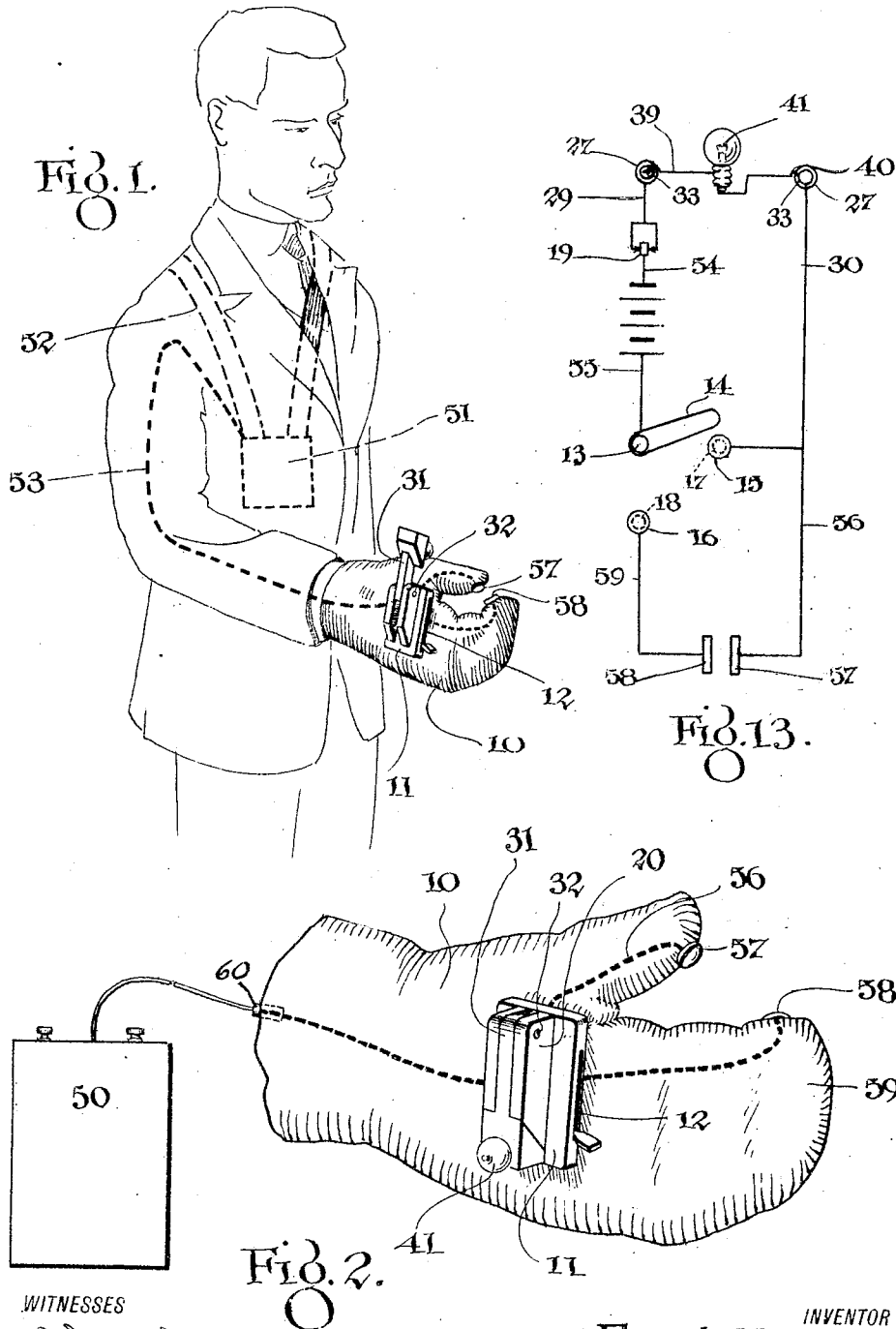


F. HODOUS.
ELECTRIC LIGHT ATTACHMENT FOR HAND COVERINGS.
APPLICATION FILED NOV. 12, 1920.

1,402,609.

