

Jan. 26, 1954

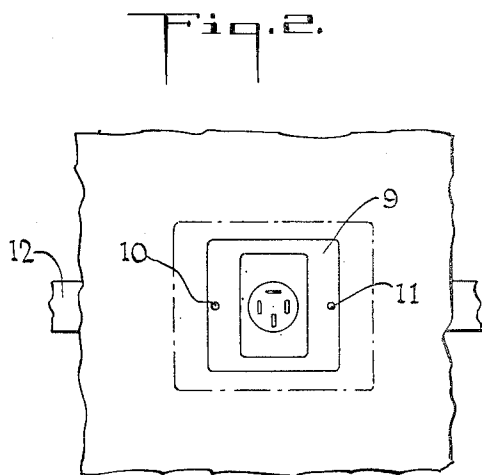
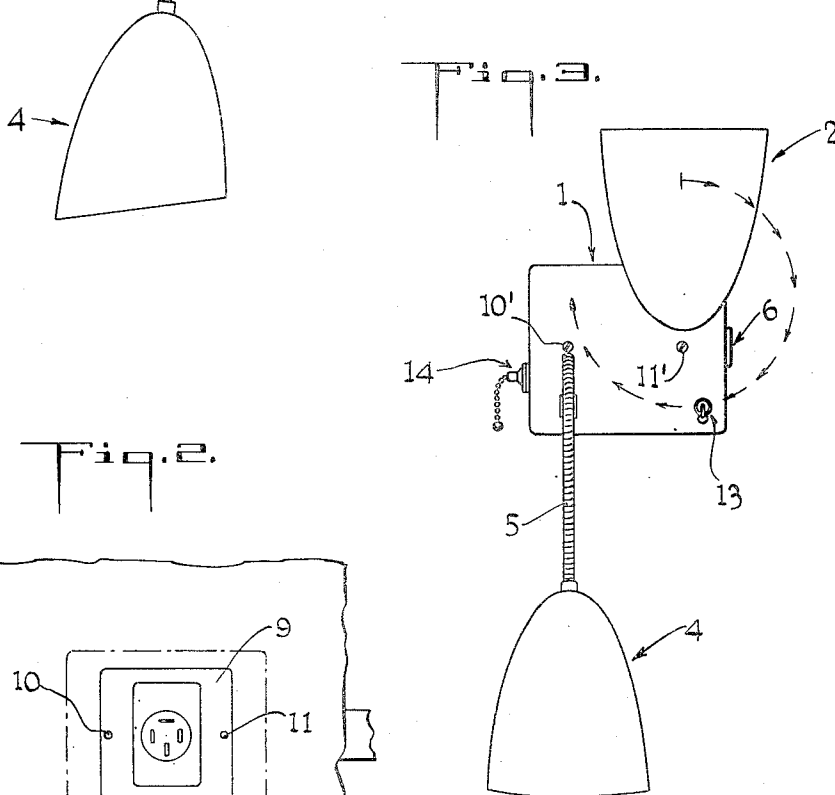
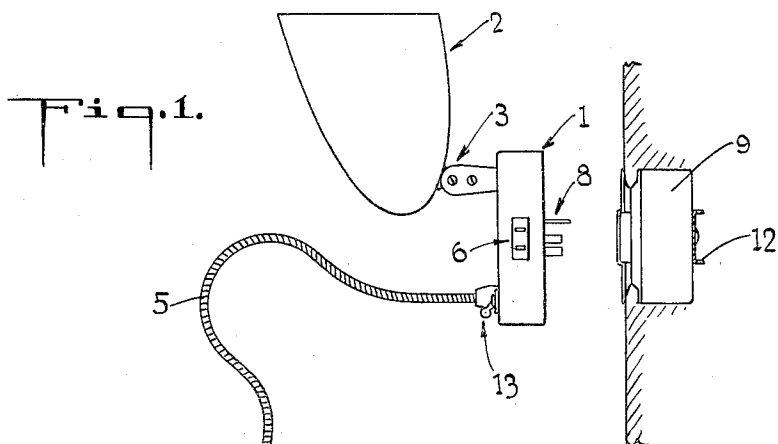
K. VERSEN

