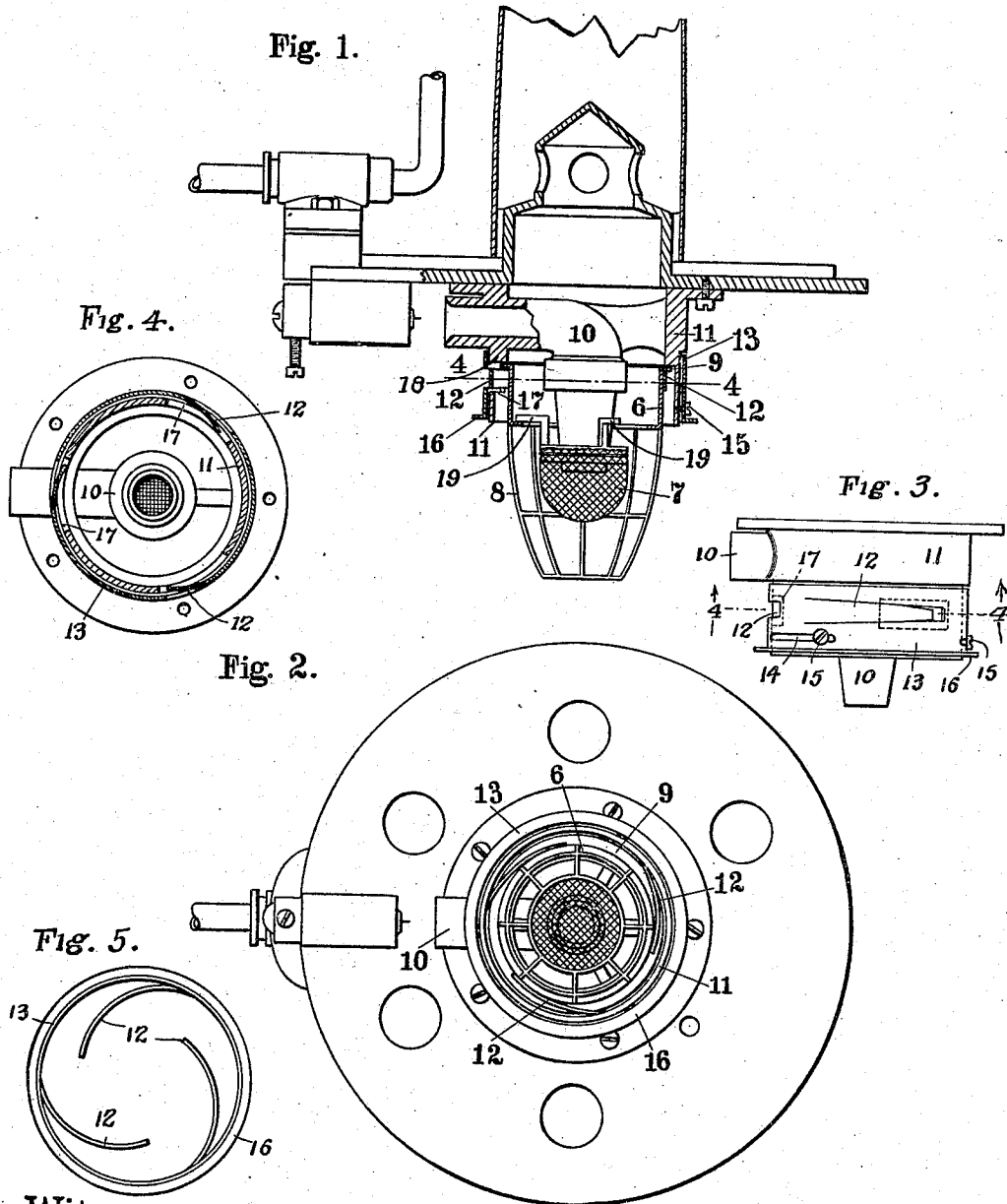


E. STEIL.
FASTENING DEVICE FOR INCANDESCENT BODIES.
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FASTENING DEVICE FOR INCANDESCENT BODIES.

937,483.

Specification of Letters Patent.

Patented Oct. 19, 1909.

