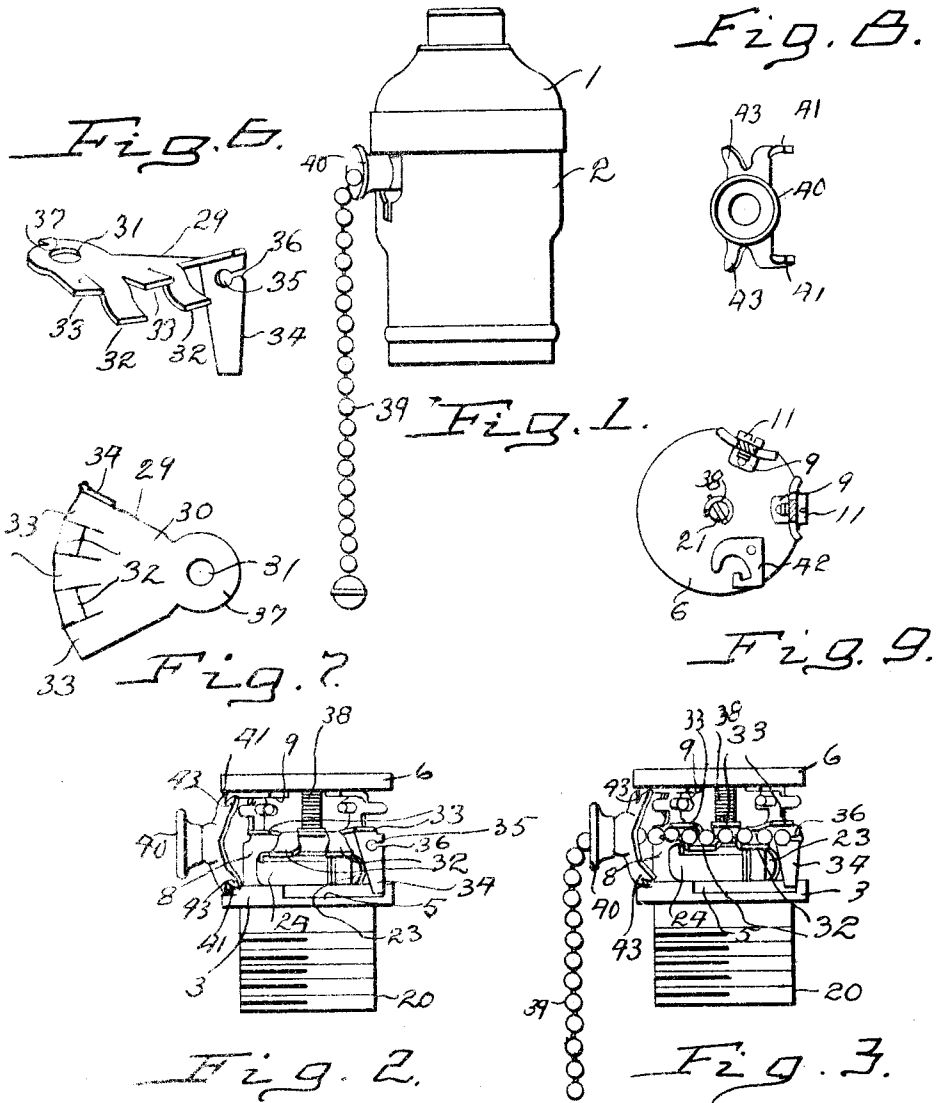


L. F. LINDSTROM.
ELECTRIC SWITCH.
APPLICATION FILED NOV. 20, 1912.

1,059,056.

Patented Apr. 15, 1913.
2 SHEETS—SHEET 1.



Witnessed
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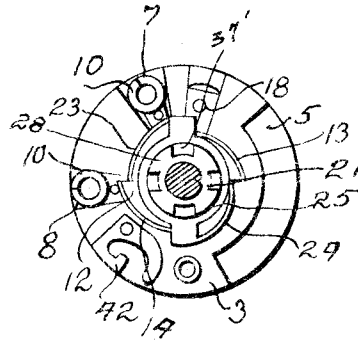


Fig. 5.