2,667,571

PLUG-IN LIGHTING UNIT FOR DUAL POWER SUPPLY SYSTEMS

Filed Sept. 30, 1949

2 Sheets-Sheet 1



INVENTOR.
KURT VERSEN
BY *Walter Huber*
ATTORNEY

Jan. 26, 1954

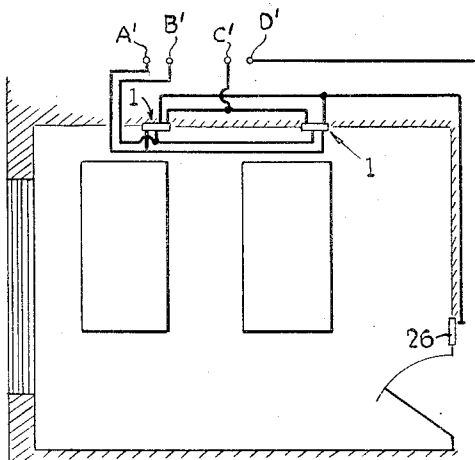
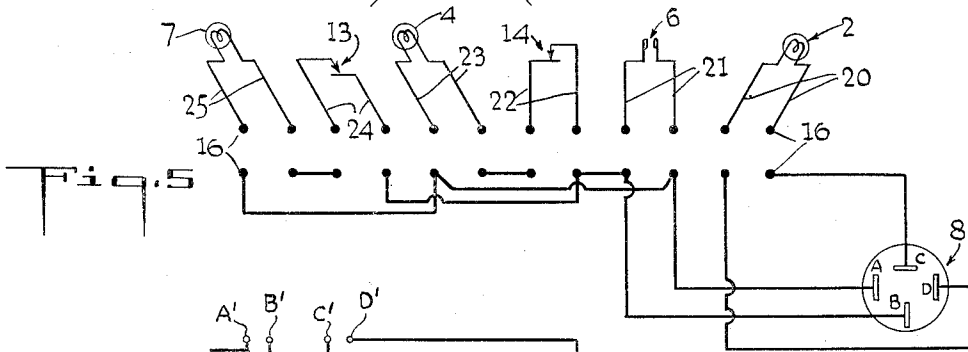
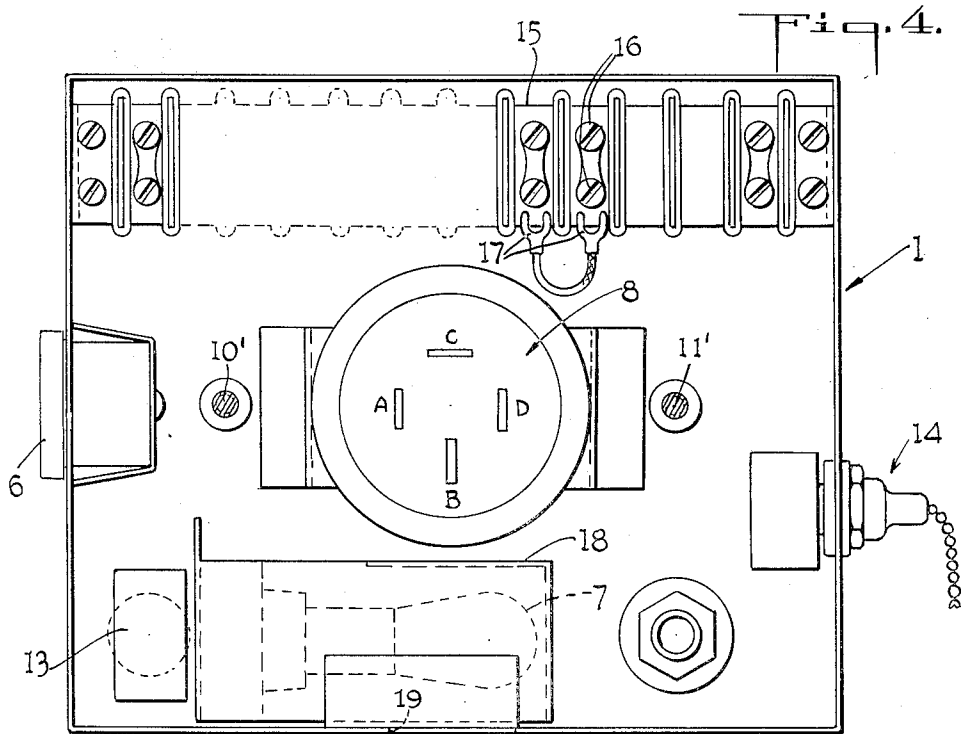
K. VERSEN

2,667,571

PLUG-IN LIGHTING UNIT FOR DUAL POWER SUPPLY SYSTEMS

Filed Sept. 30, 1949

2 Sheets-Sheet 2



INVENTOR.
KURT VERSEN
BY *Max V. V. V.*
ATTORNEY

UNITED STATES PATENT OFFICE

2,667,571

PLUG-IN LIGHTING UNIT FOR DUAL POWER
SUPPLY SYSTEMS

Kurt Versen, Tenafly, N. J.

