

N. B. WALES.
 COMBINED LAMP AND AUDIBLE SIGNAL.
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1,200,554.

Patented Oct. 10, 1916.

Fig. 1

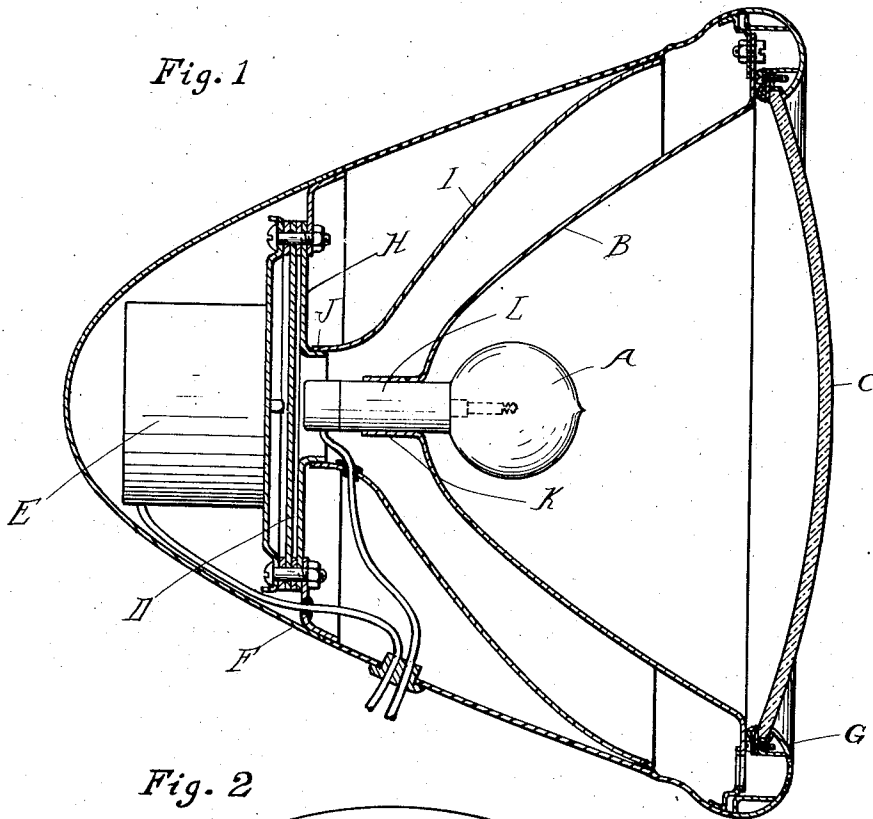
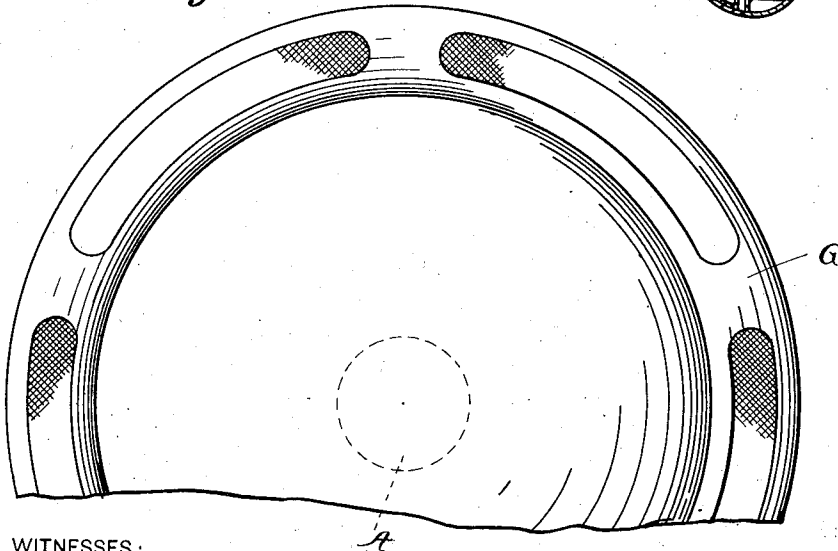


Fig. 2



WITNESSES:

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NATHANIEL B. WALES, OF SAGINAW, MICHIGAN, ASSIGNOR, BY MESNE ASSIGNMENTS,
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COMBINED LAMP AND AUDIBLE SIGNAL.