Patented Jan. 3, 1922.

2 SHEETS—SHEET 1.



WITNESSES
W. F. Buckley

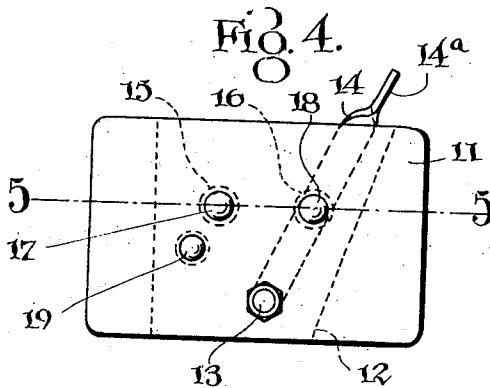
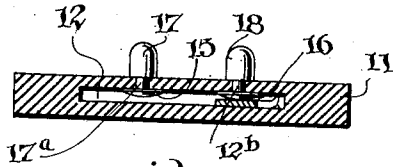
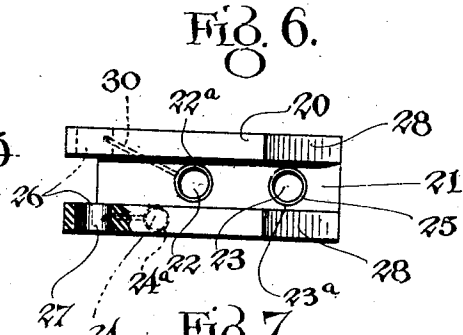
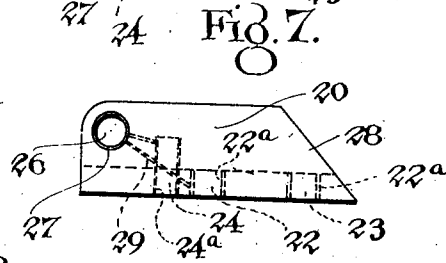
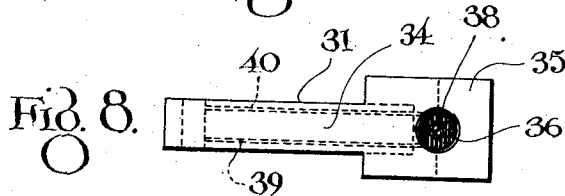
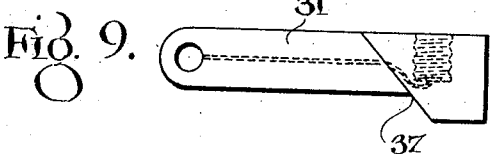
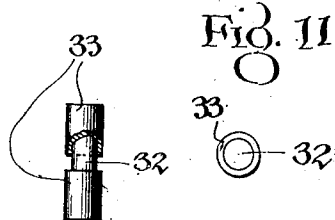
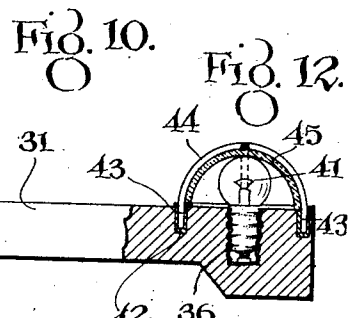
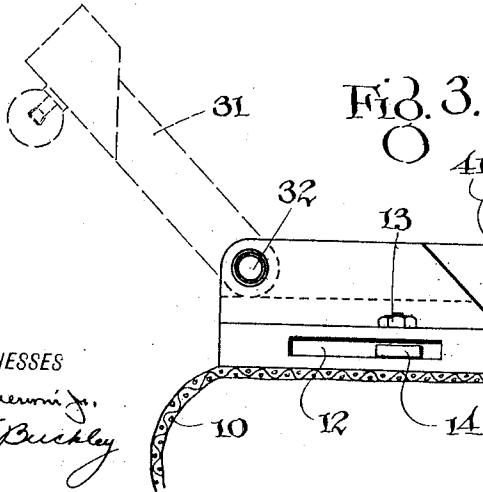
INVENTOR
Frank Hodous.
BY *M. H. Lee*
ATTORNEYS

F. HODOUS.
ELECTRIC LIGHT ATTACHMENT FOR HAND COVERINGS.
APPLICATION FILED NOV. 12, 1920.

1,402,609.

