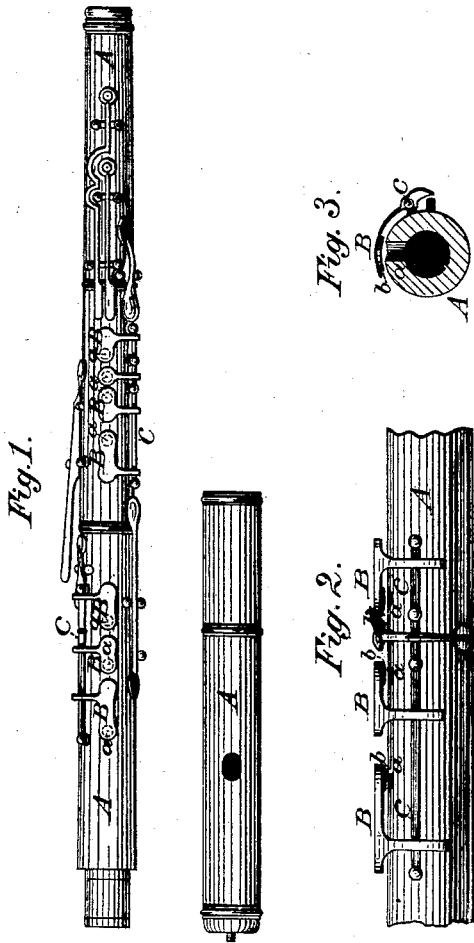


L. C. SOUTHARD.

FLUTE.

No. 183,429.

Patented Oct. 17, 1876.



Attest:  
C. E. Court.  
P. McMillan

Inventor:  
Louis C. Southard.  
per L. Deane,  
Atty.

# UNITED STATES PATENT OFFICE.

LOUIS C. SOUTHARD, OF BOSTON, MASSACHUSETTS.

## IMPROVEMENT IN FLUTES.

Specification forming part of Letters Patent No. **183,429**, dated October 17, 1876; application filed April 11, 1876.

*To all whom it may concern:*

Be it known that I, LOUIS C. SOUTHARD, of Boston, in the county of Suffolk and State of Massachusetts, have invented certain new and useful Improvements in Flutes, of which the following is a specification:

Figure 1 is a plan or top view of a flute having my improvements attached. Fig. 2 is a side elevation, somewhat enlarged, of a piece of the flute, to show a method of attaching said improvement over the key-holes. Fig. 3 is a section to show same point or feature.

The objects and designs of the present invention are to provide proper and sufficient means whereby the six open holes of a flute may be more easily and readily closed than by placing the fingers directly upon and over the same; and to this end they consist more particularly in providing suitable keys with arms having an elongated or broad surface, and by their contiguity to each other affording an easy means for closing said holes, whereby in playing a more ready and convenient method for fingering the flute is afforded, and one capable of better adapting the flute for general use, all as will now be more in detail set out and explained.

In the accompanying drawing, A denotes the flute proper, made up of sections or joints in the usual way, and having any number of the ordinary keys that may be desired. B denotes the keys, three on each joint or section, which are designed to cover the six open finger-holes, (indicated at *a*.) and these are hung upon rods C, one on each joint or section. I have now shown the keys adapted for the three holes on one section or joint of the flute, as attached to a single rod suitably supported upon and attached to the said joint or section; but in the mere detail of construction all this can be varied at will, so long as the object now had in view is attained. These keys have an elongated upper surface or elongated arms, and are suitably provided underneath with pads *b*, in any ordinary or usual way, to fit upon and over the holes. By thus elongat-

ing the said upper faces or arms and arranging them in line with the length of the flute there is afforded such a contiguity of the keys that they can each and all be readily reached and manipulated by fingers of any size or length, from the very shortest to the very longest, and all in the easiest and least tiresome or troublesome manner. This, as all persons skilled in the use of this class of devices know, is a very great and important point to gain, as there will be afforded the best facility for execution, and the holes can always at will and without any strain or effort be certainly and evenly covered. And in case of deformed or injured fingers, where there would be great difficulty in reaching or covering said holes, it will be found that by my improvement all troubles and inconveniences are obviated; and in case of loss of one finger it will be found that with a very little practice the three keys of one joint or section can be manipulated and played by two fingers.

This invention and improvement need not be confined to flutes alone, but is easily applied to fifes, flageolets, clarinets, or any of the musical instruments of like kind. Nor is it always necessary that the keys should be arranged in line, as now shown; but I have found that this arrangement is a very excellent one, and have generally adopted it heretofore.

Having thus fully described my invention, what I consider new, and desire to secure by Letters Patent, is—

The flute A, provided with the finger-holes *a* and the elongated keys B, combined, constructed, and arranged to operate substantially in the manner and for the purposes set forth.

In testimony that I claim the foregoing as my own I affix my signature in presence of two witnesses.

LOUIS CARVER SOUTHARD.

Witnesses:

DAUPHIN K. CARPENTER,  
MAYNARD NEWCOMB.