

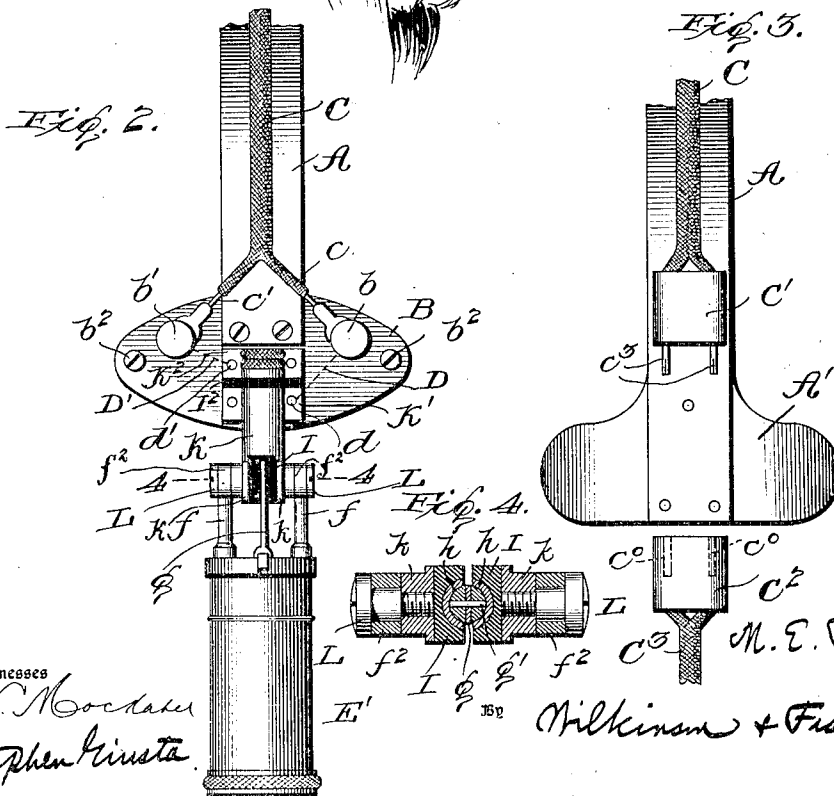
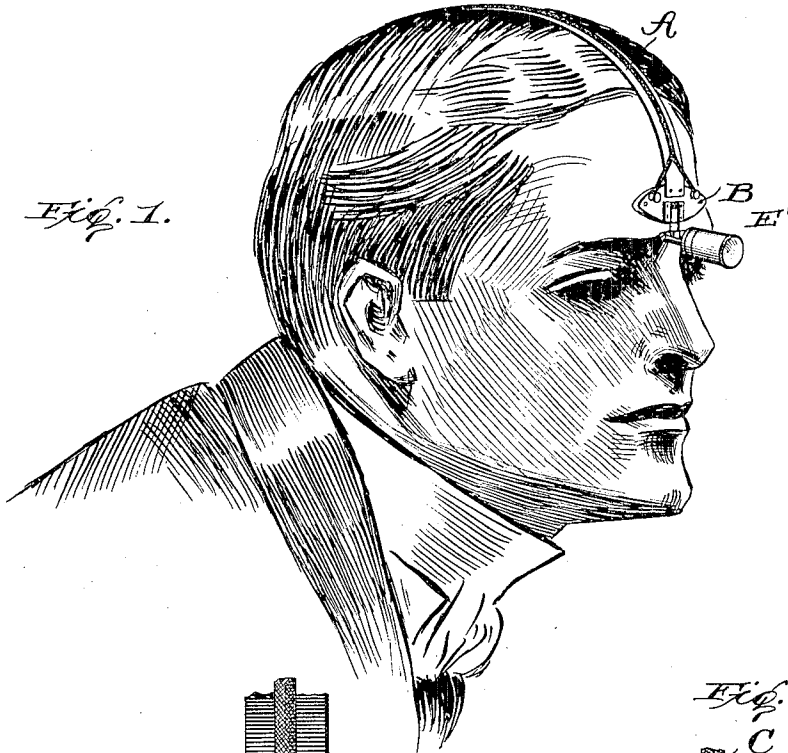
No. 852,265.

PATENTED APR. 30, 1907.

M. E. FULD.
HEADLIGHT.

APPLICATION FILED JAN. 30, 1906.

