(No Model.)

J. EINIG.

STEAM WHISTLE.

No. 480,078. Patented Aug. 2, 1892.

Fig. 1.

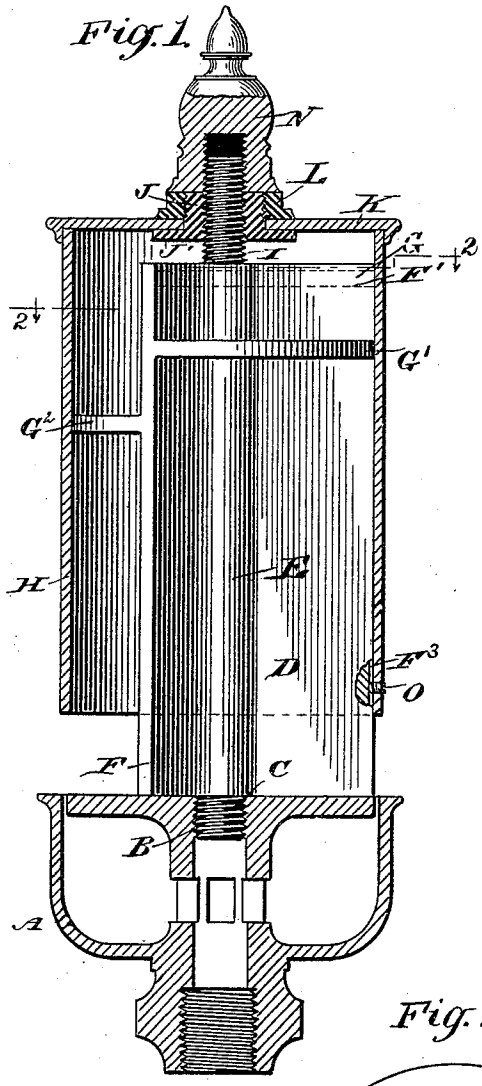


Fig. 3.

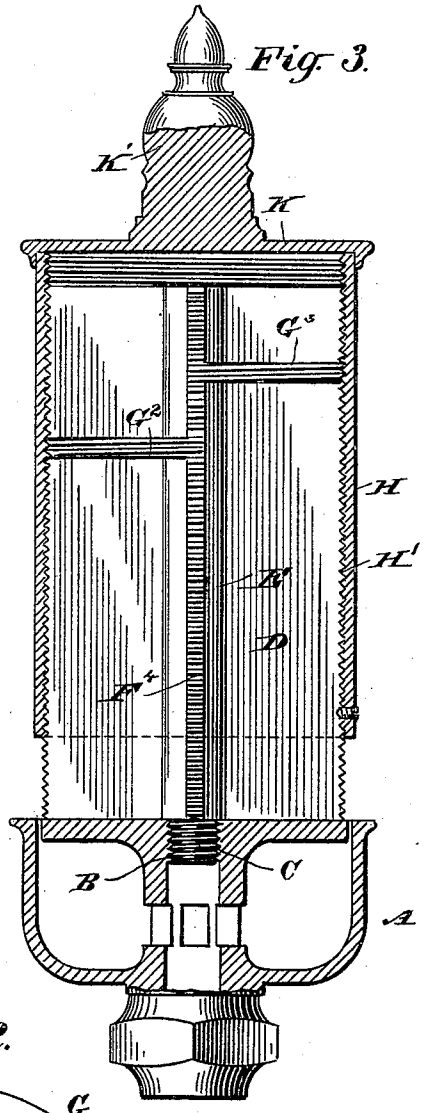
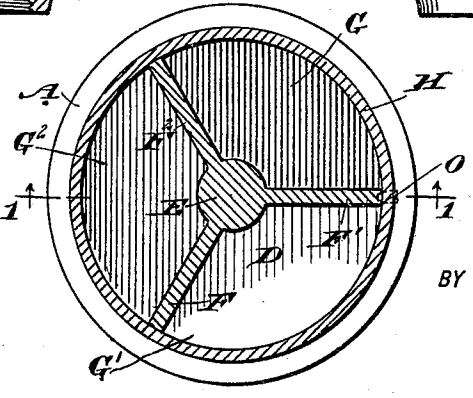


Fig. 2.



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JOHN EINIG, OF JACKSONVILLE, FLORIDA.

STEAM-WHISTLE.

SPECIFICATION forming part of Letters Patent No. 480,078, dated August 2, 1892.

Application filed March 15, 1892. Serial No. 424,985. (No model.)

To all whom it may concern:

Be it known that I, JOHN EINIG, of Jacksonville, in the county of Duval and State of Florida, have invented a new and Improved Steam-Whistle, of which the following is a full, clear, and exact description.