Fig. 14.

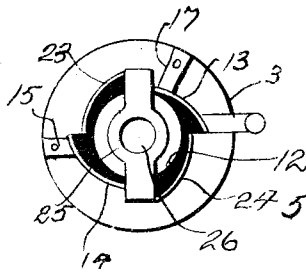
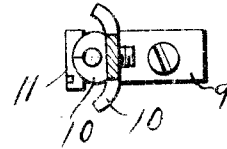


Fig. 10.

Fig. 4.

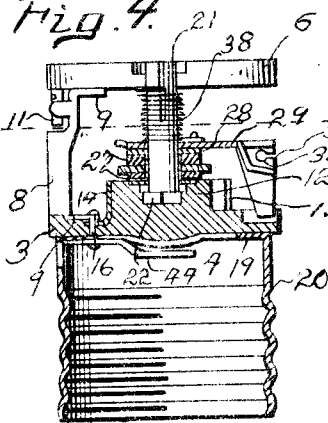


Fig. 13.

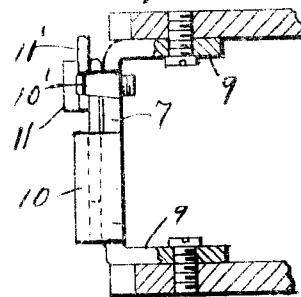


Fig. 11.

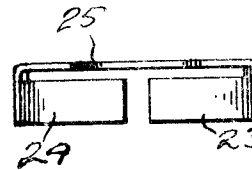
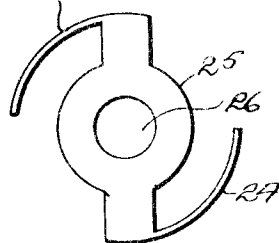


Fig. 12.

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UNITED STATES PATENT OFFICE.

LOUIS F. LINDSTROM, OF BRIDGEPORT, CONNECTICUT.

ELECTRIC SWITCH.

1,059,056.

Specification of Letters Patent.

Patented Apr. 15, 1913.

Application filed November 20, 1912. Serial No. 732,584.

To all whom it may concern:

Be it known that I, LOUIS F. LINDSTROM, a subject of the King of Sweden, residing at Bridgeport, in the county of Fairfield and State of Connecticut, have invented certain new and useful Improvements in Electric Switches, of which the following is a specification.

This invention comprehends certain new and useful improvements in electric switches and relates more particularly to switches for electric lamp sockets.

The primary object of the invention resides in the provision of an electric lamp socket which shall be of extremely simple construction, cheap to manufacture, and which may be thrown in or out of circuit by a pull upon a cord or chain.

Another and more specific object of the invention resides in the provision of a novel form of clutch plate and chain guide.

The invention also aims to generally improve devices of this nature to render them more desirable commercially.

With these and other objects in view, the invention consists in certain novel features of construction, combination, and arrangement of parts, as will be hereinafter fully described and claimed.

For a complete understanding of my invention reference is to be had to the following description and accompanying drawings, in which,

Figure 1 is a side elevation of my improved socket as it appears in use, Figs. 2 and 3 are elevations of the socket, the metal casing being removed, Fig. 4 is a vertical sectional view through my invention, Fig. 5 is a horizontal sectional view taken upon the plane of line 5--5 of Fig. 4, the clutch plate being removed, Figs. 6, 7, 8, 9, 10, 11 and 12 are detail views of parts to be hereinafter fully described, and, Figs. 13 and 14 are side and end views respectively, of one of my improved binding posts.

Referring in detail to the drawings by numerals, 1 designates a metal cap and 2 a sheet metal shell of the construction usually employed and which are used to house the switch mechanism proper.

