UNITED STATES PATENT OFFICE.

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MINE-LAMP.

1,183,147. Specification of Letters Patent. Patented May 16, 1916.

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To all whom it may concern:

Be it known that we, WILLIAM McKEAN WHITE and EVERTON C. BROMMER, citizens of the United States, residing at Indianapolis, in the county of Marion and State of Indiana, have invented a new and useful Mine-Lamp, of which the following is a specification.

It is the object of our invention to provide a headlight construction, particularly applicable for mine locomotives which usually have rather rough traveling, wherein the jarring of the source of illumination and of the reflector is in large part avoided.

In carrying out our invention, we provide a reflector, preferably a glass reflector, and a source of illumination, preferably an incandescent lamp, and mount them in a suitable frame or casing, which in turn we mount in an outer frame or casing by a spring mounting. Preferably, this spring mounting includes a number of radial springs, preferably under tension, and one or more leaf springs which bear against the back of the inner casing.

The accompanying drawing illustrates our invention.

Figure 1 is a front view of a headlight embodying our invention; Fig. 2 is a side view thereof; Fig. 3 is a section on the line 3—3 of Fig. 2; Fig. 4 is a section on the line 4—4 of Fig. 1; and Fig. 5 is a detail of the mounting of one end of one of the radial tension springs.

The outer casing 10 is conveniently of a general cylindrical form and is provided with supporting legs 11 and a handle 12. At the front of this outer casing there is preferably a door 13, mounted on a hinge 14 and provided with a suitable latch 15. In this swinging door is the usual glass plate 16, through which the light rays are projected forward. Within the outer casing 10 is an inner casing 20. This is preferably of the form shown in Fig. 4, with a larger cylindrical front portion and a smaller cylindrical rear portion, the rear portion being closed by a rear wall 21. Within this inner casing 20 is the reflector 22, which is a glass reflector in the preferred form of our invention. An incandescent electric light 23 is mounted on the focus of this reflector 22, which is preferably a parabolic reflector, this lamp bulb being carried by a socket 24 in the axis of the reflector 22 but located behind such reflector. Around the larger forward portion of the inner casing 20 are a number of holes 25, through each of which extends a radial spring 26. The springs 26 are preferably tension springs. Each spring 26 is attached at each end to a screw 27, conveniently being ensmalled at the end to inclose the stem of such screw and to receive between such ensmalled end and the head of the screw a washer 28, as is clear from Fig. 5. The screws on the outer ends of the springs 26 project through the outer casing 10 and receive nuts 29, which bear against the outside of such outer casing. The screws 27 at the inner ends of the springs 26 project through brackets 30 carried by and inside of the inner casing 20, and also receive nuts 29. The nuts 29 are tightened to put the springs 26 under the desired tension. A pair of leaf springs 32 are fastened to the rear wall 33 of the outer casing 10, near the edge of such wall, and their inner and free ends bear against the rear wall 21 of the inner casing 20. The springs 32 are in a vertical plane, as is clear from Figs. 3 and 4. These leaf springs 32 assist the tension springs 26 in maintaining the inner casing 20 properly centered, and in preventing the jars of the locomotive from being transmitted to such inner casing and to the reflector 22 and lamp bulb 23.

We claim as our invention:

1. A headlight, comprising an outer casing, an inner casing, a reflector and a source of illumination carried by such inner casing, and a plurality of substantially radial tension springs supporting said inner casing from the outer casing, said tension springs passing through the inner casing and being attached to supports on the inside of the inner casing and to the outer casing.

2. A headlight, comprising an outer casing, an inner casing, a reflector and a source of illumination carried by such inner casing, and a plurality of substantially radial springs supporting said inner casing from the outer casing, said springs passing through the inner casing and being attached to supports on the inside of the inner casing and to the outer casing.

3. A headlight, comprising an outer casing, an inner casing, a reflector and a source

of illumination carried by such inner casing, and a plurality of substantially radial tension springs supporting said inner casing from the outer casing.

4. A headlight, comprising an outer casing, an inner casing, a reflector and a source of illumination carried by such inner casing, and a plurality of substantially radial springs supporting said inner casing from the outer casing.

5. A headlight, comprising an outer casing, an inner casing, a reflector and a source of illumination carried by such inner casing, a plurality of substantially radial tension springs supporting said inner casing from the outer casing, and a leaf spring acting between the outer casing and the rear wall of the inner casing.

6. A headlight, comprising an outer casing, an inner casing, a reflector and a source of illumination carried by such inner casing, a plurality of substantially radial springs supporting said inner casing from the outer casing, and a leaf spring acting between the outer casing and the rear wall of the inner casing.

7. A headlight, comprising an outer casing, an inner casing, a reflector and a source of illumination carried by such inner casing, a plurality of substantially radial tension springs supporting said inner casing from the outer casing, and a leaf spring acting between the outer casing and the rear wall of the inner casing, said leaf spring being in a vertical plane.

8. A headlight, comprising an outer casing, an inner casing, a reflector and a source of illumination carried by such inner casing, a plurality of substantially radial springs supporting said inner casing from the outer casing, and a leaf spring acting between the outer casing and the rear wall of the inner casing, said leaf spring being in a vertical plane.

9. A headlight, comprising an outer casing, an inner casing, a reflector and a source of illumination carried by such inner casing, and a plurality of tension springs supporting said inner casing from the outer casing.

10. A headlight, comprising a casing, a reflector and a source of illumination carried by such casing, and a plurality of substantially radial tension springs supporting said casing, said tension springs passing through the casing and being attached to supports on the inside of the casing.

In witness whereof, we have hereunto set our hands at Indianapolis, Indiana, this 25th day of June, A. D. one thousand nine hundred and fifteen.

W. McKEAN WHITE.
EVERTON C. BROMMER.