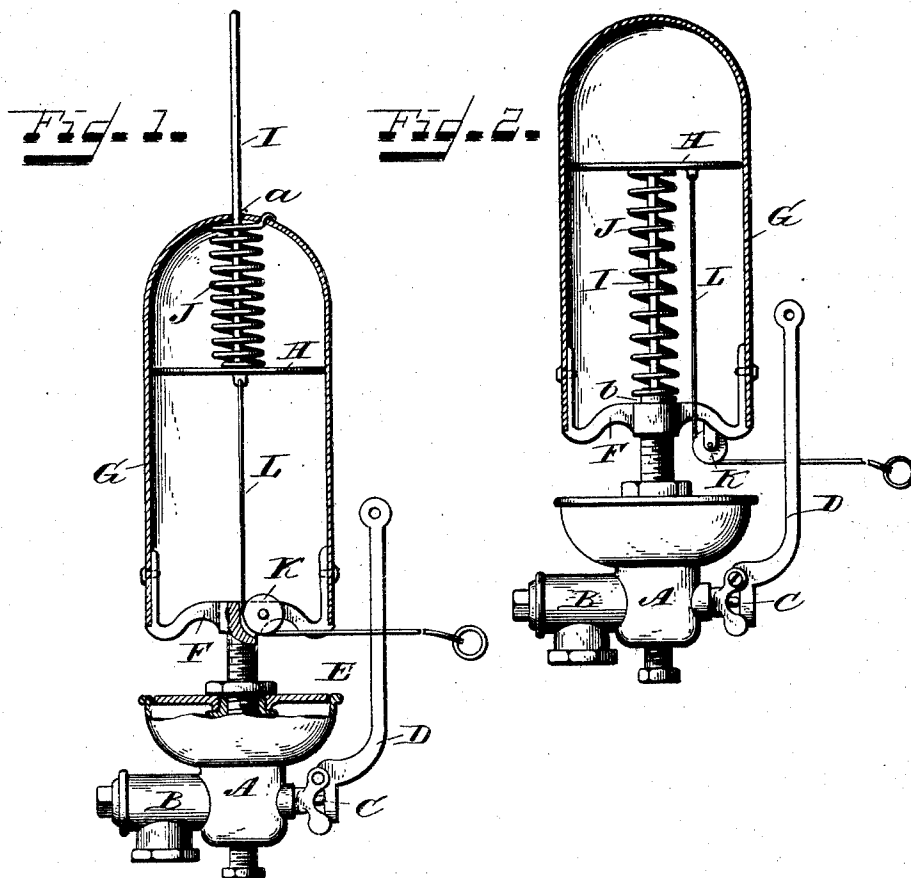


(No Model.)

E. H. LUNKEN.
STEAM WHISTLE.

No. 503,547.

Patented Aug. 15, 1893.



Witnesses.

J. Thomson & Cross
Barnard & J. Hansfeldt

Inventor:

Edmund H. Lunken
by *Chambers*
his Attorney.

UNITED STATES PATENT OFFICE.

EDMUND H. LUNKEN, OF CINCINNATI, OHIO, ASSIGNOR TO THE LUNKEN-HEIMER COMPANY, OF SAME PLACE.

STEAM-WHISTLE.

SPECIFICATION forming part of Letters Patent No. 503,547, dated August 15, 1893.

Application filed November 14, 1892. Serial No. 451,849. (No model.)

To all whom it may concern:

Be it known that I, EDMUND H. LUNKEN, a citizen of the United States, residing at Cincinnati, in the county of Hamilton and State of Ohio, have invented certain new and useful Improvements in Steam-Whistles, of which the following is a full, clear, and exact description, reference being had to the accompanying drawings, forming part of this specification.

My invention relates to all classes of steam whistles having a bell vertically set over the base, and it has for its object the production of means for actuating the piston within the bell to vary the sound of the whistle.

The novelty of my invention will be hereinafter set forth and specifically pointed out in the claim.

In the accompanying drawings:—Figure 1 is an elevation partly in section of a steam whistle embodying my invention. Fig. 2 is a corresponding view showing a modification in the construction.

The same letters of reference are used to indicate identical parts in both the figures.

In the drawings the whistle is shown as constructed in accordance with my prior patent, No. 476,472, of June 7, 1892, with the exception of the piston actuating mechanism, and in describing it, it is only necessary to say that A is the base with pipe connection B, steam valve C with actuating lever D, annular slit E concentric with the bell mouth for the escape of the steam, bell supporting spider F, and bell G. Fitted so as to slide freely within the bell is a piston H to which is attached at the middle a guiding rod I which in Fig. 1 extends from the upper side of the piston through an aperture *a* in the top of the bell, and in Fig. 2 extends from the under side of the piston through a bore in the stem of the spider F which is provided with a stuffing box *b* and out through the bottom of the base, likewise provided with a stuffing box *c*.

In Fig. 1, there is a coiled spring J surrounding the rod I and having its upper end secured in any suitable manner to the top of the bell

and its lower end secured to the piston, the purpose of which spring is to normally hold the piston up to its highest point in the bell. Suitably journaled between the base and the bell, in this instance in a slot in the spider F, is a grooved guide pulley *k* whose lower edge is below the level of the bell mouth, and secured to the piston at or near its middle is a chain or cord L which extends down around the pulley *k* and out to any point within reach of the operator. It will be seen from this construction that by pulling upon the chain or cord L the piston is drawn down and upon releasing the chain or cord the piston is drawn up by the spring J aided by the pressure of the steam within the bell, when the valve C is opened, and in this way the sound of the whistle is varied to suit the fancy of the operator, as will be readily understood. In this way I am enabled to operate the piston from the same point at which the valve is operated by simply pulling upon and releasing the cord or chain which constitutes a flexible connection for the piston. As also coming within my invention the spring J might be omitted where the piston is drawn down by the chain or cord, for the pressure of the steam within the bell would raise the piston upon releasing the chain or cord, and providing suitable vents in the top of the bell, as will be readily understood.

In Fig. 2 the spring is between the stem of the spider and the under side of the piston and acts by expansion to raise the piston.

Having thus fully described my invention, I claim—

In a steam-whistle, the combination of the bell G, a spider F with pulley K journaled thereon, the piston H held up by the spring J and provided with the guide rod I, and the operating chain or cord L running into said bell to said piston, for operating the latter, substantially as described.

EDMUND H. LUNKEN.

Witnesses:

GEORGE S. BAILY,
BERNARD J. HAUSFELDT.