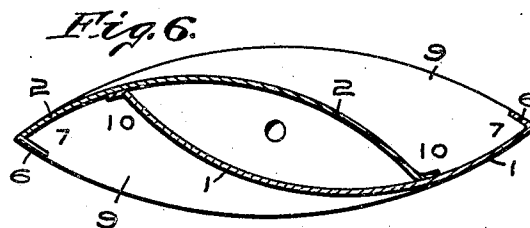
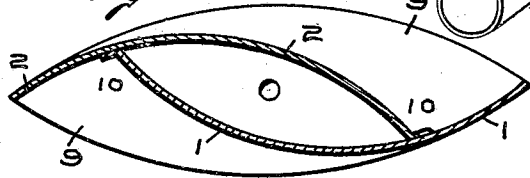
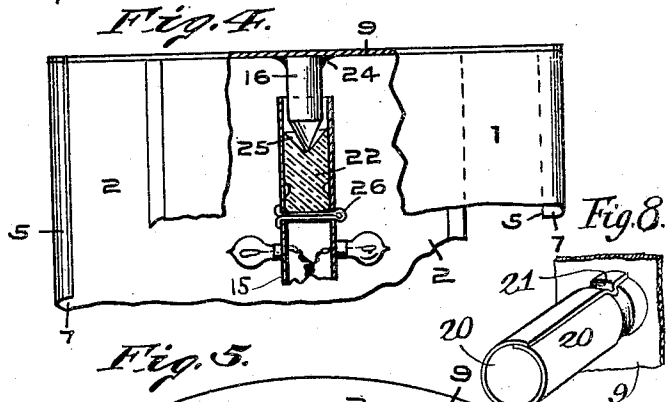
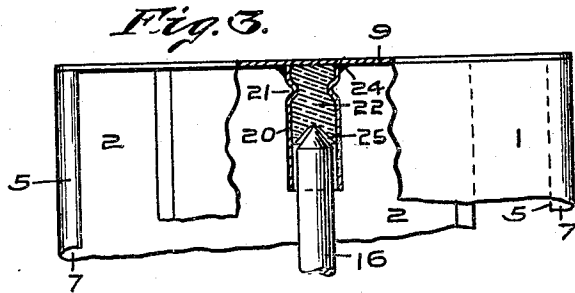
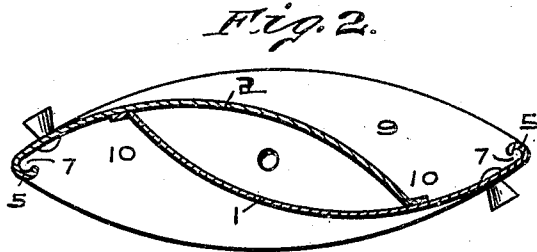
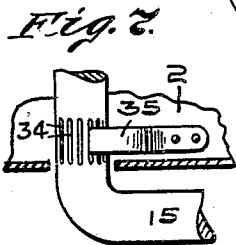
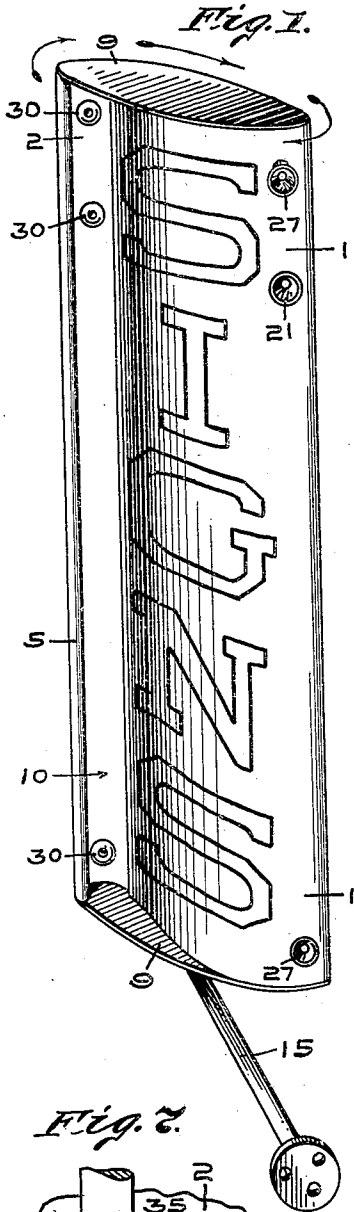


A. H. GROVE.  
REVOLUBLE SIGN.

APPLICATION FILED NOV. 7, 1907. RENEWED MAR. 25, 1909.