Application September 30, 1949, Serial No. 118,753

2 Claims. (Cl. 240-73)

1

The present invention deals with an electrical lighting unit and more particularly with an electrical lighting unit of the plug-in type having a combination of the advantages of a general lighting fixture and auxiliary lighting fixture especially useful in hospital rooms.

Hospital rooms usually require general lighting such as provided by electrical devices such as a luminaire located on the ceiling of the room, localized lighting such as provided by bed lamps or table lamps, and a small-wattage night light to furnish only enough illumination to service the occupants of the hospital room during the night. Hospitals may furnish such requirements by the use of one or two independent electrical circuits so that at least one of said electrical devices can remain operative in the event that one circuit becomes defective. It is a common practice to provide independent outlets for each of such electrical circuits. Therefore, the number of electrical outlets in each hospital room is determined by the general lighting, auxiliary lighting, convenience outlets for therapeutic apparatus, a second circuit outlet, and other outlets depending upon the size of the hospital room and the number of beds in the room. Such electrical outlets occupy various locations of the hospital room, and for lighting purposes or other uses it becomes necessary to operate the several requirements from different locations. This condition is disadvantageous since in treating a single patient it becomes necessary to inconvenience or disturb other patients in order to provide light or therapeutic treatment for such patient.

It is an object of the present invention to provide an electrical unit having the combination of the advantages of a general lighting fixture and auxiliary lighting fixtures. It is another object of the present invention to provide an electrical unit of the plug-in type which eliminates the use of numerous electrical outlets and which localizes the operation of hospital room lighting requirements and electrical therapeutic treatment for a single patient to the immediate area of a single hospital bed. Other objects and advantages of the present invention will become apparent from the description hereinafter following and the drawings forming part hereof, in which:

Fig. 1 illustrates a side elevational view of the electrical unit of the present invention including an electrical outlet therefor,

Fig. 2 illustrates a front elevational view of an electrical outlet according to the invention including a supporting wall anchor therefor shown by broken lines,

2

Fig. 3 illustrates a front elevational view of the electrical unit of Fig. 1;

Fig. 4 is a diagrammatic illustration of the rear view of the electrical unit of the invention including various embodiments thereof,

Fig. 5 is a schematic wiring diagram for the various electrical embodiments illustrated in Fig. 3, and

Fig. 6 is a plan view of a hospital room equipped with electrical units according to the present invention.

My invention deals with the unification of the electrical wiring in a hospital room at a location over each hospital bed approximately five feet above the floor, whereby all electrical hospital room requirements for each bed can be operated from one strategic location. The above mentioned unification is possible with the electrical structure or basic unit of my invention which eliminates the necessity for separate electrical outlets such as a ceiling outlet for general illumination, wall outlets for auxiliary lamps, a wall convenience outlet for therapeutic appliances, radio, etc., a second circuit wall outlet and wall switch outlets. By auxiliary lamps I refer to examining lights, bedlights, and night lights. I provide all hospital room electrical requirements by the use of a substantially small and flat structure or basic unit provided with a single plug adapted to engage one, but preferably two or more separate electrical circuits so that at least one circuit may function independently should the other circuit become defective. This small electrical basic unit has connected to it to form a single composite unit, i. e. a lighting structure or fixture, a swivel-pivoted indirect lighting means capable of being rotated, e. g. at 180 degrees or more from the vertical, so that it serves not only as a means for general lighting but also as an examining light in the treatment of a patient, a flexible arm lighting means which serves as a reading lamp, etc., and a night light of small wattage mounted within said unit. Preferably the indirect lighting means is capable of being rotated at 250 degrees to permit radial action in the swivel for efficient medical inspection purposes. By the combination of the above mentioned lighting means at a localized and easily accessible area over each hospital bed—which is made possible by the plug-in type electrical structure or basic unit of my invention hereinafter more particularly described—I provide an electrical lighting and servicing system such that all necessary hospital room electrical needs may be easily controlled to suit the requirements for each patient.

