 2 is a mouthpiece 5, having an upper contracted end 6 and surrounding beads 7 to strengthen the same. The lower part of the contracted end 6 fits against the upper end of the valve-chamber 2, and the said mouthpiece is so arranged primarily that when the upper end of the chamber 2 bears against the lower termination of the contracted end, or rather where the said con-

traction starts, the said mouthpiece will just cover the valve-chamber and may be held immovable thereon in any suitable manner. Within the valve-chamber, at a slight elevation above the bottom termination thereof, a flat or disk valve 8 is mounted and is of less diameter than the interior of the chamber, so as to leave the spaces 8^a between the periphery of the same and the adjacent wall of the said chamber. Extending outwardly from the periphery of the valve 8 are arms 9, which are regularly arranged and converge toward their outer ends. The length of the said arms is slightly greater than the interior diameter of the chamber 2, and the converged ends thereof fit in openings 10 in the lower portion of the wall of said chamber. In mounting this valve 8 in position it is pushed down from the top of the valve-chamber until the ends of the arms 9 aline with the openings 10, when the inherent resiliency of both the valve and the wall of the chamber will cause the said arms to have their reduced ends engage the openings 10 and thereby firmly hold the valve in position. The valve 8 is of course seated in the valve-chamber before the mouthpiece 5 is secured in position, and the spaces 8^a provide ducts or passages for the air to pass to the top edge or portion of the barrel 1 and cause the whistling sound to be produced. The bottom of the barrel 1 is closed and the sound is emitted through the openings 4, as previously set forth. The upper contracted ends 6 of the mouthpiece 5 afford convenience in holding the said mouthpiece between the lips of the operator, and by securing the valve 8 in place, as set forth, the use of solder is avoided and the construction thereby considerably cheapened.

By the arrangement of the parts of the whistle as shown the loudest sound can be produced with a minimum amount of force, and the salient features of the whistle might be also applied to steam-whistles or devices of this character operated by any other medium. The openings 10 in the wall of the valve-chamber are simply punctures, and when the valve is seated a very strong connection of parts is attained. Also by constructing the barrel and valve-chamber from the same initial stock or cylinder a great saving in expense, time, and labor is also ob-

tained, and the parts may be proportionately varied in their dimensions to suit different sizes of whistles, and also changes in the minor details which fall within the purview of the invention might be resorted to without departing from the nature or spirit of the same.

Having thus described the invention, what is claimed as new is—

1. In a whistle, the combination with a barrel, valve-chamber and mouthpiece, of a flat valve having radially-extended arms with outer reduced ends to engage the wall of said valve-chamber in a plane at a right angle thereto.

2. In a whistle, the combination with a barrel and a valve-chamber having openings in the wall thereof, of a flat valve having radially-extended arms with outer pointed ends to engage the openings in said wall of the valve-chamber.

3. The combination with a whistle having a valve-chamber, of a flat valve mounted in said chamber and having arms radially projecting outwardly from the periphery thereof

to engage the wall of said valve-chamber and thereby form passages or open spaces between said arms and wall.

4. In a whistle, the combination of a barrel and valve-chamber of the same diameter and formed primarily from the same piece of stock, the valve-chamber having openings in the wall thereof and held intact with the barrel by stays formed by openings in said barrel at regular intervals, a flat valve mounted in the valve-chamber and having arms radially projecting from the periphery thereof provided with outer reduced ends to fit in the openings in the wall of said chamber, passages or open spaces being formed between the wall of the chamber and the arms and periphery of the valve, and a mouthpiece fitted over the valve-chamber.

In testimony whereof I affix my signature in presence of two witnesses.

FREDERICK L. JOHNSON.

Witnesses:

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