C. E. GODLEY.

DIRIGIBLE LAMP.

APPLICATION FILED FEB. 15, 1917.

1,248,476.

Patented Dec. 4, 1917.

2 SHEETS—SHEET 1.

Fig. 1.

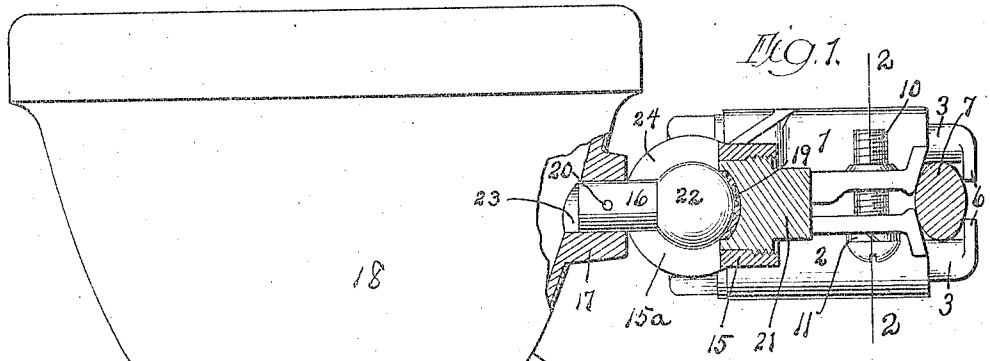


Fig. 3.

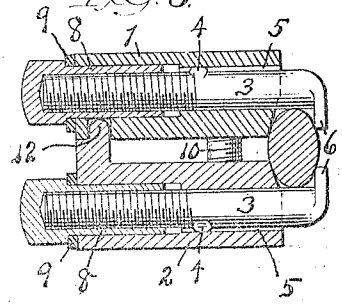


Fig. 2.

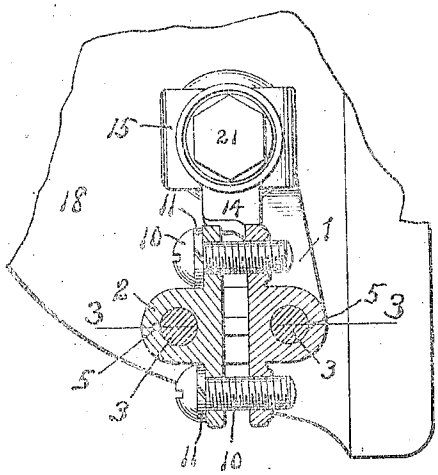
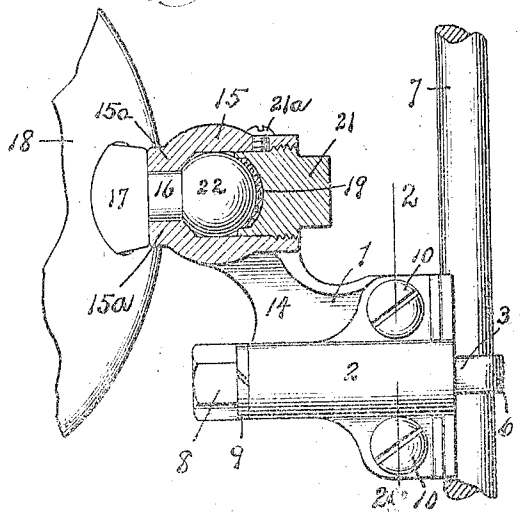


Fig. 4.



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2 SHEETS—SHEET 2.

Fig. 5.