Patented Jan. 3, 1922.

2 SHEETS—SHEET 2.



WITNESSES
H. J. ...
W. F. Buckley

Frank Hodous,
INVENTOR
BY *M. H. ...*
ATTORNEYS

UNITED STATES PATENT OFFICE.

FRANK HODOUS, OF ENDERLIN, NORTH DAKOTA.

ELECTRIC-LIGHT ATTACHMENT FOR HAND COVERINGS.

1,402,609.

Specification of Letters Patent.

Patented Jan. 3, 1922.

Application filed November 12, 1920. Serial No. 423,659.

To all whom it may concern:

Be it known that I, FRANK HODOUS, a citizen of the United States, and a resident of Enderlin, in the county of Ransom and State of North Dakota, have invented certain new and useful Improvements in Electric-Light Attachments for Hand Coverings, of which the following is a specification.

This invention relates to an electric light attachment for hand coverings, and has for its object to provide a device of this character which is adapted to be associated with and incorporated in the structure of a glove, mitten or the like to provide a pleasing quality and high degree of illumination wherever and whenever desired, which is adapted to produce a constant or intermittent illumination, which is adjustable and releasable and especially adapted to furnish from a relatively small source of light the illumination requisite to carry out reading, writing, signalling or similar operations in the dark, and which is of simple and durable construction, reliable in operation and easy and inexpensive to manufacture.

Other objects and advantages of the invention reside in certain novel features of construction, combination and arrangement of parts which will be hereinafter more fully described and particularly pointed out in the appended claims, reference being had to the accompanying drawings forming part of this specification, and in which:

Figure 1 is a perspective view, illustrating the device in use;

Figure 2 is a detail perspective view of the device detached, illustrating its association with the battery;

Figure 3 is an elevational view of the device, the hand covering being shown in fragmentary section;

Figure 4 is a detail view in plan of the base;

Figure 5 is a transverse vertical sectional view thereof, on line 5—5 of Figure 4;

Figure 6 is a detail view in plan of the releasable block;

Figure 7 is a similar view in side elevation;

Figure 8 is a detail view in plan of the adjustable arm;

Figure 9 is a similar view, in side elevation;

Figure 10 is a detail view in elevation of the combined pivot pin and collector;

Figure 11 is a similar view in end elevation;

Figure 12 is a detail view, partly in section and partly in elevation, of a modified form of adjustable arm; and

Figure 13 is a diagrammatic view, illustrating the circuits involved.

Referring to the drawings wherein for the sake of illustration is shown the preferred embodiment of the invention, it will be seen that the invention is incorporated in a hand covering, designated at 10, and which may be a glove, mitten or the like. For the sake of illustration, the invention is shown and described as associated with or incorporated in a mitten.

A base or panel 11 of insulated material is secured to the mitten by riveting or the like, and is provided with a slot 12 extending entirely therethrough, one wall of which tapers as shown in dotted lines in Figure 4. A binding post 13 is secured to the base 11, and has its shank extending through the slot 12. A swinging contact arm 14 is arranged in the slot 12 of the panel and is pivotally mounted on the shank of the binding post 13. The free end of the swinging contact arm 14 projects exteriorly of the base, and is formed to constitute a thumb piece 14^a. The contact arm 14 is adapted to cooperate with contact heads 15 and 16 of plug connections 17 and 18, respectively. A third plug connection 19 is also included for a purpose to hereinafter more fully appear. The plug connections 17 and 18 each include a reduced portion or neck designated at 17^a and 17^b, respectively, which extends through the wall of the base at the upper side of the slot and which carry at their lower ends contact heads 15 and 16, respectively. These contact heads 15 and 16 are thus disposed within the slot and may be selectively engaged with the contact arm 14.

