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SHADE AND SOCKET HOLDER.

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924,260.

Patented June 8, 1909.

Fig. 1.

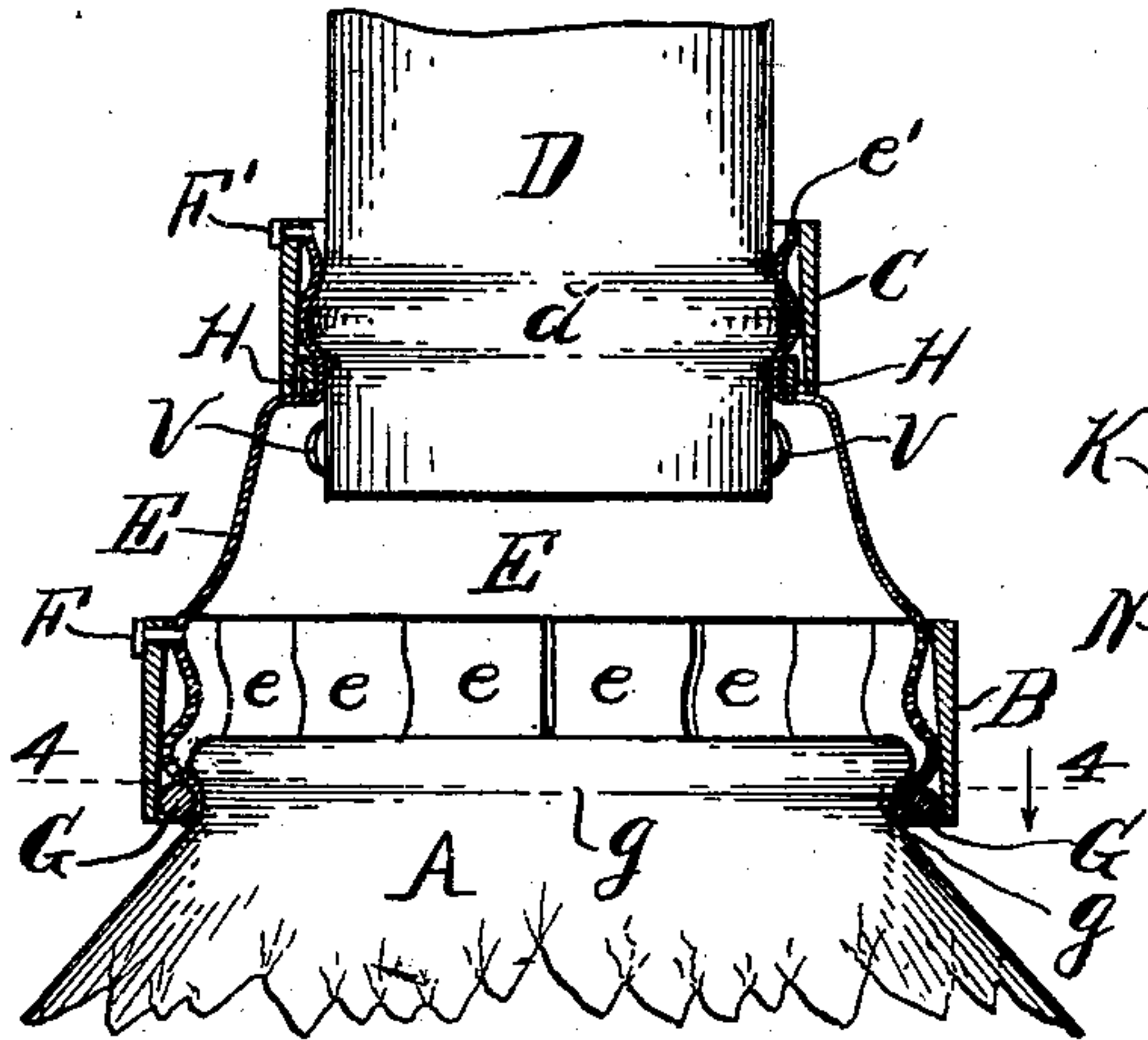


Fig. 3.