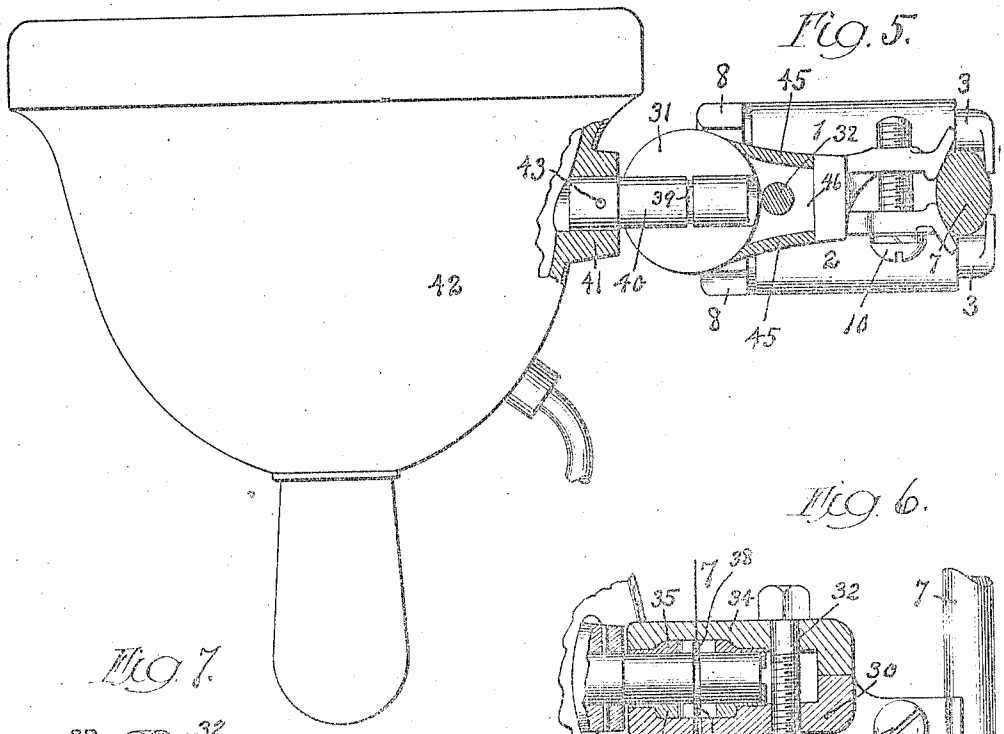


Fig. 6.

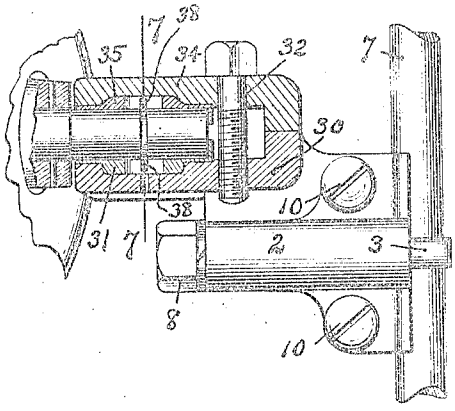


Fig. 7.

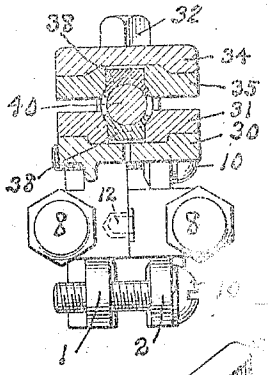


Fig. 8

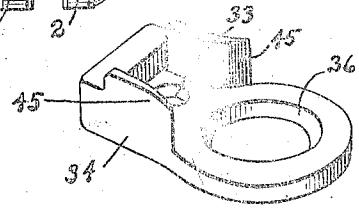
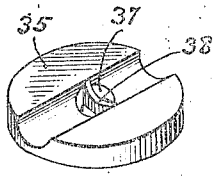


Fig. 9.



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UNITED STATES PATENT OFFICE.

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DIRIGIBLE LAMP.

1,248,476. Specification of Letters Patent. Patented Dec. 4, 1917.

Application filed February 15, 1917. Serial No. 148,717.

To all whom it may concern:

Be it known that I, CHARLES E. GODLEY, a citizen of the United States, and residing at Detroit, in the county of Wayne and State of Michigan, have invented a new and Improved Dirigible Lamp, of which the following is a specification.