A releasable block 20 is provided and is adapted to be releasably secured to the base or panel 11. The block includes a channel 21, the floor of which is provided with sockets designated at 22 and 23, and adapted to receive respectively, plugs 17 and 18. The block 20 also includes a socket 24 adapted to receive a plug 19. The sockets 22, 23 and 24 are formed by brass bushings 22^a, 23^a and 24^a inserted in suitable openings provided therefor in the block. These brass bushings frictionally engage the plug connections to releasably secure the block to the base and

to electrically connect the blocks to the base. One end of the block is provided with alined pivot bearings 26, in which brass bushings 27 are inserted. Conductors 29 and 30 embedded in the material of the block electrically connect the bushings 22^a and 24^a with the bushing 27 of the pivot bearings. The end of the block opposite the pivot bearings is inclined, as shown at 28.

10 An adjustable or swinging arm 31 which constitutes the light support proper is pivoted to the releasable block by means of a pivot pin 32 rotatably arranged in the alined pivot bearings 26. The pivot pin 32 is fixed to the adjustable arm so that the adjustable arm and the pivot pin rotates together and is also provided with brass bushings 33 which directly engage the brass bushings 27 of the pivot bearings to electrically connect the swinging arm to the releasable block. This engagement of the brass bushings 33 and 27 is sufficiently snug and tight to maintain the adjustable arm in any position to which it may be moved by virtue of the frictional engagement of the said bushings. The swinging arm 31 is provided with an elongated body portion 34 adapted to be received in the channel of the block, and has at its free end an enlarged portion 35 having a light socket 36 therein and inner inclined shoulders 37 adapted to engage the inclined end 28 of the block whereby the arm may be nested in the block. The brass bushings 33 which rotate with the adjustable arm are electrically connected with the light socket 36 and with a center electric light contact 38 at the base of the socket by means of conductors 39 and 40, respectively which are embedded in the material of the adjustable arm. An incandescent electric light or other electric light 41 is screwed in the socket 38.

In the form of my invention shown in Figure 12, the adjustable arm 31 is constructed as in the previous embodiment of the invention, and in fact is identical therewith. In this form, however, the arm is provided at its outer end adjacent and concentric with respect to the electric light socket with a plurality of holes or openings 42 which receive friction pins 43 provided at the lower end of a light guard 44. The light guard 44 consists simply of a number of crossed or interentwined wires or similar elements and within the guard is arranged a hollow semi-circular globe 45 of colored glass whereby the light may be used for signalling purposes.

The electric lamp 41 is energized from a battery or the like 50 which preferably is carried in a suitable case 51, shown in dotted lines in Figure 1, and carried by the wearer by means of straps or other suitable harness 52.

A cable 53 including two insulated conductors, designated at 54 and 55 lead from the positive and negative terminals of the battery to the plug connections 19 and the binding post 13, respectively. A branch 56 leads from the plug connection 19 to a contact 57 which constitutes one of a pair of normally spaced contacts designated at 57 and 58. A second branch 59 leads from the contact 58 to the plug connection 18. The spaced contacts 57 and 58 are carried upon relatively movable portions of the hand covering preferably upon the thumb portion and the fore-finger portion of the mitten, respectively. The contact 57 is carried by the flat face of the thumb portion in such manner that it will not engage the contact of the fore-finger portion in the normal position of the hand but may be engaged therewith without causing the hand to assume any unusual or strained positions. The cable 53 also includes a plug connection, designated at 60.