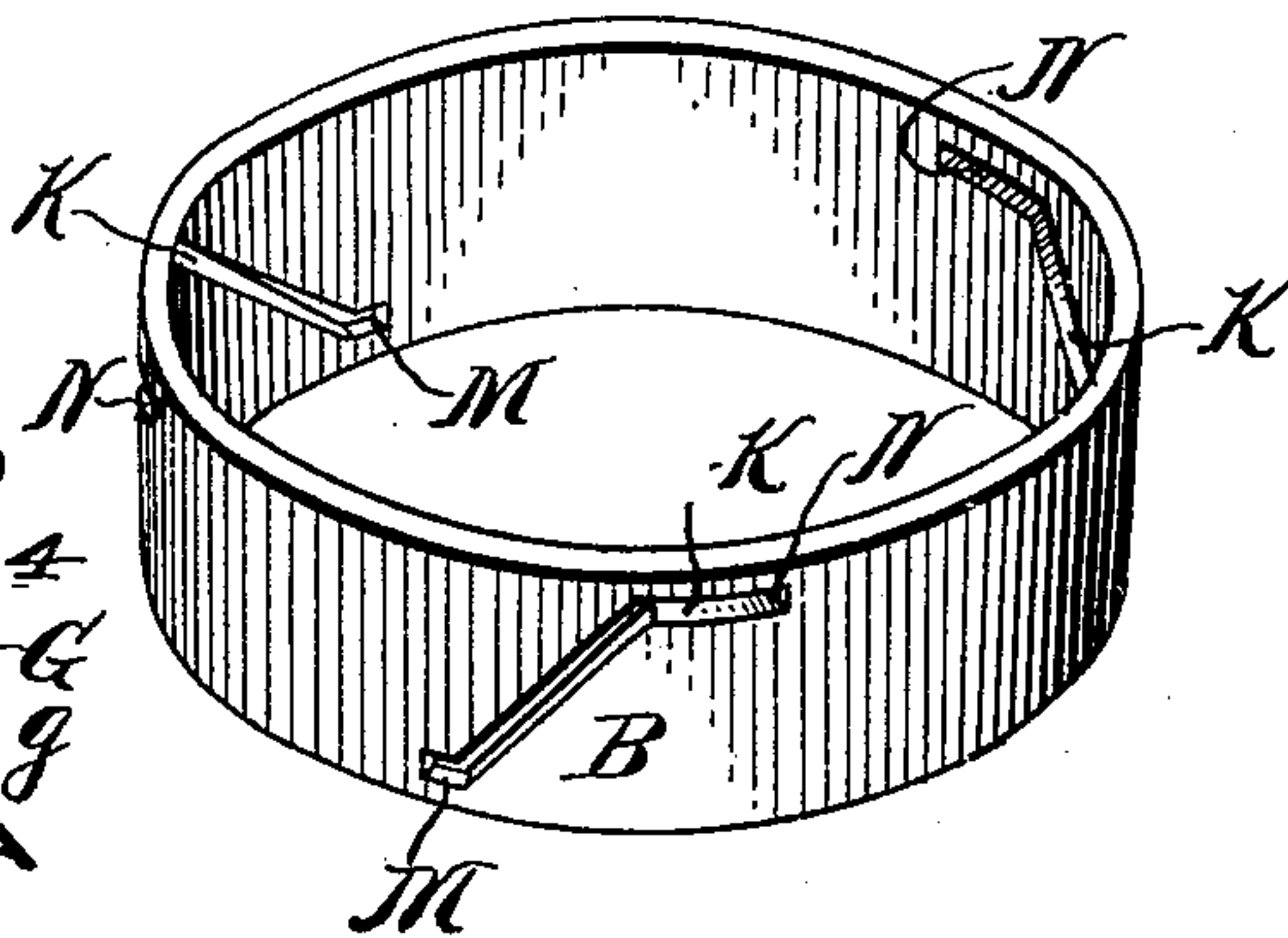


Fig. 4.

