H. D. HOUGH.

AUTOMOBILE WHISTLE.

APPLICATION FILED FEB. 29, 1912.

1,045,143. **Patented Nov. 26, 1912.**

FIG. 1.

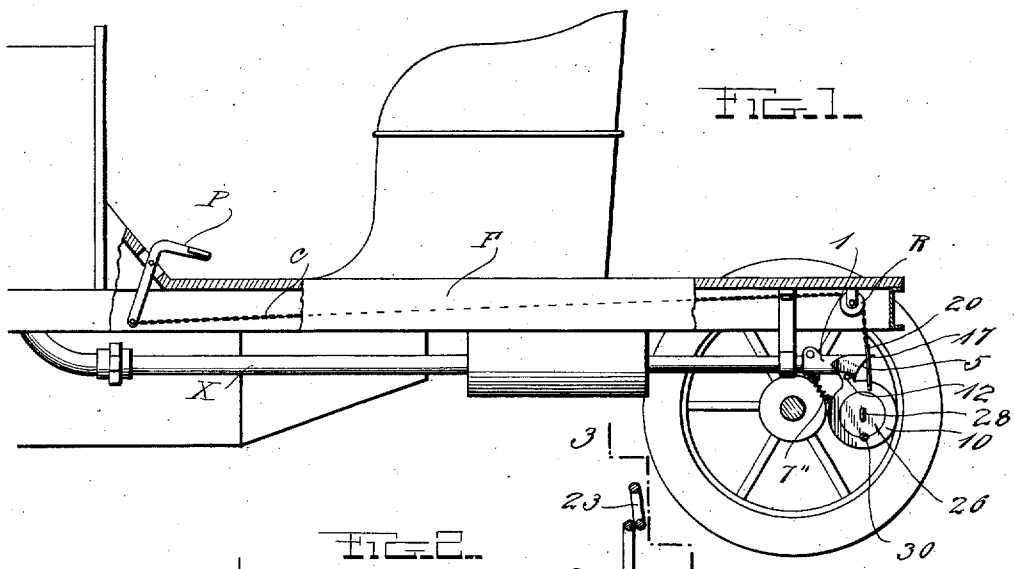


FIG. 2.

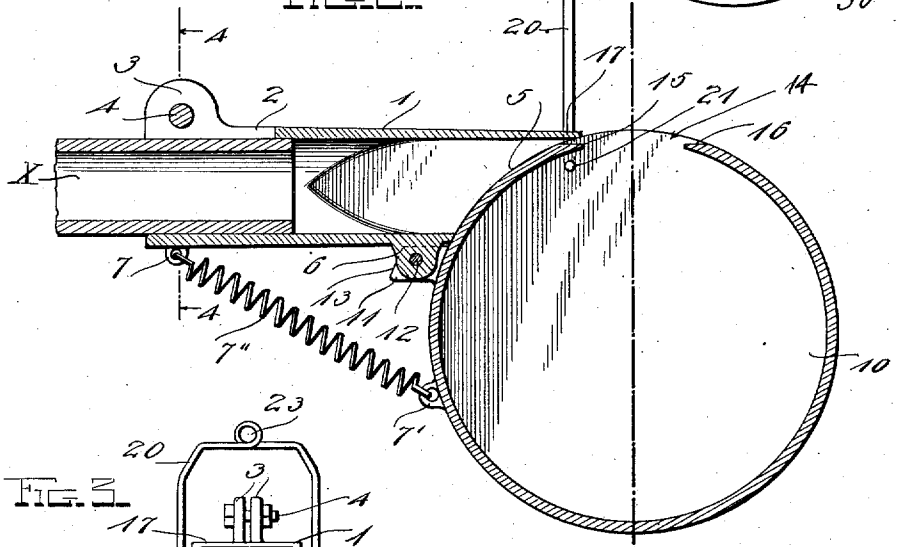


FIG. 3.

