

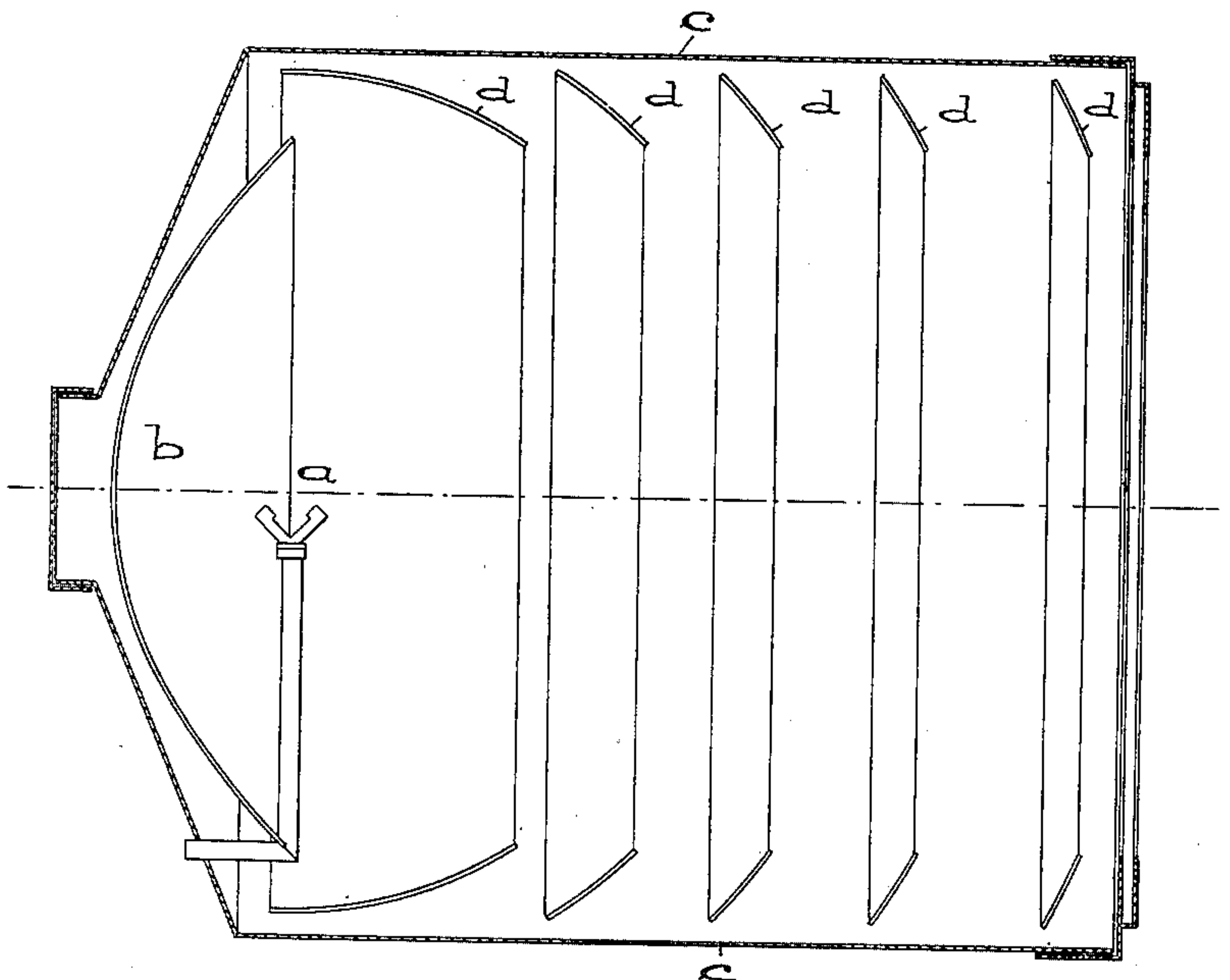
No. 657,693.

Patented Sept. 11, 1900.

F. EGNELL.
LIGHT REFLECTOR.

(Application filed Mar. 16, 1900.)

(No Model.)



WITNESSES:

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UNITED STATES PATENT OFFICE.

FRITZ EGNELL, OF STOCKHOLM, SWEDEN, ASSIGNOR TO THE NORDISKA
ACETYLEN-AKTIEBOLAGET, OF SAME PLACE.

LIGHT-REFLECTOR.

SPECIFICATION forming part of Letters Patent No. 657,693, dated September 11, 1900.

Application filed March 16, 1900. Serial No. 9,001. (No model.)

To all whom it may concern:

Be it known that I, FRITZ EGNELL, engineer,
residing at No. 37 Strandvasen, Stockholm,
Sweden, have invented certain new and use-
ful Improvements in Light-Reflectors; and I
do hereby 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,
reference being had to the accompanying
drawing, and to letters of reference marked
thereon, which forms a part of this specifica-
tion.

In the common devices for reflecting rays
generally only such light is reflected which
from the light source is thrown on a reflector
placed behind the same. The device for re-
flecting rays to which the present invention
relates is, on the contrary, thus arranged that
the whole mass of light that is thrown out to
all sides of the casing is gathered up and re-
flected in a parallel and homogeneous bunch
of light through the anterior light-opening of
the casing.

The annexed drawing shows the device in
question in a longitudinal section.

The light source *a* is placed in the focus of
a parabolic mirror *b*. The quantity of light
that is commonly not gathered up falls on the
inner side of the cylindrical casing *c*. Along
the whole said inner side there is thus ar-
ranged in the manner shown a series of con-
tinual annular reflectors *d*, thus placed and
constructed that they reflect the light radiated
from the light source *a* toward them to the
focus of the parabolic mirror *b*. The rays
which are thus commonly lost in their way
return to the light source with such a direc-
tion that the same are reflected by the para-
bolic mirror as if they were rays coming di-
rectly from the light source. Furthermore,
the annular reflectors *d* are thus constructed
that the rings which are placed farthest most

reflect the light to the central parts of the
parabolic mirror and the nearer rings to its
outer parts, this continually, so that an even
augmentation of the directly-reflecting bunch
of light is effected.

The device just described may of course be
used in lanterns, lamps, or in any situations
where it is desirable to gather all the rays of
a light. Moreover, the light source may be
of any kind. In the apparatus illustrated an
acetylene-gas flame is used.

I claim—

1. In an apparatus as described, the arrange-
ment on the inner side of the chamber or cas-
ing, surrounding the light source of a number
of annular or frame-shaped reflectors *d* posi-
tioned to reflect the rays coming from the light
source *a* back through the light source to-
ward a parabolic mirror *b*, situated behind
the same, in the focus of which the light source
is situated, in order that the light radiating
from the light source as well obliquely up-
ward and forward as backward may be gath-
ered up and reflected forward through the
light-opening.

2. The combination with a light and a re-
flector arranged back of the same, of a series
of reflecting-rings spaced a distance apart in
front of the light, the reflecting-walls of said
rings extending at predetermined and vary-
ing angles, the ring most remote from the light
being arranged to reflect the same toward the
center of the reflector back of the light, while
the ring-reflectors near the light are extended
at such angles that they reflect the light to-
ward the edge of the back reflector.

In testimony that I claim the foregoing as
my invention I have signed my name in pres-
ence of two subscribing witnesses.

FRITZ EGNELL.

Witnesses:

KONR. DAHLQVIST,
M. GENBERG.