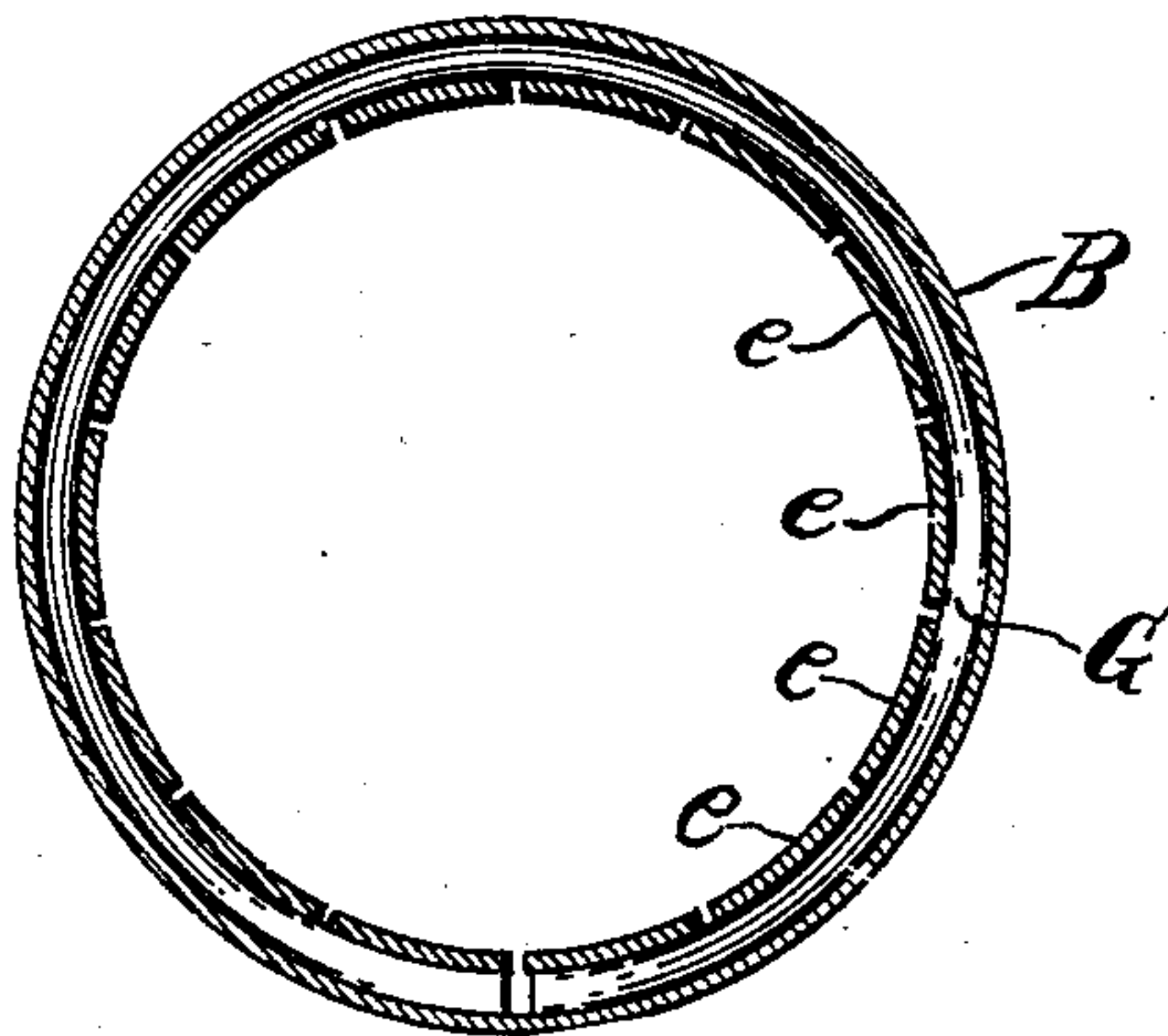


Fig. 2.

