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J. A. DUGGAN.

HEADLIGHT AND ILLUMINATED SIGN FOR STREET CARS OR OTHER PURPOSES.

(Application filed Oct. 9, 1901.)

(No Model.)

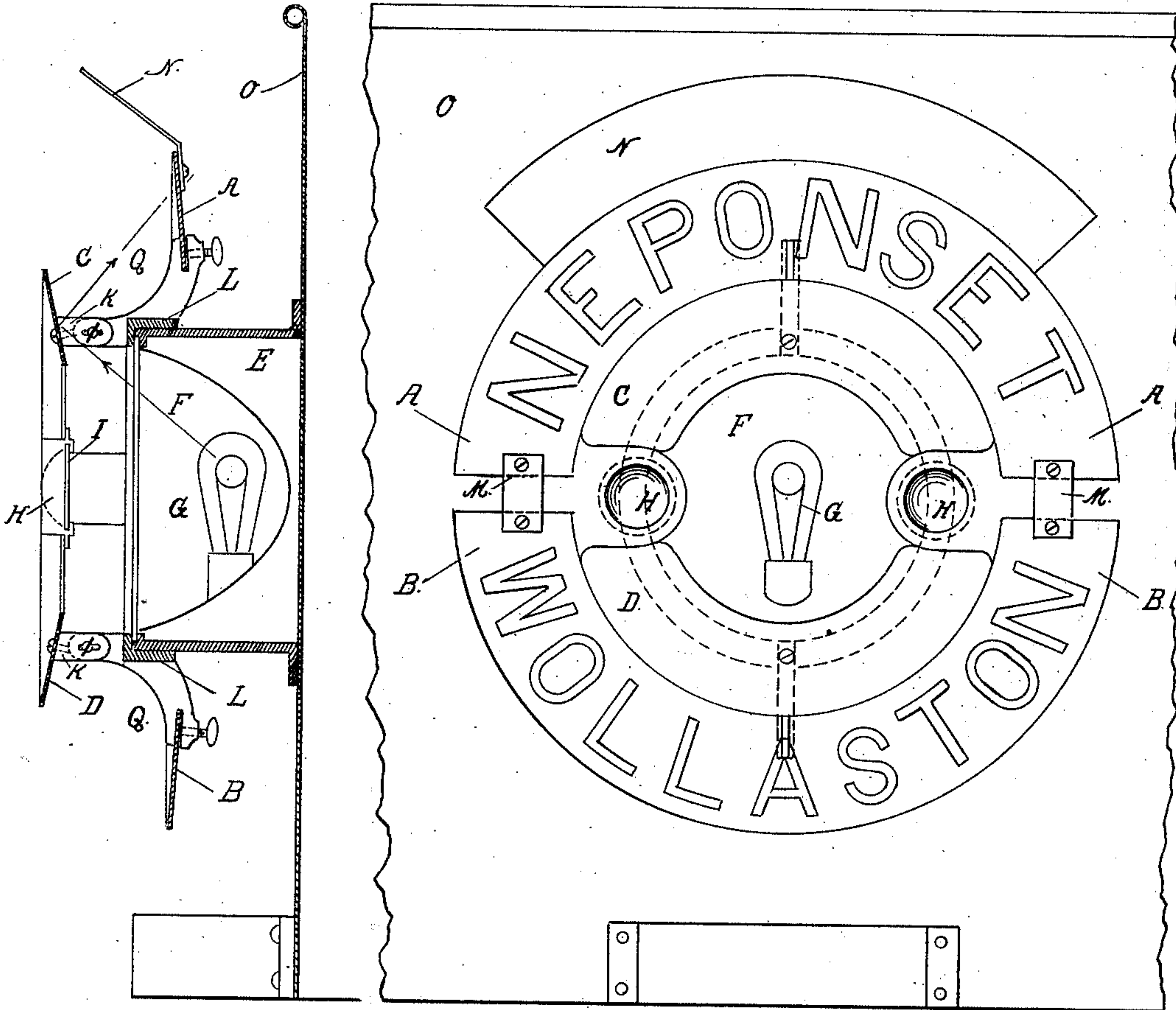


Fig 1.

Fig 2.

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HEADLIGHT AND ILLUMINATED SIGN FOR STREET-CARS OR OTHER PURPOSES.

SPECIFICATION forming part of Letters Patent No. 714,877, dated December 2, 1902.

Application filed October 9, 1901. Serial No. 78,126. (No model.)

To all whom it may concern:

Be it known that I, JOHN A. DUGGAN, of Quincy, in the county of Norfolk and State of Massachusetts, have invented certain new and useful Improvements in Headlights and Illuminated Signs for Street-Cars or other Purposes, of which the following is a specification.