2 SHEETS—SHEET 1.



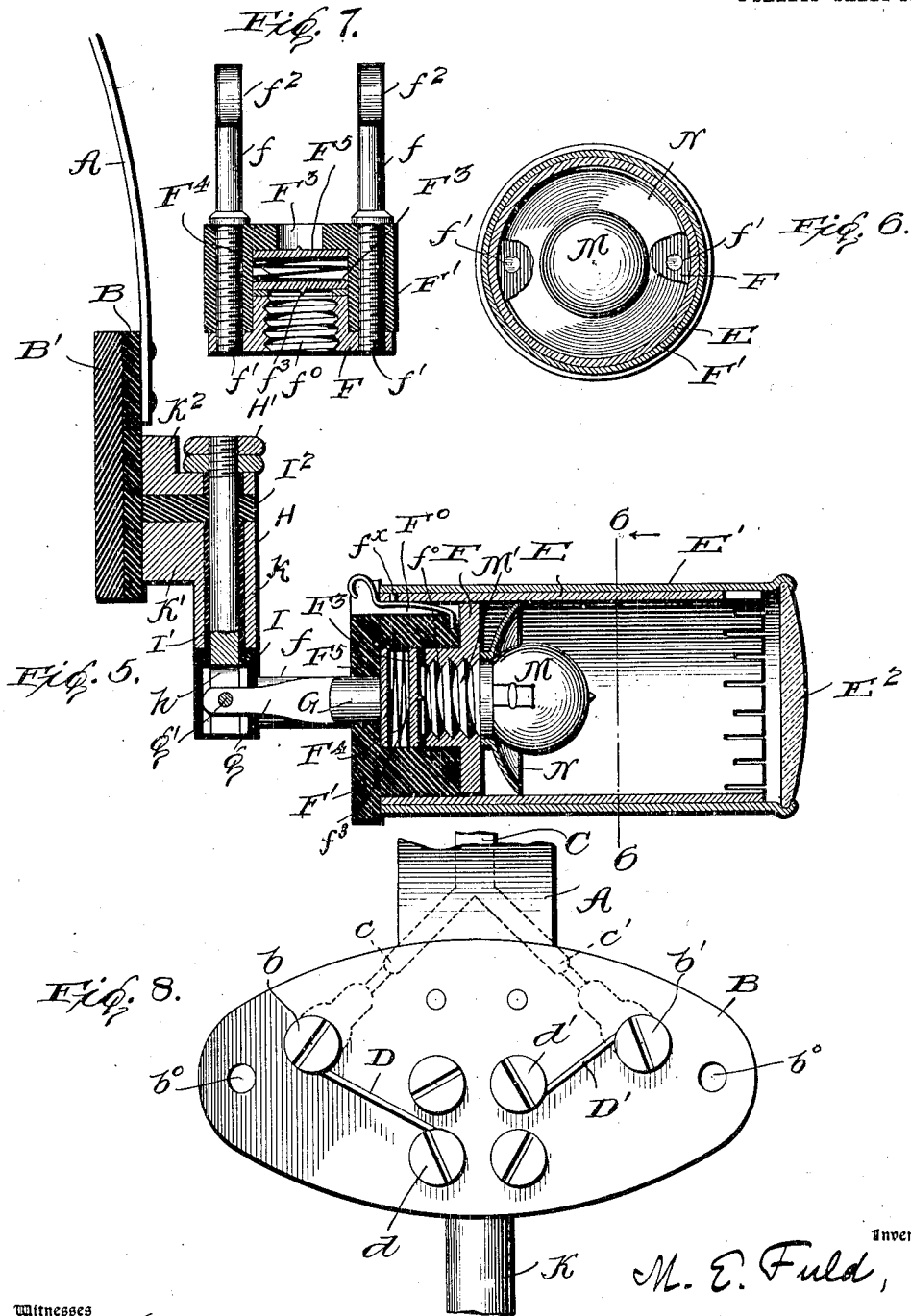
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Witnesses
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UNITED STATES PATENT OFFICE.

MANES E. FULD, OF BALTIMORE, MARYLAND.

HEADLIGHT.

No. 852,265.

Specification of Letters Patent.

Patented April 30, 1907.

Application filed January 30, 1906. Serial No. 298,649.

To all whom it may concern:

Be it known that I, MANES E. FULD, a citizen of the United States, residing at Baltimore city, State of Maryland, have invented certain new and useful Improvements in Headlights; and I do hereby declare the following to be a full, clear, and exact description of the invention, such as will enable others skilled in the art to which it appertains to make and use the same.

My invention relates to improvements in head lights for use more especially by physicians and surgeons in which the light is carried on the head of the wearer and the rays are obscured from the eye of the wearer, but are thrown on the object under examination, such for instance as the larynx of a patient.

My invention will be understood by reference to the accompanying drawings in which the same parts are indicated by the same letters throughout the several views.

