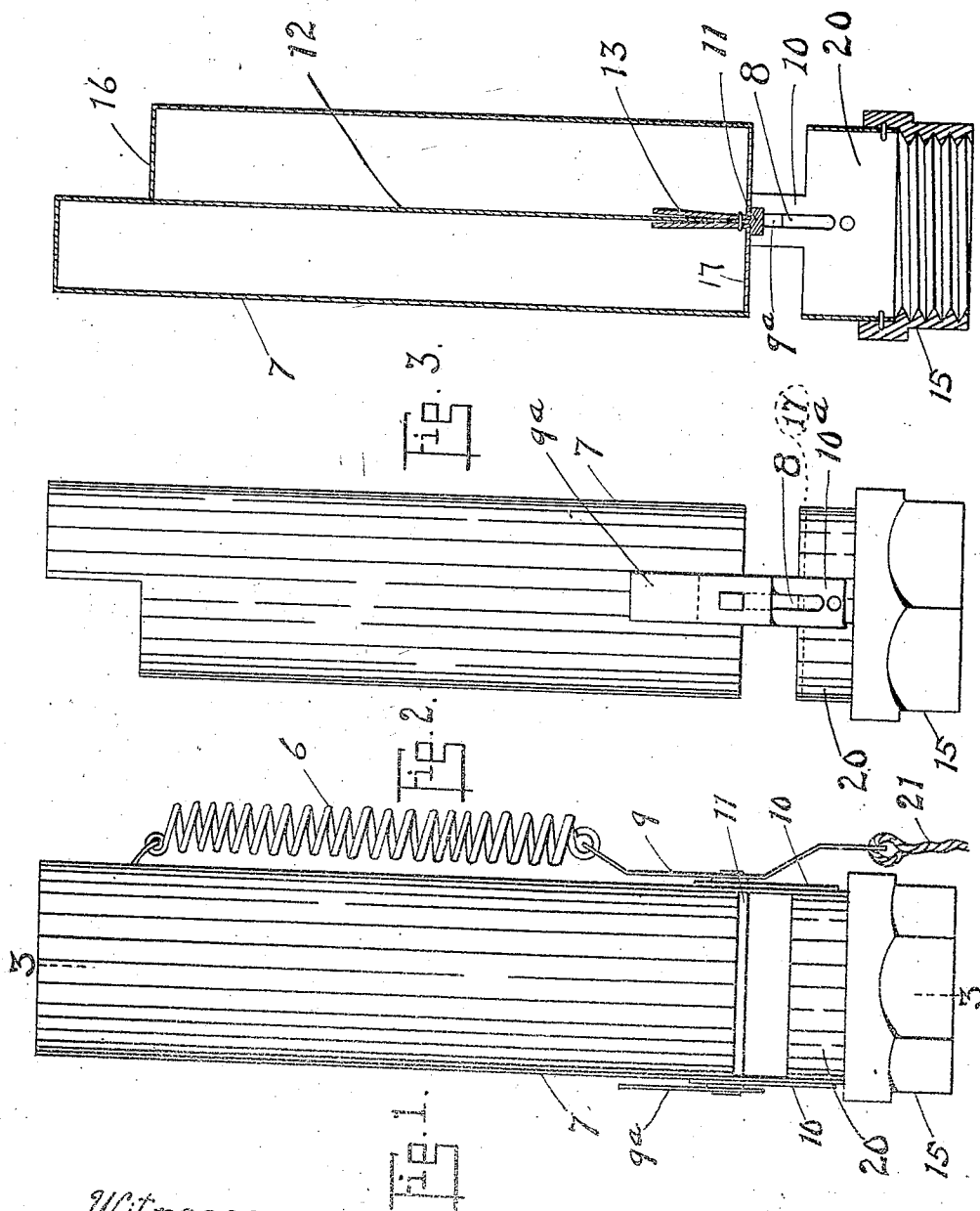


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 AUTOMOBILE HORN.
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1,046,756.

Patented Dec. 10, 1912.