1,200,554.

Specification of Letters Patent.

Patented Oct. 10, 1916.

Application filed December 27, 1913. Serial No. 808,937.

To all whom it may concern:

Be it known that I, NATHANIEL B. WALES, a citizen of the United States of America, residing at Saginaw, in the county of Saginaw and State of Michigan, have invented certain new and useful Improvements in Combined Lamps and Audible Signals, of which the following is a specification, reference being had therein to the accompanying drawings.

The invention relates to combined audible signal and lamp structures, and it is the object of the invention to combine an efficient sound-producing instrument with a lamp and to compactly arrange both instruments in a symmetrical casing.

In the drawings: Figure 1 is a central longitudinal section through the device; and Fig. 2 is a front elevation thereof.

A is the lamp bulb; B the reflector; and C the transparent front of the lamp case. The sound-producer, which is combined with the lamp, comprises a vibratory diaphragm D, and operating means E, preferably of electro-magnetic construction. These elements are arranged in rear of the reflector B and are inclosed by an outer casing F having the perforated front ring G surrounding the transparent front C and forming the sound outlet.

To obtain an efficient sound-producing instrument, it is necessary to provide a flaring horn or megaphone, and the sound is intensified where the diaphragm is inclosed in an air-tight case, with but a slight clearance space centrally connected with the small end of the horn which is of lesser area than the diaphragm. The lines of such a construction do not, however, form a pleasing appearance, and moreover do not conform to the standard shape of lamps as now in general use. I have therefore devised a construction in which both the sound-producing instrument and the lamp are inclosed in an outer casing F of the usual paraboloid shape and of a size sufficient to accommodate the diaphragm D and its operating mechanism E in rear of the reflector B. Efficiency is then imparted to the sound-producer by

providing the diaphragm-inclosing case H, and a flaring horn or megaphone I connected with this case H and extending into proximity to the outer case F. As specifically shown, the case H is provided with an outwardly-extending flange J and the horn I is telescopically engaged with this flange and surrounds the reflector B as well as the rearwardly-extending sleeve K thereof which forms a support for the lamp socket L.

The device constructed as described has a symmetrical and pleasing appearance, while the efficiency of the sound-producer is greatly increased over a construction in which the megaphone I is omitted.

What I claim as my invention is:—

1. The combination with a lamp and a reflector therefor, of a sound-producer comprising a vibratory diaphragm and operating mechanism therefor, arranged in rear of said lamp and reflector, a common case for inclosing said sound-producer and lamp, and a flaring horn or megaphone in the space between said reflector and inclosing case for intensifying the sound.

2. The combination with a lamp and a reflector therefor, of a sound-producer comprising a vibratory diaphragm and operating mechanism therefor, arranged in rear of said lamp and reflector, a common case for inclosing said sound-producer and lamp, a perforated ring connecting said reflector with said inclosing case, and a horn or megaphone arranged between said reflector and case, having its small end of lesser diameter than the diaphragm and its large end extending in proximity to the outer case.

3. The combination with a lamp and parabolic reflector therefor, of a sound-producer comprising a vibratory diaphragm and actuating mechanism therefor arranged in rear of said lamp and reflector, a case in the form of a paraboloid surrounding said sound-producer and lamp, and a horn or megaphone arranged between said reflector and case, having its small end of lesser area than said diaphragm and its large end extending into proximity to the outer case.

4. The combination of a lamp, a reflector

therefor, a sound-producer comprising a vibratory diaphragm, actuating mechanism therefor and a flaring megaphone surrounding said lamp reflector and having its small
5 end of lesser area than said diaphragm, and a symmetrical case inclosing said sound-producer and lamp.

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

NATHANIEL B. WALES.

Witnesses:

JAMES P. BARRY,
ARTHUR D. PULVER.