Application filed April 17, 1908. Serial No. 427,697.

To all whom it may concern:

Be it known that I, EDMUND STEIL, a subject of the King of Prussia, residing at No. 26 Winterfeld street, city of Berlin, in the Kingdom of Prussia, Germany, have invented new and useful Improvements in Fastening Devices for Incandescent Bodies, of which the following is a specification.

This invention relates to means for fixing the incandescent body and its accessory, such as a protecting basket, on the burner head or to the frame of a gas lamp for the illumination of railway carriages, in connection with which the device is especially intended to be used.

The object of this invention is to provide a connecting device which is positively prevented from becoming loose by the unavoidable vibrations in railway cars or carriages, while its handling is simple and easy, and a ready interchange of the body assured.

A further object of the invention is to provide a device which is capable of seizing and clenching the means carrying the basket and the incandescent body placed therein, in a concentric position with respect to the burner, even although the diameter, other dimensions or the shape of the part to be fastened may vary within certain limits.

These objects are attained by the employment of spring tongues or fingers tangentially touching or embracing the circumference of a ring-shaped carrier supporting the incandescent mantle and its protecting basket, and also engaging under a lateral projection or a flange of the said carrier with their upper edges, which edges are tapered to the free ends of the tongues, so that, when the tongues are moved around the carrier, their edges will press the said circumferential projection upon a seat thereby immovably clamping the mantle support in a position concentric with the burner. The said tongues being attached to a rotatable ring, the mantle-supporting means will be seized or released by all of them at the same time, thus permitting an easy and ready handling and the required exactness of operation.

The nature, construction, and operation of the fastening device will be seen from the following detail description in connection

with the accompanying drawings forming part thereof and in which—

Figure 1 is a vertical sectional elevation of the principal parts of an incandescent lamp provided with the fastening device embodying my invention, Fig. 2 is an inverted plan of the lamp represented in Fig. 1, Fig. 3 is a side elevation of the burner and of the fastening device, Fig. 4 is a horizontal section on the line 4—4 of Fig. 3, looking in the direction of the arrows and Fig. 5 represents the gripping tongues and the ring bearing the same.

A ring 6 having an outwardly directed flange 9 or the like on its upper end bears the incandescent mantle 7, angular arms 19 of which rest upon an inwardly directed flange formed on the lower end of the ring 6. To this ring is also attached a basket-shaped housing 8 surrounding the mantle and being the protecting means for the same.

The mixing tube 10 of the well-known Bunsen-burner, which is shown as being elbow-shaped, but may be straight or vertical, is inclosed in a concentric sleeve 11 connected to the lamp-frame and having a step or seat 18 in its inner periphery against which the flange 9 of the mantle supporting ring is to be pressed by the tongues 12 which may be used in any suitable number, for instance three, as illustrated in Fig. 5 by way of example. These tongues are equidistantly formed on a common supporting ring 13 rotatably arranged upon the outer circumference of the sleeve 11, and they may be stamped or cut from the ring 13 or attached thereto in any convenient manner. Circumferential slots 14 made in the ring 13 of the required length and screws 15 or pins fixed to the sleeve 11 and engaging the said slots, allow the ring 13 to be rotated upon the sleeve to a limited extent, while a flange 16 of the ring 13 serves the purpose of facilitating the operation of the ring, and is used as a handle. The tongues 12 tapering on their upper edges, spring inwardly toward each other in a conveniently curved form, as shown in Fig. 5. Apertures or slots 17 cut in the wall of the sleeve 11 on corresponding places give the tongues free way for entering the interior of the said sleeve when the ring 13 is turned in the respective direction,

while one lateral edge of the slots moves the tongues outward with the rotation of the ring 13 in the opposite direction, so that they will come to rest on the periphery of the sleeve 11, leaving the interior of the latter free or open throughout (as represented in Fig. 4). The insertion or removal of the mantle-carrier is thus facilitated.