Witnesses.

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AUTOMOBILE-HORN.

1,046,756.

Specification of Letters Patent.

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To all whom it may concern:

Be it known that I, DELOEY FIFIELD, a citizen of the United States, residing at Cleveland, in the county of Cuyahoga and State of Ohio, have invented certain new and useful Improvements in Automobile-Horns, of which the following is a specification.

This invention relates to automobile horns and is adapted for connection to the exhaust pipe of the automobile engine for the purpose of sounding the horn by means of the exhaust gases.

The object of the invention is to provide an improved horn which is characterized particularly by the absence of a valve, the sound being controlled by means of a plate or disk against which the exhaust gases impinge. This plate is located at the open end of the tube or barrel of the horn, and is normally closed against the same so that no sound is produced, but it may be pulled away from said tube to open the same and permit vibration of the tube.

The invention is illustrated in the accompanying drawings in which—

Figure 1 is a plan view of the horn. Fig. 2 is a similar view at a right angle to Fig. 1. Fig. 3 is a section on the line 3—3 of Fig. 1.

Referring specifically to the drawings, 7 indicates the barrel or tube of the horn, divided by a central partition 12 forming two compartments which by reason of the stepped end 16 are of different lengths so as to produce a chord.

17 indicates a valve plate controlling inlet of gases to the tube. A cross piece 11 is fixed to this plate, with its ends projecting through slots 8 in fixed guide pieces 10 which are fastened to opposite sides of the front end of the horn and also to opposite sides of a tube section 20 which is attached to a coupling 15 by means of which the device may be screwed onto the end of the ordinary exhaust pipe of an automobile engine. The plate 17 is provided on its inner side with two projecting spring fingers 13 which fit against the opposite sides of the partition 12 and which will move in and out against said partition, with slight friction, the purpose of these fingers being to

guide the plate or disk 17 and to hold the same in proper relation and position with respect to the tube. At one end, the cross piece 11 is attached to a sliding plate 9 which works beside the corresponding piece 10. A spring 6 is connected to the plate 9 at one of its ends, and a pull cord 21 is connected to the other end of the plate 9. The end of the cross piece 11 on the opposite side is attached to a sliding piece 9^a which works adjacent to the corresponding guide piece 10.

As will be seen there is a space between the adjacent ends of the tubes 7 and 20. The spring 6 by reason of its pull on the slide 9 normally holds the plate 17 closed against or just within the front end of the tube 7. In this position gases escaping through the tube 20 will strike the plate 17 and be deflected through the lateral openings or space between the tubes. To sound the horn, the cord 21 is pulled, which moves the plate 17 to position at the end of the tube 20, as indicated in dotted lines in Fig. 2. The gases which then impinge against said plate will be directed thereby in an annular stream against the tube or barrel 7. On releasing the pull on the cord the spring will close the plate 17 against the tube 7 and stop the sound.

The invention therefore comprises the use of a vibratory plate which normally acts as a closure for the tube of the horn but which may be moved toward the delivery tube 20 in which position it will direct gases impinging against the same, toward the bell or tube to produce the desired sound or signal.

The invention is not limited to the exact form shown and described, but the construction may be varied in a number of ways, within the scope of the following claims.

I claim:

1. A horn comprising a tube, a pipe adapted to direct fluid toward the mouth of said tube, said tube and pipe being spaced to form lateral openings therebetween, guides extending across said space, a valve disk yieldingly held against the mouth of the tube and forming a closure for the same, a cross piece attached to said disk and slid-

able on the guides, and means to move said disk from said mouth, and toward the end of the pipe, to open the tube.

2. A horn comprising a tube having a
5 partition therein, a valve disk having spring fingers embracing said partition, said disk being located at the mouth of the tube and movable axially toward and from the same,

and a pipe for fluid directed toward the side of the disk opposite to the tube.

In testimony whereof, I do affix my signature in presence of two witnesses.

DELROY FIFIELD.

Witnesses:

JOHN A. BOMMARDT,

ARCHIE FIFIELD.