

A. Fitts,

Steam-Boiler Indicator.

N^o 48,921.

Patented July 25, 1865.

Fig. 1.

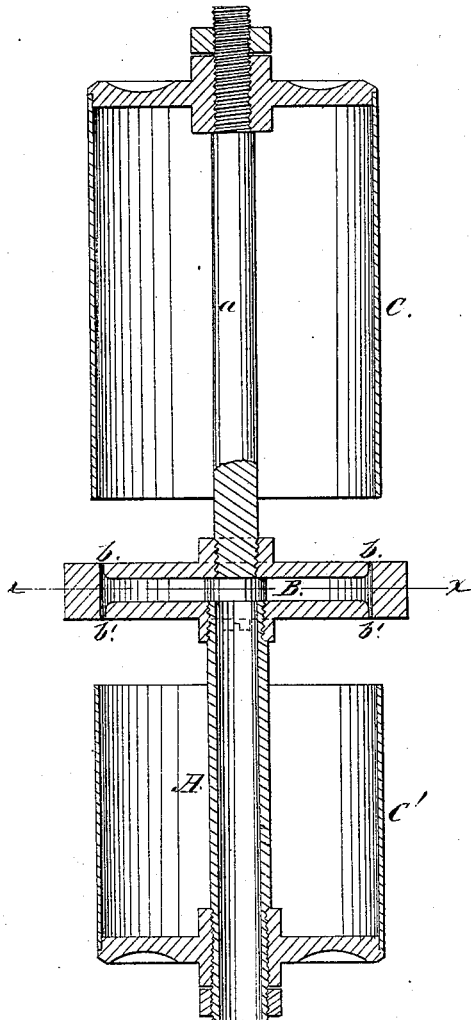
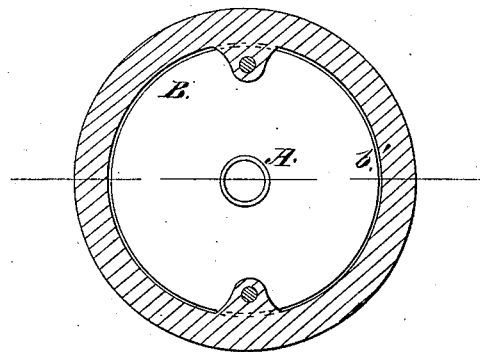


Fig. 2.



Witnesses:

Flies Lusch
Wm. J. Brown

Inventor:

A. Fitts
By Munn & Co
Attys

UNITED STATES PATENT OFFICE.

ABRAHAM FITTS, OF WORCESTER, MASSACHUSETTS.

IMPROVEMENT IN STEAM-WHISTLES.

Specification forming part of Letters Patent No. **48,921**, dated July 25, 1865.

To all whom it may concern:

Be it known that I, ABRAHAM FITTS, of Worcester, in the county of Worcester and State of Massachusetts, have invented a new and Improved Signal-Gong; and I do hereby declare that the following is a full, clear, and exact description thereof, which will enable others skilled in the art to make and use the same, reference being had to the accompanying drawings, forming part of this specification, in which—

Figure 1 is a vertical central section of this invention. Fig. 2 is a horizontal section of the same, taken in the plane indicated by the line *x x*, Fig. 1.

Similar letters of reference indicate like parts.

This invention relates to a whistle operated by steam or hot air and composed of two bells, with an intermediate chamber having an annular steam or air passage opposite the edge of each of the bells in such a manner that by admitting steam or compressed air to said chamber both bells are sounded simultaneously and a sound of increased intensity is produced. In order to increase the intensity of the sound still further and render the whistle particularly fit for a signal-gong, the two bells are so tuned as to produce musical chords.

A represents a pipe which leads from a reservoir containing steam or compressed air to the chamber B. This chamber is situated between two bells, C C', the bell C being supported by a central stem, *a*, which rises from the chamber B, whereas the bell C' is secured to the pipe A. The chamber B is provided with two annular passages, *b b'*, one opposite to each of the bells, so that the steam or com-

pressed air issuing from said passages strikes simultaneously the edges of both bells and a loud and very intense sound is produced. The two bells are so tuned that they produce musical chords, either thirds or fifths, it being a well-known fact among experts in musical matters that the intensity of a tone when the same is coupled with its third, and more particularly with its fifth, is considerably increased.

My experience shows that one of my gongs, when operated by steam of from fifty (50) to sixty (60) pounds pressure, produces a sound which can be heard for twenty (20) miles and more, whereas a whistle of the same size with only one bell, and operated by steam of the same pressure, can hardly be heard one-fourth of that distance. On account of this great increase in the intensity of the tone a whistle constructed according to my invention is peculiarly fit for a signal-gong, and such gong will be used with great advantage as fog-signals or for similar purposes.

I claim as new and desire to secure by Letters Patent—

1. The combination of two bells with an intermediate chamber having an annular passage opposite the edge of each of the bells, substantially as and for the purpose set forth.

2. Combining in a whistle operated by steam or compressed air two bells tuned so as to produce musical chords, substantially as herein described, for the purpose of increasing the intensity of the sound.

ABRAHAM FITTS.

Witnesses:

M. M. LIVINGSTON,
C. L. TOPLIFF.