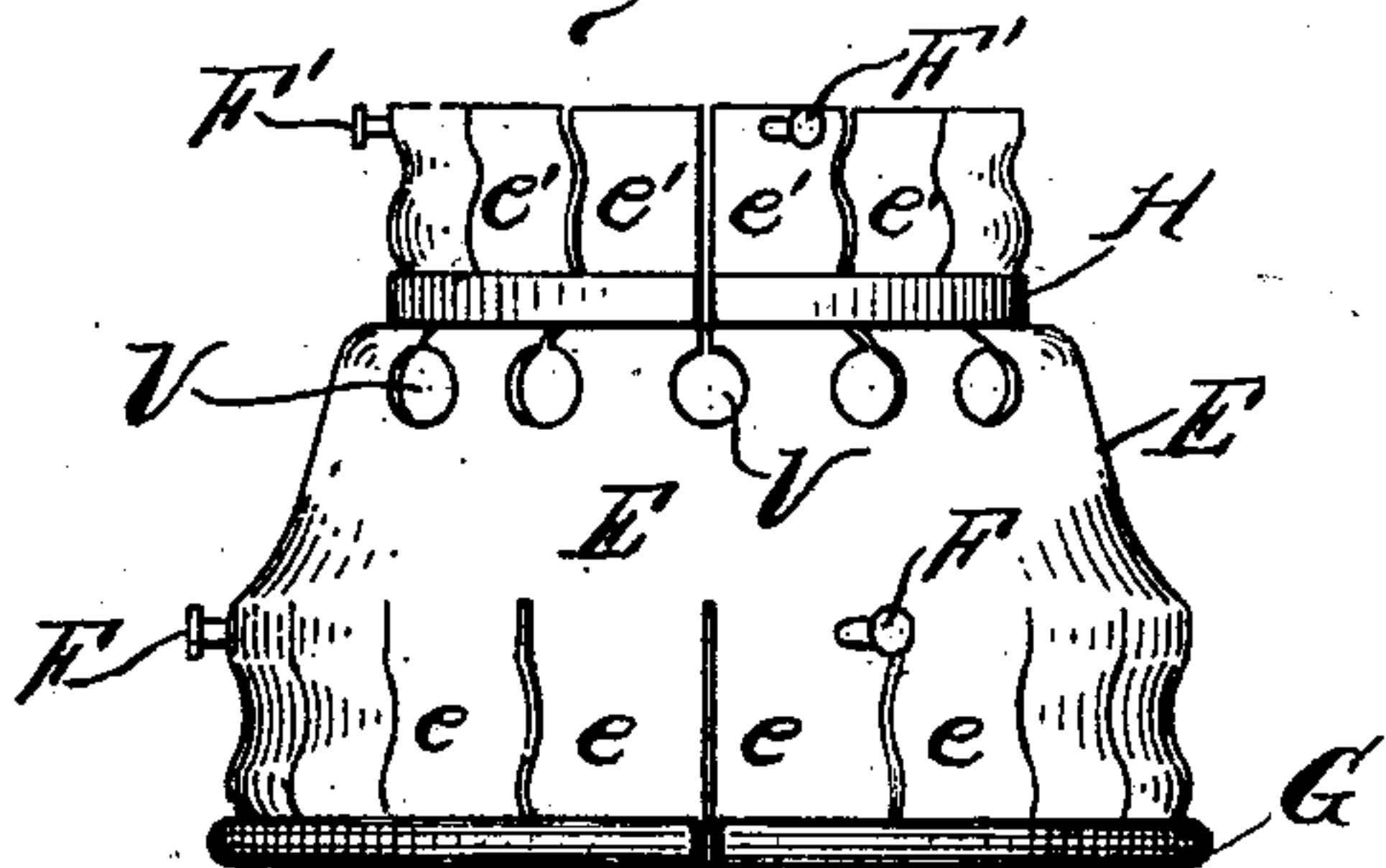
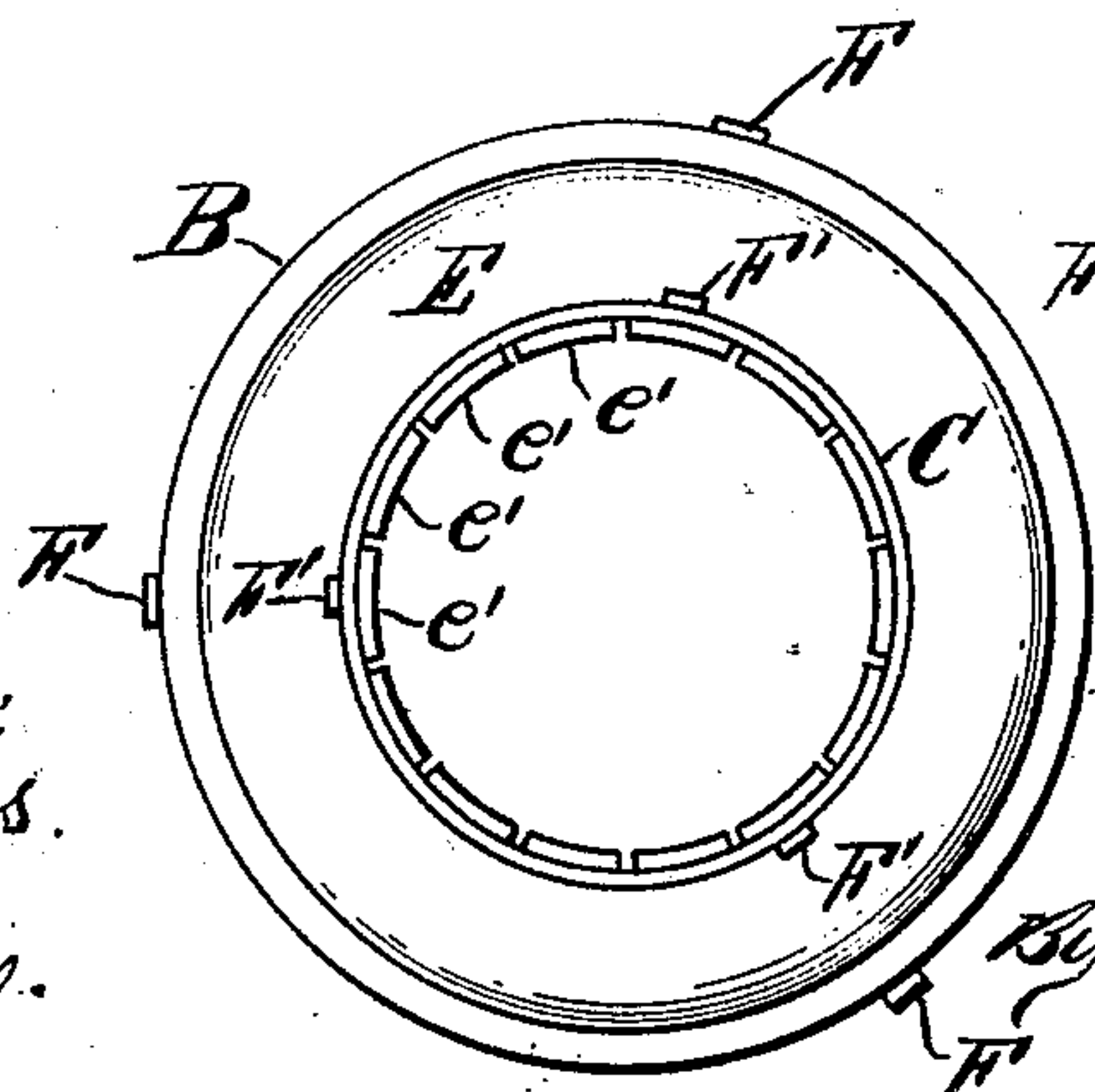