This invention relates to dirigible head lights especially those that may be mounted on automobiles and power boats, and its object is to provide a mounting for lamps of this character which will hold the lamp firmly in the desired position, which is readily adjustable and which can be constructed for a moderate price. This invention consists in the combination with the lamp and the support for the same, of a novel clamping device which can be adjusted within wide limits and a novel universal joint connecting the lamp and the clamping device. It also consists in forming an adjustable ball-and-socket joint upon the clamping device which ball-and-socket joint supports the lamp. It further consists in the details of construction illustrated in the accompanying drawings and particularly pointed out in the claims.

In the drawing, Figure 1 is a plan of the lamp and clamping member and a horizontal section of the ball-and-socket joint. Fig. 2 is a section on the lines 2—2 of Figs. 1 and 4. Fig. 3 is a section on the line 3—3 of Fig. 2. Fig. 4 is an elevation of the clamping members and a vertical section of the ball-and-socket joint. Fig. 5 is a plan of the lamp and clamping member and a horizontal section of a modified form of the universal joint. Fig. 6 is an elevation of the clamping device and a central vertical section of the universal joint. Fig. 7 is a section on the line 7—7 of Fig. 6. Fig. 8 is a perspective view of a socket member of the universal joint. Fig. 9 is a perspective view of the revoluble disk used in this particular universal joint.

Similar reference characters refer to like parts throughout the several views.

The clamping device shown in the drawings consists of a main member 1 and a relatively movable member 2. Each one of these portions is bored and a bolt 3 is slidable within a proper hole in each of these members. Each bolt 3 may be provided with a spline 4 that slides in a groove 5 formed in the bore of each of these two parts. The bolts 3 are provided with jaws 6 adapted to engage the supports 7 on which the lamp is mounted. The two members of the clamping device are counter-bored to receive the long cylindrical nuts 8 by means of which the jaws 6 are drawn up against the support 7. If desired, split-washers 9 may be employed to prevent the nuts from turning backward. The two clamping members are forced toward each other by means of the screws 10 which may be provided with split-washer 11 to keep them from turning backward. At their rear ends, one of these clamping members is provided with a small post 12 to engage in a slot formed in the other member. It will therefore be seen that the jaws 6 may be swung apart as far as desired when the screws 10 are turned back, to permit the jaws to be passed around the support 7, after which the screws 10 are turned down hard. This peculiar construction is adapted to engage any desired type of support, whether round or polygonal. And nuts 8 are then turned down until the engagement between the clamping device and the support 7 is sufficiently secure. This support 7 may be any desired angle to the vertical, but for the purpose of this description will be considered as vertical for the purpose of clearness.

Projecting upward from the clamp member 1 is the neck 14 which carries the head 15 which constitutes a portion of the socket of the ball joint. This part 15 has upper and lower jaws 15^a between which the stem 16, which is firmly held in the boss 17 on the lamp body 18, can swing horizontally. The part 15 is bored and screw threaded to receive the plug 21 which is provided with a recess to receive a flat sheet or pad 19 of cork, felt or similar material. The stem 16 is held in the boss 17 by means of the pin 20. A small screw 21^a may prevent the plug 21 from turning after it has once been adjusted.

To assemble this mounting for the lamp the plug 21 is removed and the stem 16 with the ball 22 attached thereto is slipped into position through the opening thus left. The stem 16 is slipped into the hole 23 in the boss 17 and the pin 20 is driven into position. The plug 21 is then screwed down into the ball 22 until that is held sufficiently tightly to prevent it from turning under any but unusual stresses. The lamp may be turned on the horizontal axis of the stem 16

and it may be swung around a vertical axis passing through the center of the ball 22, the stem 16 moving in the space 24 between the jaws 15ª of the head 15. The pad 19 may also serve as a receptacle to hold a small amount of lubricating oil for the ball 22.

In a construction shown in Figs. 5 to 9 inclusive, the clamping device is similar to those just described, and consists of the main portion 1, the relatively movable portion 2, the bolts 3, the nuts 8 on said bolts which cause the jaws on these bolts to engage the upright 7, the small post 12 and its socket and the screws 10 to force the two clamping members toward each other. Integral with the main clamping member 1 is the head 30, provided with a circular seat to receive the circular bearing member 31 which is preferably of steel. A screw 32 passes through a hole 33 in the cap 34 and into a screw threaded hole in the head 30 and holds this cap and the circular bearing member 35, mounted in the circular seat 36 of the cap, in proper relation to bearing member 31. These two bearing members 31 and 35 are rotatable in the parts 30 and 34 on a vertical axis, and each may be formed with a hole 37 to receive a flat keeper 38. As shown in Fig. 6, these two keepers are opposite to each other and extend into a circumferential groove 39 in the stem 40, which stem is secured in the boss 41 carried by the body 42 of the lamp. If desired a pin 43 may be employed to hold this stem in place in the boss.

