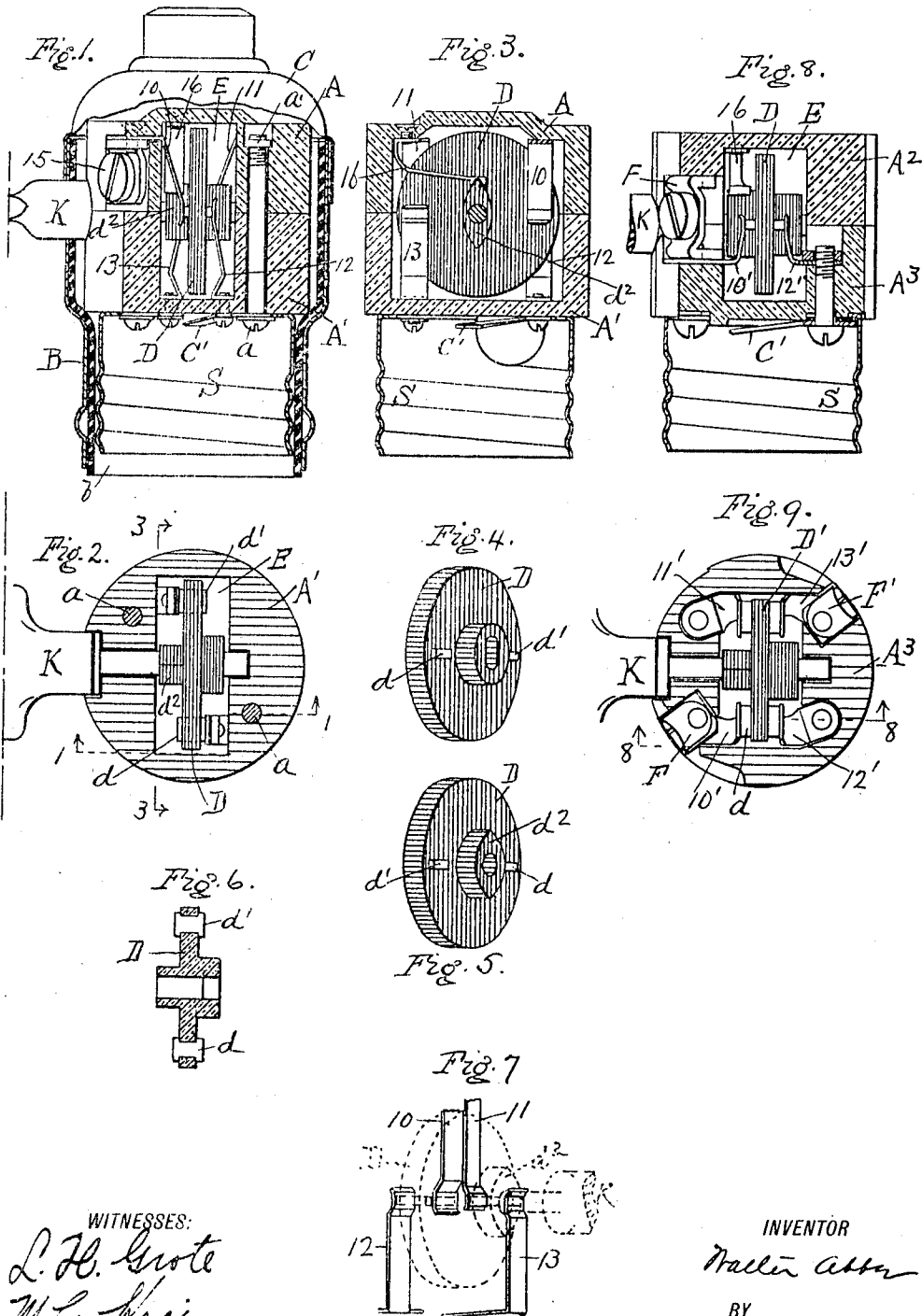


W. ABBE.
ELECTRIC LAMP SOCKET.
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1,020,245.

Patented Mar. 12, 1912.



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ELECTRIC-LAMP SOCKET.

1,020,245.

Specification of Letters Patent.

Patented Mar. 12, 1912.

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To all whom it may concern:

Be it known that I, WALTER ABBE, a citizen of the United States of America, and residing in the borough of Brooklyn, in the county of Kings and State of New York, have invented a certain new and Improved Electric-Lamp Socket, of which the following is a specification.

The object of my invention is to construct an electric incandescent lamp socket which shall be simple in construction and economical to manufacture, and have a switch mechanism in which the contacts are well separated from each other, and giving a quadruple break of the circuit, and a long break at each contact.