Fig. 5.



Witnesses:
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UNITED STATES PATENT OFFICE.

WILLIAM F. MINOR, OF NEW YORK, N. Y., AND CARL W. W. HECK, OF EAST ORANGE, NEW JERSEY, ASSIGNORS TO NATIONAL ELECTRIC LAMP COMPANY, OF CLEVELAND, OHIO, A CORPORATION OF NEW JERSEY.

SHADE AND SOCKET HOLDER.

No. 924,260.

Specification of Letters Patent.

Patented June 8, 1909.

Application filed July 30, 1908. Serial No. 446,056.

To all whom it may concern:

Be it known that we, WILLIAM F. MINOR, a citizen of the United States, and a resident of the borough of Manhattan, city, county, and State of New York, and CARL W. W. HECK, a citizen of the United States, and a resident of East Orange, in the county of Essex and State of New Jersey, have invented certain new and useful Improvements in Shade and Socket Holders, of which the following is a specification, reference being had to the accompanying drawings, in which—

Figure 1 represents a vertical central section showing a portion of the socket and shade in elevation; Fig. 2 is a side elevation of the holder itself, the clamping rings being removed; Fig. 3 is an enlarged perspective view of one of the clamping rings; Fig. 4 is a sectional plan view taken on the line 4—4 of Fig. 1, the shade being removed from this figure; and Fig. 5 is a top plan view of our improved device, the socket and shade being removed from the figure.