Fig. 1 illustrates the electrical composite unit

3

of my invention as a structure comprising a substantially flat electrical basic unit 1 having combined therewith and positioned on the front thereof a swivel-pivoted indirect lighting device 2 comprising a lamp and shade therefor pivoted on a swivel 3 which may be rotated at least 180 degrees from the vertical, as shown in Fig. 3, to enable it to act not only as a source for general indirect lighting but also as an examining light, a reading lamp or bed lamp 4 comprising a lamp and shade therefor attached to the front of said electrical unit by means of a flexible arm 5 easily adjustable to assume any desired position, a convenience outlet 6 for therapeutic devices, etc., positioned on one side of said electrical unit, a night light 7, as shown in Fig. 4, contained within said basic unit and adapted or positioned for illumination through the bottom of said unit, and a plug 8, two-pronged or three-pronged for single circuit and four or more pronged for multiple circuits, positioned on the rear of the electrical unit for engaging the wall outlet 9 and two separate electrical circuits so that at least one circuit may function independently should the other circuit become defective, said outlet 9 being electrically connected to two independent sources of current.

Fig. 2 shows a front elevational view of a main outlet 9 including two recesses 10 and 11 for cooperating with a locking means, e. g. two screws, by which said unit 1 is retained in position and grounded, said outlet being secured to a wall by means of the anchor 12.

Fig. 3 illustrates the location of a toggle switch 13 for operating the night light 7 and pull switch 14 for operating the bed lamp 4. The general or indirect light 2 is operated, preferably from an independent circuit, by a switch located near the door of the hospital room as hereinafter described. The electrical unit 1 is plugged into the outlet 9 and further secured or locked in position by means of the screws 10' and 11' which engage the recesses 10 and 11 and which are electrically contacted in known manner to provide a ground therefor.

Fig. 4 is a diagrammatic rear view illustration of the various fixed embodiments, contained within the electrical basic unit of my invention. Centrally located with respect to the unit 1 is a two or more, e. g. four, pronged plug 8 having terminals A and B associated with an electrical circuit for supplying current to the night light 7, bed lamp 4, convenience outlet 6 and to the switches 13 and 14 for operating said night light and said bed lamp respectively. The terminals C and D of the plug 8 are associated with a separate circuit for supplying current to the general indirect light 2. Contained inside the electrical unit 1 and secured to an upper portion thereof is a terminal block 15 having a plurality of aligned electrically connected binding posts 16 equipped with a plurality of easily changeable and substantially short conductors, one of which is shown, with spade clips 17 so that said spade clips may be manipulated to enable one of the circuits hereinafter described to function in a series connection for selected electrical requirements to the exclusion of a second circuit, or the electrical requirements of the hospital room may be divided to function in parallel from two circuits, or any single hospital lighting requirements may be easily removed from either circuit, all by simply disconnecting specific spade clips and rearranging the circuit to function according to the electrical needs wanted. Any desired light

4

may remain in service should some light herein mentioned be removed for repair. A suitably selected pair of binding posts are electrically connected to each fixed electrical embodiment described. Therefore, defective wiring in lighting, etc., can be readily repaired and replaced as the only connections for all hospital electrical requirements extend from the terminal block 15 to each electrical embodiment for a short distance. In short, the terminal block wiring inside the electrical unit is constructed for easy and rapid correction and adjustment to any wiring specifications for flexibility and independent operation of the light sources, etc., without disturbing the fixed wiring system of the various electrical embodiments. Moreover, any repair work which would be necessary for any hospital room lighting requirement need not be made in the hospital room since it is a simple operation to remove the securing means, e. g. the screws 10' and 11', disengage the plug 8 from the outlet 9, and repair the composite unit outside of said room. In this manner it is possible to service all hospital room lighting requirements by simply removing the electrical unit, which, of course, is advantageous in that there is a minimum of disturbance in the hospital room.

The night light 7 is encased in a shield 18 in such manner that it may be easily removed or inserted by means of snap-in type contacts, and the electrical unit is provided with a slot or opening 19 on the bottom thereof so that said night light provides only a downwardly directed illumination along the hospital room wall in the vicinity of the hospital bed from a distance of about five feet above the floor.