In the use of the device, the swinging arm carrying the lamp is first adjusted to the position most advantageous for the purpose of the user. Then the lamp may be energized either by engaging the swinging contact arm 14 with the head 15 of the plug connection 17 to provide for constant illumination or to engage this swinging contact arm 14 with the head 16 of the plug connection 18 and also engage the normally spaced contacts 57 and 58 as desired to provide for intermittent illumination. When the contact arm 14 is engaged with contact 15 of plug connection 17 to provide for constant illumination, the current flows from the battery through the conductor 54, plug connection 19, conductor 29, bushing 27 and 33, conductor 39, through the lamp and back to the battery by way of conductor 40, bushing 27 and 33, conductor 30, plug connection 17, contact arm 14, binding post 13 and conductor 55. When the contact arm 14 is engaged with the plug connection 18 the current flows from the battery through the conductor 54, conductor 29, conductor 39 through the lamp and back to the battery by way of conductor 40, conductor 30, branch 56, contact 57 and 58, branch 59, plug connection 18, arm 40, binding post 55 back to the battery. It is obvious that the contact arm 14 and the plug connections with which it is engageable constitute a switch to provide for constant illumination and that the contacts 58 and 59 provide a switch to provide for intermittent illumination.

The device finds a high degree of usefulness in the field as it enables the user to read or write or signal or carry out similar actions in the dark as the light which is provided may be adjusted to provide the

character of illumination desired and may be positioned to advantage and to suit the exigency of conditions.

It is to be understood that while the invention is preferably embodied in a hand covering which incidently serves to mount it on the back of the hand, other conventional and well known means may be used for so mounting it.

10 I claim:

1. A device of the character described, comprising, in combination with a hand covering such as a glove, mitten or the like, a base of insulating material secured to the back of the hand covering and having a slot therein, a binding post carried by said base, a swinging contact arm pivoted to said binding post, a plurality of plug connections upstanding from said base and having contact heads engageable with the contact arm, a releasable block having sockets adapted to receive and frictionally engage the plug connections of the base, an adjustable arm pivoted to the releasable block and electrically connected with the plug connections, an incandescent lamp arranged on the outer end of said adjustable arm and spaced contacts arranged upon the thumb and forefinger of the hand covering respectively and electrically connected with the plug connections for controlling the lamp for intermittent illumination.

2. In a device of the character described for use with hand covering such as gloves, mittens and the like, a base adapted to be secured to the back of the hand covering, a block releasably arranged upon the base and having a channel, an adjustable arm pivoted to the block and adapted to be nested in the channel, an electric lamp carried by the outer end of the arm, a switch carried by the block for controlling the lamp as to constant illumination, and a second switch

constituted by movable contacts carried by relatively movable portions of the hand covering and adapted to intermittently energize the lamp.

3. In a device of the character described for use with hand covering such as gloves, mittens or the like, a base of insulating material carried by the back of the mitten, a releasable block carried by the base, an adjustable arm pivoted to the releasable block, an electric lamp carried by said adjustable arm, a switch arranged upon the base for controlling the lamp as to constant illumination, and normally spaced contacts carried by relatively movable portions of the hand covering for controlling the lamp as to intermittent illumination.

4. In a device of the character described, a base of insulating material, a block releasably arranged upon the base and having a channel, an adjustable arm pivoted to the releasable block and having a body portion adapted to be nested in the channel of the block, and an offset end portion adapted to be disposed below the top of the releasable block, and an electric lamp carried by the adjustable arm.

5. In a device of the character described, a base having a slot therein, plug connections upstanding from the base and having contact heads arranged in the slot, a swinging contact arm arranged in the slot and engageable with the contact heads and plug connections, a releasable block having sockets engageable with the plug connections to releasably retain the block on the base and electrically connect the block therewith, an adjustable arm pivotally connected to the block and electrically connected thereto, and an electric lamp carried by the adjustable arm and adapted to be controlled by the swinging contact arm of the base.

FRANK HODOUS