Similar letters refer to similar parts throughout the several figures.

The object of our invention, among other things, is to produce a simple and inexpensive holder for securing shades to incandescent lamps, and for other uses, combined with a device for holding the shade by means of our holder to the ordinary electrical socket used in incandescent lamps, and we attain this object by means of resilient springs in combination with clamping rings to hold such springs in place, so as to secure both the socket and the shade immovably with the holder, so as to preclude their being loosened or shaken under successive jars to which such holders and incandescent lights may be subjected in their ordinary uses.

With these ends in view we have devised a simple and novel means for combining such desirable features in the simplest and cheapest possible manner, and also have combined in our device means whereby unskilled operators may readily secure the parts together, and lock same.

A denotes an ordinary shade having in its upper portion the annular recess *g* to enable the clamping means to secure the shade to the holder.

D is an ordinary socket for incandescent

lamps such as is customarily used, having the annular bead *d* to enable the holder to be attached thereto.

E is the holder, which consists preferably of a single piece of sheet metal of resilient character, and is shaped in a flaring manner such as is customary in the construction of such holders for incandescent lamps. The lower portion of the holder E is split vertically into a plurality of springs so formed in the metal as to shape themselves to the annular groove *g* in the shade itself, and we have denoted same by the letters *e, e, e, e*. About the lower edge of said springs *e, e, e, e*, we preferably place an annular ring G, which acts as a temporary holder for the shade at the initial step of clamping.

The upper part of the holder E is vertically divided into a plurality of springs *e', e', e', e'*, to hold within themselves the electrical socket, and are so conformed as to fit snugly about the bead *d* of the socket D. For the better securing of the socket in the initial stage of operation, we encircle the springs *e', e', e', e'*, with the annular ring H of resilient metal, to hold the socket in position while the clamping rings are being placed in position.

B is the clamping ring for securing in permanent position the shade, while C is the clamping ring for securing in rigid and permanent position the socket D. These clamping rings B and C are similar in shape and function, and are circular, having preferably beveled sides for better securing their respective spring members in the holder itself, as shown in Fig. 1, the thicker portion of the ring being the upper part. Each of these clamping rings is provided with a plurality of cam slots K, K, K. The spring members of the holder, both the upper and lower parts thereof, having a corresponding plurality of pins adapted to fit within the cam slots K, K, K, and we have designated in the figures the pins for the lower clamping ring B by the letter F, and the pins for the upper clamping ring C by the letter F'.

V at the base of the spring members *e', e', e', e'*, represents ventilating holes for the holder, but said ventilating holes are not essential to our invention. The pins F, F', are so adapted as to allow their co-acting

clamping rings to move readily through their respective cam slots in the respective clamping rings.

The operation of our shade and socket holder is as follows:—The ordinary lamp shade is sprung within the lips of the springs *e, e, e, e*, and the spring members *e* grasp and secure within themselves the shade by means of the annular groove *g*. The spring *G* assists in securing the shade temporarily to the holder. The clamping ring *B* is above the spring members *e, e, e, e*, and the pins *F* are resting in the cam slot in the position marked *M* in the clamping ring shown in Fig. 3; in order to permanently secure the shade within the holder the clamping ring *B* is revolved in a direction which will cause the pins *F* to move through the cam slots until they reach the end thereof at *N*, shown in Fig. 3, said movement causing the spring members *e, e, e, e*, to be rigidly clasped about the shade *A*, the beveled edges of the clamping ring *B* assisting in this operation. Fig. 1 shows the clamping ring *B* in final position securely locking the shade in the holder. Likewise at the upper or socket end of our holder a similar operation is performed. The socket *D* is inserted and sprung within the spring members *e', e', e', e'* so as to secure within them the socket *D* by means of the bead *d*, the circular spring *H* assisting to temporarily hold the socket within the holder. The clamping ring *C* is then twisted so that the pins *F'* move through the cam slots *K* of the clamping ring *C*, thereby causing the spring members *e', e', e', e'*, to be closely confined and rigidly secured about the socket *D* with its bead *d*, and the result attained thereby is that both the socket and the shade are permanently and rigidly secured to the holder and are locked there in permanent position.