The device is operated as follows: When the fastening tongues 12 are in their inoperative position described above and illustrated in Fig. 4, the mantle-supporting ring 6 can be introduced into the sleeve 11 from below and moved upward until its flange 9 rests against the seat 18. Locking of the mantle-carrier 6 is then effected by rotating the ring 13 in the direction in which the free ends of the tongues point, whereby the latter pass through the corresponding slots 17 all at a time, embracing the carrier on all sides by touching its circumference with their flat inner sides, thus centering it with respect to the burner. However, since the tongues also engage under the flange 9, their upper inclined edges will clamp it between themselves and the seat 18, this attachment being maintained immovable by the friction and the spring-action of the tongues.

The spring tongues being capable of projecting toward the center of the device to a greater or less extent, a sure and reliable fastening of the carrier is attained, even if its diameter varies within certain bounds. Moreover, as the long edges of the tongues engage under the flange, and a long line of supporting contact being afforded, the flange need not necessarily be continuous, but may be provided with recesses, as may be required for any other purpose, without interfering with a satisfactory attachment. Therefore, most of the constructions of mantle-supports now in use, can be affixed to any lamp by means of this device.

I have disclosed a constructional form of the fastening device in the accompanying drawings for the purpose of example, but evidently the details of the appliance may be varied in different ways, without departing from the principle of my invention; the movement of the ring carrying the tongues, upon the sleeve, may be guided and limited by other equivalent means. I, therefore, do not wish to be limited to the illustrated construction, but

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

1. In a lamp, the combination of a mantle holder provided with a projection, a ring revoluble in relation to said mantle holder, said ring being provided with a plurality of spring tongues projecting inwardly therefrom and adapted to engage said mantle holder tangentially, said spring tongues

being so located relatively to said projection as to engage the same, and means for supporting said mantle holder.

2. In a lamp, the combination of a mantle holder provided with a projection extending laterally therefrom, a seat disposed adjacent to said mantle holder, and a revoluble ring, said ring being provided with a plurality of inwardly extending spring tongues for the purpose of engaging said mantle holder, said projection extending laterally from the latter, and said tongues being tapered for the purpose of pressing said projection firmly upon said seat.

3. In a lamp, the combination of a mantle holder, a seat for said mantle holder, said seat being formed upon the lamp, and a revoluble ring, said ring being provided with a plurality of spring tongues projecting inwardly from it and tangentially engaging said mantle holder, said spring tongues being tapered for the purpose of pressing said mantle holder upon said seat.

4. The combination of a mantle carrier provided with a projection extending outward from the circumference thereof, a vertically disposed sleeve having a seat formed in it, said sleeve being disposed adjacent to said mantle holder and being provided with a plurality of perforations, a ring revoluble relatively to said sleeve, and a plurality of spring tongues projecting inwardly from said ring and extending through said perforations of said sleeve so as to tangentially embrace said mantle carrier and at the same time to engage said lateral projection upon the latter.

5. In a lamp, the combination of a mantle holder provided with a projection extending outwardly from its circumference, a vertically disposed sleeve mounted fixedly in position and provided with a seat and also with a plurality of perforations, a ring revoluble relatively to said sleeve, a plurality of spring tongues projecting inwardly from said ring through said perforations of said sleeve for the purpose of embracing tangentially said mantle holder and also engaging said projection extending laterally from the same, and means for limiting the rotation of said ring relatively to said sleeve.

6. In a lamp, the combination of a mantle holder having upon its outer circumference a projection extending laterally therefrom, a burner, a sleeve encircling said burner and concentric thereto, said sleeve being provided with openings, a ring revoluble relatively to said spring and provided with a plurality of curved spring tongues projecting tangentially from said ring and extending through said openings, said tongues embracing said mantle holder tangentially and engaging said projection upon the under side thereof, the upper edges of said

tongues being tapered, and means for guiding said ring relatively to said sleeve.

5 7. In a device for fastening incandescent mantles to burners, the combination with a burner having a tubular portion to receive a mantle carrier, said tubular portion being provided with a plurality of openings, of a ring rotatable on the tubular portion and provided with spring tongues adapted to

project through the said openings to lock 10 the mantle carrier in position.

In testimony whereof I have set my signature to this specification in the presence of two subscribing witnesses.

EDMUND STEIL.

Witnesses:

WOLDEMAR HAUPT,
HENRY HASPER.