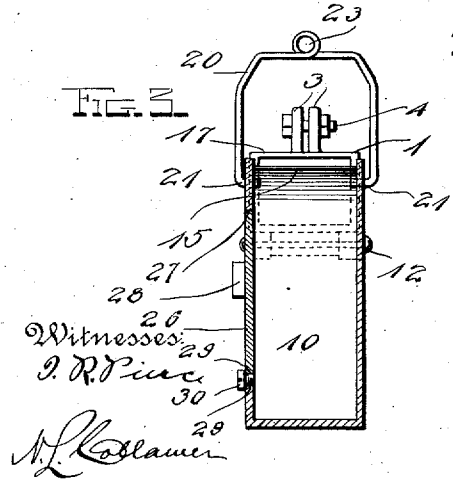
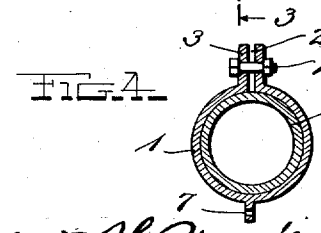


FIG. 4.



Witnesses:
J. R. Pierce
N. L. Coblentz

Inventor.
H. D. Hough,
by H. B. Williamson & Co.
Attorneys.

UNITED STATES PATENT OFFICE.

HERBERT D. HOUGH, OF PROVIDENCE, RHODE ISLAND.

AUTOMOBILE-WHISTLE.

1,045,143. Specification of Letters Patent. Patented Nov. 26, 1912.

Application filed February 29, 1912. Serial No. 680,664.

To all whom it may concern:

Be it known that I, HERBERT D. HOUGH, a citizen of the United States, residing at Providence, in the county of Providence and State of Rhode Island, have invented certain new and useful Improvements in Automobile-Whistles; and I do 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 signals, and more especially to those ordinarily used upon motor vehicles; and the object of the same is to produce a whistle adapted for application to the outlet end of the exhaust pipe of the motor.

A further object is to produce a whistle of this character which is as far as possible free from rattle, and a still further object is to keep the whistle proper out of the direct line of the exhaust gases when it is not being used and to provide means for readily cleaning its interior.

These and other objects are carried out by the construction hereinafter more fully described and claimed and as shown in the drawings wherein—

Figure 1 is a general side elevation of a part of the automobile chassis, showing the relative arrangement and disposition of the parts of this improved signal, showing the latter in its normal or inactive position out of alinement with the exhaust pipe. Fig. 2 is an enlarged central longitudinal section through the whistle alone, showing the position the parts assume when a signal is being sounded. Fig. 3 is a cross section on the line 3—3 of Fig. 2, and Fig. 4 is a similar section on the line 4—4 thereof.

In the drawings the letter F designates the frame or chassis of an ordinary automobile employing a gasolene engine, and X is the exhaust pipe from the latter which is herein shown as leading to the rear beneath said frame so as to discharge the spent gases behind the machine.

In the present embodiment of my idea, the letter P designates a pedal adapted to be depressed by the foot of the driver and C is a chain leading from this pedal rearward over a pulley or roller R to the whistle which forms the subject matter of my present improvement and will now be described in detail.

The numeral 1 designates a short piece of tubing, whose forward end is split as at 2 and provided with ears 3 adapted to be drawn together by a bolt 4 whereby this end of the tubing may be clamped upon the outer end of the exhaust pipe; and the other end of the tubing is by preference made substantially square in cross section as seen in section in Fig. 3, its rear extremity being cut off on a curved line 5 as best seen in Fig. 2. Beneath this end of the tubing depends a lug 6, and beneath the forward end another lug 7.

The numeral 10 designates a drum of about the relative size and shape shown in the drawings, which is supported from the rear end of the tubing 1 by means of two ears or lugs 11 pivotally mounted as at 12 astride the rearmost lug 6, and said ears preferably having angular shoulders 13 which contact with the under side of the piping or tubing 1 when the device stands in normal position as seen in Fig. 1. The periphery of the drum also carries another lug or ear 7′ connected by a coiled spring 7″ with the forward lug 7 beneath the tube 1, and the tendency of this spring is to hold the parts as shown in Fig. 1 so that the shoulders 13 of the ears 11 rest against the under side of the tube 1 and rattling is prevented. The periphery of the drum is closed entirely around the same, excepting at one point where an opening 14 is left, and in front and in rear of the same the edges of the peripheral wall are beveled off as at 15 and 16. The position of this opening is such that when the drum is turned on its pivot 12 as shown in Fig. 2, the edge 15 passes the extremity 17 at the rear end of the tube 1 and leaves a slight space between them through which the exhaust gases are directed, and the opposite edge 16 stands in the path of said gases and "splits" them so as to produce a signal, as well understood in this art, a portion of the gases traveling

around within the drum and out the opening and thereby producing a whistling noise. Care should be taken in making and assembling the parts that they are of such relative size and disposition that there is a small outlet between the edges 15 and 17 so that the escaping gases will not be choked; but when the whistle is not in use and hangs as seen in Fig. 1, the rear end of the extension tube 1 is wide open and there is no interruption whatever to the free escape of the gases of combustion.