Patented Aug. 24, 1909.

932,120.



WITNESSES:

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Wm. Hurte.

INVENTOR

Albert H. Grove,  
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ATT'YS.

# UNITED STATES PATENT OFFICE.

ALBERT H. GROVE, OF INDIANAPOLIS, INDIANA.

## REVOLUBLE SIGN.

932,120.

Specification of Letters Patent.

Patented Aug. 24, 1909.

Application filed November 7, 1907, Serial No. 401,116. Renewed March 25, 1909. Serial No. 485,816.

*To all whom it may concern:*

Be it known that I, ALBERT H. GROVE, a citizen of the United States, residing at Indianapolis, in the county of Marion and State of Indiana, have invented certain new and useful Improvements in Revoluble Signs, of which the following is a specification.

This invention relates to a wind revoluble sign for displaying advertising matter; and the object of the invention is to provide a sign of the above character which will be attractive, simple in construction and cheap to manufacture.

A further object consists in providing a sign of the above character with a simple means for hanging or mounting the sign whereby there will be a minimum friction on the pivotal support; said pivot being mounted within the sign body so as to be protected from the weather and thereby prevent interference with the free and easy rotation of the sign.

A further object consists in providing a sign of the above character with whistles or similar devices for producing sounds, harmonious or otherwise, while rotating, in order to direct the public's attention thereto, and thus insure that the advertising matter displayed on the sign faces will be more widely read, than would otherwise obtain.

I accomplish the objects of my invention by means of the sign illustrated in the accompanying drawings, forming a part hereof, in which—

Figure 1 is a perspective view of my improved revoluble sign in operating position. Fig. 2 is a cross section of the sign body showing the peculiar formation and relation of the sign faces. Fig. 3 is a fragmentary detail view of the upper portion of the sign body showing the construction of the pivotal bearing upon which the body is mounted. Fig. 4 is a view similar to Fig. 3 except the journal-pintle is inverted. Fig. 5 is a view similar to Fig. 2 except that the wind-pockets at the ends of the sign blades have been omitted. Fig. 6 is a view similar to Fig. 2 except that the ends of the sign blades are bent backward on an acute angle to form wind-pockets. Fig. 7 is a modified view of an arrangement to produce sounds when the sign rotates. Fig. 8 is a detail perspective view of the sleeve for retaining the bearing cup.

The sign body is composed of a pair of

concavely bent plates 1 and 2, which are partly lapped over each other, as shown in the drawings, to present sign faces formed on reverse curves in order to gather the wind and cause free rotation of the sign. One edge of each of the plates 1 and 2 instead of being left straight, as shown in Fig. 5, may be turned as at 5 and 6, shown in Figs. 2 and 6, to form the wind-pockets 7 to catch the air when moving off the convex portions of the sign faces and thus accelerate rotatorial movement of the sign. The sign body is provided with the end-plates 9 which determine the outline of the ends of the sign and impart a finished appearance thereto. The plates 9 also close the ends of the channel 10, formed by the concave portions of the sign faces, and also the ends of the wind-pockets 7. The sign body is supported on a single supporting arm 15, which is bent upward and terminates in the journal-pintle 16 on which the sign body turns. By this arrangement the pivotal bearing of the sign is at all times protected from the weather, and thus interference with the operation of the sign is prevented.