In the accompanying drawings, Figure 1 is a sectional view of a socket embodying my invention the section being taken on the line 1—1, Fig. 2; Fig. 2 is a sectional plan view at the line of separation between the upper and lower blocks, the inclosing shell being omitted; Fig. 3 is a sectional view on the line 3—3, Fig. 2; Fig. 4 is a perspective view of the switch disk; Fig. 5 is a similar view of the disk, but looked at from the other side; Fig. 6 is a sectional view of the same; Fig. 7 is a diagrammatic view of the circuits; Figs. 8 and 9 are views of a modified construction of socket.

I prefer to make the insulating body of the socket in two parts, an upper block A and a lower block A¹, which may both be of porcelain. These blocks are juxtaposed and secured together by any suitable means such as bolts a and nuts a¹ as shown in Figs. 1 and 2, or by binding posts F, F¹, as shown in the modification Figs. 8 and 9. To the under face of the lower block is secured the usual screw shell S and a suitable center contact C¹ for the lamp or plug. The socket may be inclosed within a suitable lined shell B and its cap C, Fig. 1.

In the juxtaposed faces of the two insulating blocks A and A¹ are formed corresponding recesses centrally placed, and together these recesses form a large central chamber E to receive and house the switch mechanism. This latter includes a disk D, mainly or wholly of insulating material, preferably glass, which may be annealed. This disk is mounted upon the key spindle K to turn with it, but with a lost motion, as is common in the case of the cam blocks of ordinary socket keys. The disk forms a

switch chamber into two parts, as seen in Figs. 1, 2, 8 and 9. In the disk are loosely secured, (at the time of molding the disk or otherwise), two transverse pins d, d¹ of metal or other conducting material, these pins being placed at diametrically opposite points in the disk and near the edges of the latter, as shown. These conducting pins cooperate with four spring contact fingers to make and break the circuit upon the turning of the disk by the key. In Figs. 1, 3 and 7, I have shown two such contact springs 10 and 11 as carried by the upper block A and mechanically and electrically connected to terminal binding posts, such as 15, Fig. 1, for the line wires. The other two contacts 12 and 13 are carried by the lower insulating block A¹, and one contact is electrically connected to the center contact C¹ for the lamp, while the other is connected to the screw shell S.

In the modification, Figs. 8 and 9, all four spring contacts 10¹, 11¹, 12¹ and 13¹ are shown as mounted on the lower insulating block A¹, as will be understood without further explanation.

In each described construction, the disk D is shown as in the position with the circuit closed, and when the key is turned to rotate the disk a quarter of a turn, the circuit will be broken at four points,—two in each branch of the circuit—namely, at each contact spring (10, 11, 12 and 13), and owing to the fact that the disk is of relatively large diameter and the pins d, d¹ set well toward the edges of the disk, each break is a long one. And inasmuch as the disk almost completely divides the switch chamber into two, a spark on one side cannot communicate with the other side.

Any suitable means may be provided to insure a quick make and break and proper positioning, but I prefer to use means which will permit the key to be rotated in either direction. For this purpose, I form one of the spacing hubs of the disk D in the form of a cam d² (Figs. 3 and 5) with two diametrically opposite sharp rises, with which engage the forked free end of the spring arm 16 secured to the upper block A, as shown in Fig. 3. This spring 16 acting on the cam will position the disk as shown, but when the disk is turned to break the circuit, carrying the sharp rise of the cam out of the notch at the end of the spring arm, the latter will then give the disk a quick quar-

ter turn to make a quick break. This will be the case no matter in which direction the disk is turned. The ends of the pins d , d' are projected to a distance beyond the opposite faces of the insulating disk to avoid forming upon those faces a track of metal from the scraping of the contacts.

I claim as my invention:—

1. An electric lamp socket, having an insulating body carrying line and lamp terminals and provided with a switch chamber, in combination with a rotary insulating disk therein, having spacing hubs, one of which is made of cam form, transverse conductors in the disk, a spring to cooperate with the cam to produce a quick break and contacts to cooperate with the conductors.

2. An electric lamp socket, having an insulating body carrying line and lamp terminals and provided with a switch chamber, in combination with a rotary insulating disk

therein, having a transverse conductor, means whereby the disk may be rotated in either direction, with a quick break, and contacts on opposite sides of the disk cooperating with the conductors.

3. An electric lamp socket, having an insulating body carrying line and lamp terminals and provided with a switch chamber, in combination with a rotary insulating disk therein, having a transverse conductor, means whereby the disk may be rotated in either direction, with a quick break, and contacts on opposite sides of the disk cooperating with the conductor.

In testimony whereof I have signed my name to this specification, in the presence of two subscribing witnesses.

WALTER ABBE.

Witnesses:

M. A. FREEDMAN,
HUBERT HOWSON.