Figure 1 is a perspective view showing the apparatus mounted on the head of the wearer. Fig. 2 shows on a larger scale the front end of the spring clip for engaging the head of the wearer with the parts mounted thereon. Fig. 3 shows a rear end of the spring clip and illustrates the means of making the electrical connections with the battery (not shown). Fig. 4 shows a section along the line 4—4 of Fig. 2. Fig. 5 shows a central vertical section through the apparatus and includes the electric light and the various parts in proximity thereto, parts being shown in elevation. Fig. 6 is a section along the line 6—6 of Fig. 5 and looking in the direction of the arrows. Fig. 7 shows a section through the lamp socket and adjacent parts, the section being at right angles to that shown in Fig. 5, and Fig. 8 shows the insulating plate to which the terminals of the leading in wires are connected, the lining plate which goes next the forehead of the wearer having been removed. This figure shows the opposite side of the insulating plate from that shown in Figs. 1 and 2 and on a larger scale than in either of those figures.

A represents a spring clip adapted to fit the head of the wearer and provided with an enlarged plate A' to fit the back of the head, and a shield or plate to fit the forehead. This shield is preferably made of insulating material in two pieces, the front piece B being at-

tached to the clip A, and the rear piece B' being attached to the front piece by the screws 55 b^2 passing through holes b^0 .

The leading in wires are preferably inclosed in a cable C which passes along the top of the clip A and is bifurcated at each end, as shown in Figs. 2 and 3. At the rear end the leading in wires pass through an insulating block C' fast to the clip A, and are connected to contacts c^3 which are adapted to engage in contact sockets c^0 in the insulating block C', see Fig. 3, through which block the leading in wires from the cable C³ are led. The wires of this cable C³ connect with the poles of the battery, not shown. The battery may be carried in the pocket of the user, or may be placed in any convenient position and the wires connected thereto lead up along the back of the operator and are out of the way.

At the front end of the cable C the wires c , c' are bifurcated as shown in Fig. 2, and are connected to the binding posts b , b' , see Figs. 2 and 8, and these posts are connected by the conductors D, D' let into the face of the block B to the binding posts d , d' , and from these binding posts d , d' the circuit is completed through the lamp, as will be hereinafter described.

E represents an inner telescopic tube and E' an outer tube sliding thereon carrying the lens E², by means of which the light from the lamp may be focused on any desired spot.

F represents a lamp socket which is mounted in the insulating block F' which block is detachably held in the inner tube E by means of the spring clip F⁰ having a lug f^x engaging in a notch in the tube E. The base M' of the lamp M is screwed into this socket as at f^0 . N represents a reflector that is held in place by the globe of the lamp when the latter is screwed in place.

The block F' is recessed to receive the metallic disks F³ and F⁵, and the metallic spring F⁴. The disk F³ is provided with a contact point f^3 which carries the current into the lamp M.

Contact is made between the disk F⁵ and the plug G by means of the spring F⁴. This plug G is provided with a tongue g pivoted at g' in the fork h of the pin H, which is held in place in the brackets K¹, K², by means of the lock nuts H'. This pin H is insulated as at

I, I', I² so that the current may pass from the binding post *n'* and conductor D' to the bracket K² and through the pin H and tongue G to the lamp M.

5 The lamp socket F is secured to the insulating block F' by means of the pins *f* which are screw threaded as at *f'* and are provided with eyes *f*². These eyes are adapted to receive the screws L which engage the arms *k* of the tube K which is made integral with the bracket K', see Figs. 2, 4 and 5. The current from the lamp therefore passes through the lamp socket and thence through pins *f*, through the screws L and the arms *k*, tube K and the bracket K' to the binding post *d*, and through the conductor D and binding post *b* to the wire *c*, see Figs. 2 and 8. Thus it will be seen that the circuit from the cable C is completed through the lamp. The screws L should be set up tight enough to create the requisite friction so that the telescopic tube carrying the lamp may be held inclined at the desired angle and yet may be readily swung up or down, when desired.

25 Thus it will be seen that I provide a simple and effective head light that may be readily applied and removed and which will not interfere in any way with the movements of the wearer.

30 It will be obvious that various modifications might be made in the herein described apparatus which could be used without departing from the spirit of my invention.

Having thus described my invention what I claim and desire to secure by Letters Patent of the United States, is:— 35

1. The combination with a resilient lip provided with end plates adapted to engage the head of the wearer, of an electric lamp adjustably connected to the front one of said end plates, and insulated leading in wires carried by said clip and electrically connected to said lamp, with means located at the rear of said support for connecting said leading in wires to a source of electricity, substantially as described. 40 45

2. The combination with a spring clip provided with front and rear end plates adapted to engage the head of the wearer, of a bracket secured to the front end plate, an electric lamp socket hinged to said bracket, and leading in wires mounted on said clip and electrically connected to said lamp socket, an inner tube inclosing said lamp socket, a lamp mounted in said socket, an annular reflector mounted on the base of said lamp and inclosed in said tube, and an outer telescopic tube carrying a lens mounted exterior of said inner tube, substantially as described. 50 55 60

In testimony whereof, I affix my signature, in presence of two witnesses.

MANES E. FULD.

Witnesses:

G. HOWARD DUVAL,
C. B. HANCOCK.