While any approved means may be employed for turning the drum on its pivot 12, I preferably make use of the pedal and connecting mechanism above referred to, and of a bail 20 whose inturned extremities 21 are mounted in eyes or holes in the sides of the drum and whose body spans the rear end of the tube 1, while its center 23 has an eye connected to the rear end of the chain C. When the latter is drawn upon by manipulation of the pedal, this bail swings the entire drum around its pivot 12 to the position shown in Fig. 2 and a blast is sounded as above described; and when pressure on the chain is released the contraction of the coiled spring restores the parts to the position shown in Fig. 1 where the drum is entirely out of the path of the escaping gases, and the bail at this time straddles the tube 1 so that it also offers no obstruction to the escape of the gases. I repeat that this illustration and description cover one form of actuating mechanism which may be used in connection with this whistle, but I desire not to be limited to the same.

A detail of construction which may be and preferably is employed in connection with this invention consists in making one head of the drum removable so that its interior may be cleaned of the soot and carbon deposits which accumulate therein, in addition to the dirt which might fall into the same. Here again any approved means may be employed for carrying out the end in view, but by preference I use a disk 26 of considerable size as one head of the drum and secure it removably or detachably thereto in any suitable manner, as by forming a thread 27 around its periphery and screwing it into a large threaded hole in one end of the drum as seen in Fig. 3, leaving a handle 28 on the exterior of the disk by which it may be rotated in either direction; or by forming registering notches 29 in the contiguous edges of the opening in this head of the drum and the periphery of the disk, and passing a screw or other fastening device 30 through said notches when they register so as to prevent the dislocation of the disk or its rotation which might disconnect its threads. It is obvious that by removing this disk (especially if it be of quite large size as shown) the operator may gain access to the interior of the drum and clean the same quite easily, after which the disk is replaced and the device is again ready for use. Here again I have had in mind a construction which will prevent rattling of parts, while still conserving strength and simplicity. The precise details of construction may be modified without departing from the principle of my invention, and I deem it unnecessary to state the sizes, proportions and materials.

What is claimed as new is:

1. In an automobile alarm, the combination with a tube whose front end is adapted for connection with the exhaust and whose rear end is made substantially square in cross section and undercut on a curved line, and lugs depending from the front and rear ends of said tube; of a drum having an opening in its periphery, lugs on the latter disposed to stand astride the rearmost lug on said tube and having shoulders contacting with said tube when the drum hangs pendant, a pivot pin through the three alined lugs, a contractile spring connecting the remaining lug on the drum with the remaining lug on the tube, and means for swinging the drum on its pivot against the tension of said spring, for the purpose set forth.

2. In an automobile alarm, the combination with a tube whose front end is adapted for connection with the exhaust and whose rear end is undercut on a curved line, and a lug near its rear end; of a drum having an opening in its periphery, lugs on the latter disposed to stand astride that on the tube and having shoulders contacting with said tube when the drum hangs pendant, a pivot pin through the three alined lugs, means for swinging the drum normally forward beneath its pivot with yielding force, a bail whose extremities are connected with the drum in rear of its pivot and whose body stands astride said tube, and manually operated means for lifting said bail from a remote point, for the purpose set forth.

3. In an automobile whistle, the combination with a tube adapted to be connected with the rear end of the exhaust and having its rear extremity undercut, a drum having an opening in its periphery, and a large threaded hole in one head, a pivot supporting said drum beneath the tube, means for swinging it normally forward around its pivot, and manually operated means for swinging it in the opposite direction so that said opening stands partly across the outlet end of said tube; of a disk having threads around its edge adapted to engage those

around said hole, the periphery of said disk and the inner edge of the drum head around the hole having notches adapted to register, fastening devices adapted to engage said notches when they are in register, and a handle on the disk.

In testimony whereof I have hereunto set my hand in presence of two subscribing witnesses.

HERBERT D. HOUGH.

Witnesses:
RUPELL C. C. DUBOIS,
CHARLES O. LATHAM.