We do not wish to limit ourselves to the size or general contour of the rings or the number of pins and cam slots to be used, or the manner in which such pins may be attached to the spring members, whether integrally or otherwise, for many modifications of the devices shown and herein described may be employed without departing from the spirit of our invention.

What we claim as new and desire to secure by Letters Patent is the following, viz:—

1. A holder of the class described which consists of a circular holding member whose upper and lower parts comprise a plurality of spring members, two unyielding clamping rings each permanently secured to and entirely surrounding said spring members respectively adapted to contract and lock said spring members about a socket and a shade respectively, substantially as described.

2. A holder of the class described which consists of a circular holding member whose upper and lower parts are vertically divided

into a plurality of spring members, two clamping rings surrounding said spring members respectively and provided with beveled edges to contract and lock said spring members about a socket and a shade respectively, substantially as described.

3. A holder of the class described which consists of an intermediate holding member whose lower edges comprise a plurality of spring members adapted to receive and hold a shade and whose upper edges comprise a plurality of spring members adapted to receive and hold a socket together with unyielding clamping rings permanently secured to and entirely surrounding said spring members to rigidly secure and lock said shade and said socket respectively to said holding member, substantially as described.

4. A holder of the class described which consists of a circular holding member whose lower edges comprise a plurality of spring members integral with said holding member and adapted to receive and hold a shade, a clamping ring provided with a plurality of cam-slots, and an equal plurality of pins attached to said spring members adapted to slide through their respective cam slots so as to contract by said clamping ring said spring members to hold and lock the shade to said holding member, substantially as described.

5. A holder of the class described which consists of a circular holding member whose upper edges comprise a plurality of spring members adapted to receive and hold a socket, a clamping ring provided with a plurality of cam slots, and an equal plurality of pins attached to said spring members adapted to slide through their respective cam slots so as to contract by said clamping ring said spring members to hold and lock the socket to said holding member, substantially as described.

6. A holder of the class described which consists of an intermediate holding member whose upper and lower edges comprise a plurality of spring members adapted to receive and hold a socket and a shade respectively, two clamping rings surrounding said upper and lower spring members, each provided with a plurality of cam slots, and an equal plurality of pins attached to said upper and lower spring members adapted to slide through their respective cam slots in said clamping rings so as to contract by said clamping rings said spring members to hold and lock said shade and said socket respectively to said holding member, substantially as described.

7. A holder of the class described which consists of an intermediate holding member whose upper and lower edges comprise a plurality of vertical spring members adapted to receive and hold a socket and a shade respectively, two annular holding rings each surrounding said upper and lower spring

members respectively, two clamping rings having beveled edges surrounding said holding rings and said spring members each provided with a plurality of cam slots, and an
 5 equal plurality of pins attached to said upper and lower spring members adapted to slide through their respective cam slots in said clamping rings so as to contract by said clamping rings said spring members to hold
 10 and lock said shade and said socket respectively to said holding member, substantially as described.

8. A holder of the class described which consists of an intermediate holding member
 15 E provided with upper spring members e', e', e', e' , integral therewith and lower spring members e, e, e, e , likewise integral with E, annular holding rings H and G surrounding respectively the upper and lower
 20 spring members, two clamping rings C and B each provided with a plurality of cam slots

K, K, K, C surrounding the spring members e', e', e', e' , and the holding ring H, while B surrounds the spring members e, e, e, e , and the holding ring G, a plurality of pins F, F, 25 F, attached to the spring members e, e, e , and adapted to slide through their respective cam slots in the ring B, and a plurality of pins F', F', F' , attached to the spring members e', e', e' , and adapted to slide 30 through their respective cam slots in the ring C, said clamping rings being adapted by their movements relatively to said spring members to hold and lock a socket and a shade respectively within said spring mem- 35 bers, substantially as described.

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