In Fig. 3 of the drawing I have shown the construction of the pivot wherein the friction is reduced to a minimum, and consists in providing a split sleeve 20 formed of thin sheet material and provided with an internal annularly extending shoulder 21. A glass cup 22 is slipped into the sleeve 20 and is provided with an annular groove which engages the shoulder 21, so that when the sleeve is thoroughly soldered to the top plate 9, as shown by the fillet 24, the cup 22 is securely held in position. The glass cup 22 is provided in its lower end with a conically shaped depression 25 to receive the correspondingly shaped pintle 16. It will be noted that the sleeve 20 extends considerably below the cup 22, and the object for this additional length is to prevent the sign body from being displaced from the pintle 16. By this simple and efficient construction an almost non-frictional contact for the sign is secured. It may here be mentioned that porcelain or similar material can be substituted for the glass cup, but I prefer glass since it can be more easily and cheaply made.

Fig. 4 of the drawing shows the glass cup 22 inverted and let into the arm 15, which in this instance is a hollow pipe, the cup being held in the desired position by means of the transverse pin 26. In this instance the pin-

the 16 is secured to the top plate 9. This rearrangement of the pivot is more desirable when illuminating the sign for displaying advertisements at night, for the reason that the hollow supporting arm affords the necessary conduit and insulation for the electric wires. In case I desire to provide an illuminating design for displaying advertisements at night, I simply form the sign faces 1 and 2 of translucent material, such as celluloid, etc., while the letters will be opaque.

To make my sign more attractive and direct attention thereto in day time, I provide the sign with numerous sound producing devices, such as whistles, rattlers, etc., whereby sounds, either harmonious or otherwise, will be produced through the action of the sign body. One of the common expediences employed in producing sounds, shown in Fig. 1, is to provide a number of the old and well known whistles 30. As the sign rotates whistling sounds will emanate from the whistles and, as will be readily understood, the sounds so produced will increase and decrease in range as the travel of the wind varies. The inlets to the whistles are provided with converging mouth-pieces 27, so that more air will be gathered to increase the volume of sound produced.

Fig. 7 illustrates a rattler construction which may be applied to the sign for producing sounds. In this instance I provide the supporting rod at a convenient place with a plurality of longitudinally extending grooves 34 which are engaged by the end of a leaf spring 35, so that as the sign rotates the end of said spring will drag over said grooves and thus create a rattling noise to attract attention.

Having thus fully described my said invention, what I desire to secure by Letters Patent, is—

1. A revoluble sign comprising two similarly concavely bent plates relatively arranged to partly overlap with the concave surfaces facing each other, and means for mounting said sign in operable position.

2. A revoluble sign comprising two similarly concavely bent plates relatively arranged to partly overlap with the concave surfaces facing each other, end-plates to

close the ends of the sign, and means for mounting said sign in operable position.

3. A revoluble sign comprising two similarly concavely bent plates relatively arranged to partly overlap with the concave surfaces facing each other, one end of each plate being turned to form wind-pockets, and means for mounting the sign in operable position.

4. A revoluble sign comprising two similarly concavely bent plates relatively arranged to partly overlap with the concave surfaces facing each other, to form a centrally located and longitudinally extending hollow chamber, end-plates secured to the ends of the sign to close said central chamber, a pivotal bearing arranged within said chamber to be engaged from the bottom of the sign, and means extending up through the bottom of the sign and into the central chamber and adapted to engage the pivotal bearing.

5. A revoluble sign comprising two similarly concavely bent plates relatively arranged to partly overlap with the concave surfaces facing each other to form a centrally located and longitudinally extending hollow chamber, end plates secured to the ends of the sign to inclose said central chamber, a pivotal bearing arranged within said chamber to be engaged from the bottom of the sign, means extending up through the bottom of the sign and into the central chamber and adapted to engage the pivotal bearing, and means for preventing displacement of the sign from said bearing.

6. A revoluble sign comprising two similarly concavely bent plates relatively arranged to partly overlap with the concave surfaces facing each other, in combination with sound producing devices carried by said plates which are adapted to produce sound by the action of the air on said devices.

In witness whereof, I, have hereunto set my hand and seal at Indianapolis, Indiana, this 30th day of October, A. D. one thousand nine hundred and seven.

ALBERT H. GROVE. [L. s.]

Witnesses:

F. W. WOERNER,  
L. B. WOERNER.