To assembled this mounting, the screw 32 is removed and the cap 34 and the bearing member 35 positioned by the cap are lifted up to permit the stem 40 to be inserted between the two bearing members 31 and 35, the keeper 38 in the lower bearing member 21 serving to position the stem. The upper bearing member and the cap 34 are then returned to their original position and the screw 32 is inserted and turned down until the parts are so firmly engaged that the lamp cannot swing on the horizontal pivot and the lamp and the two bearing members cannot swing on a vertical pivot without the application of considerable force. In order to keep the members in proper alinement the cap 34 may be provided with flanges 45 that fit around the rear portion 46 of the head 30.

The faces of the two clamping members 1 and 2 in both cases are beveled, as shown in Figs. 1, 3 and 5, to form seats to receive the upright supports 7 and thus cause these supports to always retain a position substantially parallel to the opposing faces of the clamping members 1 and 2.

I claim:—

1. In a lamp mounting, the combination of a main clamping member and an auxiliary clamping member, screws adapted to force said clamping members toward each other, a bolt slidable in each of said clamping members and provided with a jaw extended toward the other clamping member, a nut mounted on each bolt in each clamping member and adapted to draw said bolts and jaws toward the clamping members, a universal joint mounted on the main clamping member, a lamp, and a stem mounted on the lamp and connecting into said universal joint.

2. In a lamp mounting, the combination of a main clamping member and an auxiliary clamping member, each provided at one end with a bearing face inclined toward the bearing face of the other, one of said members provided at the end opposite said bearing face with a socket and the other with a pin adapted to engage in said socket, each of said bearing members provided with a longitudinal hole, a threaded bolt slidable in each hole and having a jaw extending toward the other bolt, the ends of said holes opposite said jaws being counterbored, an internally threaded sleeve mounted in each counterbore and receiving the bolt therein and having an enlargement on the outside of the member wherein it is mounted, a pair of screws extending transversely of the bolts to secure the clamping members together, said screws being mounted between the bearing faces and the pin and socket of said bearing members, a universal joint mounted on one of said bearing members, and a lamp carried by said universal joint.

3. In a lamp mounting, the combination of a main and an auxiliary clamping member, means to fulcrum one on the other, each of said members having a bearing face at an angle to the bearing face of the other, means mounted between the fulcrum and bearing faces to press said members toward each other, each of said bearing members being formed with a longitudinal hole provided with a groove, a bolt slidable in each hole and having a spline extending into the groove and also having a jaw on the end adjacent the bearing face of the member in which it is mounted and threads on the opposite ends, said holes being counterbored at the ends opposite said jaws, cylindrical internally threaded sleeves mounted in said counterbores and on said bolts and having their outer ends extending beyond said clamping members and formed with polygonal heads, a lamp provided with a boss and a stem carried by said boss, and a universal joint between said stem and said clamping device.

4. In a lamp mounting, the combination of a main and an auxiliary clamping member, means to secure them together, a head connected to one of said members and formed with a socket for a ball and a pair of jaws having a space between them in alinement with the socket, a lamp, a stem carried by the lamp and a ball at the end of said stem,

a plug adjustably fitting in said socket and engaging said ball.

5. In a lamp mounting, the combination of a main and an auxiliary clamping member, means to secure them together, a head connected to one of said members and formed with a socket for a ball and a pair of jaws having a space between them in alinement with the socket, a lamp, a stem carried by the lamp and a ball at the end of said stem, a plug adjustably fitting in said socket and engaging said ball, said plug being formed with a pocket having a resilient pad to engage said ball.

CHARLES E. GODLEY.