Fig. 5 shows the wiring diagram for the various electrical embodiments illustrated in Fig. 4. In Fig. 5 I have illustrated one type of dual circuit arrangement possible and in which case the two electrical circuits mentioned operate simultaneously and independently of each other. A selected pair of binding posts is connected to the conductors 20 of the indirect light 2. Conductors of other electrical embodiments, e. g. outlets, are likewise connected with other selected binding posts. In accordance with Fig. 5, I have shown conductors 21 to relate to the convenience outlet 6 and conductors 22, 23, 24 and 25 to relate, respectively, to the pull switch 14, flexible arm light 4, toggle switch 13, and night light 7. It is, however, apparent that by removing and rearranging some of the spade clips 17 I may place any of the electrical embodiments into either of the two circuits illustrated. For example, I may utilize the circuit cooperative with the plug terminals C and D to furnish current to outlets for the bed lamp 4 and night light 7 while the circuit cooperative with the plug terminals A and B furnishes current to all other electrical embodiments or outlets. The spade clips 17 may also be arranged to cooperate with a single circuit where hospital rooms are thus wired, and a main outlet then serves only the single circuit. In such case the prongs A B C D may be adapted so that two of the prongs relate to a wall switch as shown in Fig. 6 for operating, for example, the indirect lighting device 2 and the two remaining prongs serve the other electrical devices herein described, all electrical devices being served by the said single circuit, which is made possible by applying cross jumpers in such manner that the four prongs are electrically connected with a common ground associated with one prong and a live leg jumpered, as known to the art, to serve the other three prongs

Since only a single ground is used in the case of a single circuit, it is apparent that the plug 3 may comprise less than four prongs, e. g. two or three prongs. I prefer, however, to use one circuit for the general indirect lighting alone which is operative by means of a separate switch near the room door. Such arrangement is advantageous since in a hospital room having several beds and more than one electrical unit, I may control more than one indirect light from said door switch to instantly provide a balanced indirect lighting.

Fig. 6 shows a plan view of a hospital room occupied by two beds and provided with two electrical units of my invention connected in parallel to the circuits A' B' and C' D'. It is apparent from the circuit wiring that the circuit C' D', which I use for indirect lighting, is independent of the circuit A' B' and is operable from the wall switch 26 located near the hospital room door. With more than one electrical unit in a hospital room, I may remove an electrical unit for repair and still provide the room with electrical requirements since at least one other electrical unit may remain operative in the event of emergency, etc., or a spare unit may be plugged in readily to replace a defective one.

Therefore, the composite unit of my invention is not only advantageous from the standpoint of maintenance, but also furnishes the most flexible illumination and other electrical requirements when it is wanted in all phases of hospital operation both for the convenience of the patient and for hospital personnel who utilize light and therapeutic devices in the treatment of patients.

What I claim is:

1. A composite electrical unit for the unification of lighting requirements comprising in combination, a substantially small and flat container having a front face, rear face and sides, an electrical terminal block within said container, a plurality of pairs of binding posts on said terminal block, each pair of binding posts consisting of first and second electrically connected binding posts, a plurality of electrical members comprising a lamp member secured to the front face of said container and an electrical outlet member on a side of said container, each of said members being electrically connected from a first binding post of one pair of binding posts to a first binding post of another pair of binding posts, a plurality

of short changeable electrical conductors each engageable with a second binding post of one pair of binding posts and a second binding post of another pair of binding posts, at least a pair of prong members extending outwardly of the rear face of said container, conductors leading from one of said prong members to a second binding post of one pair of binding posts and from another prong member to a second binding post of another pair of binding posts, a main electrical outlet for said prongs said main outlet containing electrically conductive sockets for each prong, said prongs being detachably insertable into said sockets, an electrically conductive retaining means engageable with said container and said main outlet for securing said container to said outlet.

2. A composite electrical unit according to claim 1, comprising two pairs of prong members, one pair of said prongs being electrically connected to two of said second binding posts and the other pair being electrically connected to another two of said second binding posts, said main electrical outlet having two pairs of openings receptive to said prong members, two sources of current, one of said sources of current being associated with one pair of said openings and the other source of current being associated with the other pair of said openings.

KURT VERSEN.

References Cited in the file of this patent

UNITED STATES PATENTS

Number	Name	Date
35 Re. 22,037	Markel et al.	Feb. 24, 1942
1,631,997	Benjamin	June 14, 1927
1,738,206	Riddles	Dec. 3, 1929
1,791,264	Chaney et al.	Feb. 3, 1931
2,063,099	Loock	Dec. 8, 1936
2,201,743	Peterson	May 21, 1940
2,227,549	McNeill	Jan. 7, 1941
2,397,688	Osinski	Apr. 2, 1946
2,428,110	Dorfman	Sept. 30, 1947
2,433,917	McCartney	Jan. 6, 1948

FOREIGN PATENTS

Number	Country	Date
5,681 of 1908	Great Britain	Mar. 15, 1909
412,077	Great Britain	June 21, 1934