My invention relates particularly to head-
lights or dasher-lights used upon street-cars,
but may also be advantageously used on loco-
motives, steam-trains, or any motor or vehi-
cle upon which it is desired to denote the des-
tination or route or give other information
during day or night by signal or letters or by
both. It may also be used anywhere for gen-
eral advertising purposes; and it consists in
certain novel features of construction, ar-
rangement, and combination of parts, which
will be readily understood by reference to
the description of the accompanying drawings
and to the claims hereto appended and in
which my invention is clearly pointed out.

I am aware that "illuminated signs," so
called, have been used on cars and elsewhere;
and consist, generally, of an ordinary reflector
throwing light directly from the light to the
illuminated object. This form of illuminated
sign, particularly when used upon cars, re-
quires special lights and, when electricity is
used, extra wires, switches, and oftentimes
lamps of special design, making the cost of
providing and maintaining the same very ex-
pensive.

The object of my invention is to attain the
desired result by utilizing to a very large ex-
tent the lights and other fixtures now com-
monly used, without, however, in any way de-
tracting from the efficiency of their intended
purposes, as will appear by the mechanism
illustrated in the drawings.

Figure 1 is a vertical section through the
headlight and dashboard of a car. Fig. 2 is
a front view of a headlight and center por-
tion of a dashboard.

In the drawings different parts of both fig-
ures are represented by corresponding letters.

Letter O is the usual dashboard or support
for sustaining the headlight.

E is a headlight, which may be of any de-
sired construction.

L is a ring on outer edge of headlight-case.

F is a reflector, arranged in usual form to
throw the rays of light forward.

G is an electric light, but may be of any
light preferred.

C and D are also reflectors, preferably in
circular form, so constructed as to permit the
central rays of light from the headlight to
pass through and forward in the usual man-
ner, thus not interfering with the practical
purposes of the light as heretofore used.

A and B are signs or plates, which may
be portable, properly supported and encir-
cling the headlight.

The reflectors C and D and signs A and B
are supported by the arms or brackets Q,
forming part of the ring L, to which are at-
tached the arms K.

The arms K and brackets have attached
thereto the reflectors C and D.

The arms K and bracket L are provided
with slots and clamping-screws, which per-
mit the reflectors C and D, attached to the
arms K, to be adjusted to the distance and
angle desired from the headlight E.

N is a shield and reflector that may be at-
tached to the sign-plate or supporting-ring
and is for the purpose of protecting the eyes
of the driver or operator from any upward-
directed rays of light and reflects the same
upon the signs A and B.

To obtain the best results, it is desirable
that a strong light be reflected upon the
face of the signs, that preferably consists of
white letters on a dark ground. This is ac-
complished by making the reflecting plate or
disk of the proper shape and material, and
it is important that its face be placed at the
proper angle and distance from the headlight,
the object being to divert all the intercepted
rays of light upon the signs and nowhere else.

Letter H represents lenses or bull's-eyes of
glass in suitable supports so placed that rays
of light from the reflector F will pass through.
These lenses may be made to show different
colors by placing colored glass over the flat
surface of the lenses, grooves for this purpose
being provided on the supports referred to.

In order that different names or characters
may be shown, the sign-plates are made de-
tachable, and by reversing or changing them

any name can be displayed in the day and illuminated at night. These plates are held firmly in position by the arms Q, before referred to.

5 In the specification and claims hereto appended the word "headlight" when used will be understood as a general name for headlights, dasher-lights, signal-lights, or any light or lamp used for similar purposes.

10 What I claim as my invention, and desire to secure by Letters Patent, is—

1. The combination in a headlight of the headlight E, reflector F, light G, with auxiliary reflectors C and D, adjusting-arms K,
15 brackets Q, sign-plates A, all substantially as set forth.

2. In a headlight the combination of adjustable reflecting-plates C and D supported by the arms K and brackets Q, with detachable

sign-plates A and B and protecting-shield and reflector N, substantially as set forth. 20

3. An attachment for a headlight, consisting of the ring having thereon the arms L and K, supporting auxiliary reflectors C and D, sign-plates A and B, and the reflector and shield N, substantially as described and for
25 the purpose specified.

4. A headlight having adjustable auxiliary reflectors and combined with removable sign-plates placed near the face of the headlight
30 and encircling the same and receiving rays of light diverted from the central direct rays of the headlight.

JOHN A. DUGGAN.

In presence of—

A. T. EMMONS,
WILLIAM C. LORING.