The invention relates to steam-whistles such as shown and described in the Letters Patent of the United States Nos. 186,718 and 304,511, granted to me January 30, 1877, and September 2, 1884, respectively.

The object of the present invention is to provide a new and improved steam-whistle, which is simple and durable in construction, cheap to manufacture, and arranged to produce a harmonious chord the pitch of which can be regulated according to the pressure of the motive agent.

The invention consists of a bell held longitudinally adjustable on a fixed web forming longitudinal chambers of different lengths.

The invention also consists of certain parts and details and combinations of the same, as will be fully described hereinafter, and then pointed out in the claims.

Reference is to be had to the accompanying drawings, forming a part of this specification, in which similar letters of reference indicate corresponding parts in all the figures.

Figure 1 is a sectional side elevation of the improvement on the line 1 1 of Fig. 2. Fig. 2 is a sectional plan view of the same on the line 2 2 of Fig. 1, and Fig. 3 is a sectional side elevation of a modified form of the improvement.

The improved steam-whistle is provided with the usual nozzle A, formed in the top at the center with a threaded opening B, in which screws the screw C, projecting from the lower end of the web D, having a central stem E, of which the said screw C is a continuation. From the stem E project radially a series of longitudinally-arranged partitions F F′ F^2, connected with each other by transverse partitions G G′ G^2, located one above the other, as is plainly shown in Fig. 1, so as to form longitudinal chambers of different lengths in connection with the bell H, fitted over the web D, the inner surface of the bell engaging the outer edges of the partitions F F′ F^2 G G′ G^2.

As shown in the drawings, the transverse partition G connects the longitudinal partitions F′ and F^2 with each other and is located highest, and the other transverse partition G^2 connects the longitudinal partitions F^2 and F with each other and is the lowest, while the third transverse partition G′ connects the partition F with the partion F′ and is located about midway between the transverse partitions G^2 and G.

In order to arrange the whistle for different pressures of the motive agent, the bell H is made longitudinally adjustable relative to the web D, so that the lower edge of the bell is moved nearer to or farther from the top of the nozzle A, according to the pressure of the motive agent. It is understood that by this longitudinal adjustment of the bell H relative to the web D and the nozzle A the longitudinal chambers formed by the web within the said bell are increased or decreased in length according to the downward or upward movement of the bell.

In order to adjust the bell longitudinally, I prefer the construction shown in Figs. 1 and 2, in which the stem E of the web D is provided at its upper end with a projection I, formed with screw-threads engaging a nut J, extending through the cap K of the bell H, the said nut being formed at its lower end with a flange J′, engaging the under side of the cap K. On the projecting end of the nut J is screwed or otherwise secured a nut or collar L, engaging the top of the cap K, so that the nut J is free to turn within the said cap K. A jam-nut N screws on the extreme upper end of the threaded projection I to lock the nut J in place after the bell H is adjusted to the proper position. In order to guide the bell H when adjusting the same on the fixed web D, a set-screw O is provided, screwing in the said bell and engaging a longitudinal groove F^3, formed in one of the partitions F, F′, or F^2. It will be seen that by loosening the jam-nut N the nut J can be screwed up or down on the threaded projection I, so that the bell H is adjusted longitudinally on the web, as the nut J supports the bell. When the desired position is reached, the jam-nut N is screwed down upon the upper end of the nut J, so as to lock the latter in place on the threaded projection I. A turning of the bell

H is prevented by the set-screw O engaging the longitudinal groove F^3. Now in case the bell H becomes dented through any cause whatever, the said bell can be conveniently removed by the operator removing the screw O and the jam-nut N and then turning the nut J outward to unscrew the same from the projection I. By this movement the bell H is carried outward without turning, as the dent would prevent turning of the bell by striking one of the partitions F, F′, or F^2.

As illustrated in Fig. 3, the bell H is held longitudinally adjustable on the web D by means of an interior screw-thread H′, formed on the said bell H and screwing on corresponding threads F^4 and G^3, formed on the longitudinal and transverse partitions F and G, respectively. The nut J and jam-nut N are omitted, and the cap K of the bell is formed with a fixed knob or handle K′, as is plainly shown in the said figure. The base of the knob K′ is preferably polygonal, and is adapted to be engaged by a wrench or other tool for conveniently turning the bell to raise or lower the same.

Having thus fully described my invention, I claim as new and desire to secure by Letters Patent—

1. A steam-whistle comprising a fixed web and a bell held longitudinally adjustable on the said web and forming with the latter longitudinal chambers of different lengths, substantially as shown and described.

2. A steam-whistle comprising a nozzle, a web secured on the said nozzle and provided with longitudinal and transverse partitions, and a bell fitted over the said web and held longitudinally adjustable thereon, substantially as shown and described.

JOHN EINIG.

Witnesses:
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