3 designates a preferably porcelain base provided upon its under side with the projection 4 and upon its upper side with the arcuate recess 5. A disk 6 of some non-conducting material is held in spaced relationship above the porcelain base 4, by means of

the binding posts 7 and 8. Each of these binding posts is provided with the inwardly projecting end portions 9 and has its body portion bent to form the sleeve 10. The upper end of each of the binding posts is apertured to receive a clamping screw 11 by means of which the wires may be attached. The projections 10' and the sleeve 10 form supports for the wire 11' and effectually prevent short circuiting. The upper surface of the porcelain base 4 has formed therein, what may be termed a ratchet commutator 12. I have shown this commutator as provided with four teeth, the outer faces of two of which are covered with the conducting strips 13 and 14, while the others are non-conducting. The conducting strip 13 is provided adjacent one end with a lateral extension 15, which passes under the inwardly projecting end 9 of the binding post 8 and is clamped against the same and against the base 4, by means of the screw 16. The other conducting strip 14 is similarly provided with a lateral extension 17, which is connected by means of a screw 18 to an inwardly projecting flange 19 formed upon the metallic socket 20. It will thus be seen that this screw also assists in securing the socket to the base 4.

A spindle 21 having one end longitudinally slotted and being provided upon its other end with a many sided projection 22, is seated at its lower end within the recess formed in the commutator 12 and the other end of the spindle projects through an opening in the disk 6, said opening being counter-sunk around the extreme end portion of the spindle. The bottom of the recess in the commutator is of the same shape as the many sided projection 22 and the spindle 21 is therefore held against rotation, but, by raising this spindle a slight distance so as to bring the many sided portion 22 into the larger portion of the recess, said spindle may be rotated.

A pair of segmental spring brushes 23 and 24 are formed integral with the connecting strip 25, which is enlarged intermediate its ends and provided with the circular opening 26. The brushes 23 and 24 extend in opposite directions from the connecting strip 25, which continues from the upper edges of these brushes. The connecting strip 25 is clamped between two insulating disks 27 by means of the flanged sleeve 28 and mounted for revolution upon the spindle 21. The

flanged sleeve 28 may be rotated by means of a clutch member 29, which is formed of a single piece of sheet-metal and which comprises a segmental body portion 30 rounded at one end and formed with the centrally positioned circular opening 31. One edge of the body portion 30 is provided with a number of slits and the alternate portions of metal formed by said slits are bent downwardly and outwardly to provide the guide fingers 32. The fingers 32 are slightly longer than the unbent projections 33. A downwardly projecting stop 34 is formed upon one edge of the body portion 30 and is provided with a circular opening 35 which communicates with the end opening slot 36, the purpose of which will be hereinafter explained. A downwardly projecting spur 37 is formed upon the clutch plate 29 for removable engagement in notches 39' formed in the flanged sleeve 28. An expansive spiral spring 38 has one end secured within the slotted portion of the spindle 21 and is affixed at its other end to the clutch plate 29, whereby said plate is held against the flanged sleeve 28 and also held against rotation in one direction.

In order to provide for actuating the clutch plate 29, I attach a pull chain 39 consisting of a number of beads threaded upon a wire, to the stop projection 34. This attachment is easily made by slipping a bead upon each side of the projection, the wire being received within the slot 36 and opening 35. The portion of the chain adjacent the affixed end thereof, is received between the projections 32 and 33 of the clutch plate 29. A chain guide 40 having a funneled body portion provided with hook-shaped projections or arms 41, is secured within the brackets 42 between the base 4 and disk 6. It will be seen upon reference to Fig. 9, that the brackets 42 are formed with arcuate slots for the reception of the hook-shaped projections 41. Stops 43 are also formed upon the chain guide 40 and abut the interior of the sheet-metal casing 2. The construction of the chain guide and the manner in which it is positioned, permits of a slight rotary movement which facilitates the passage of the chain 39.

When the chain 39 is pulled, the clutch plate 29 is rotated about a quarter of a revolution and carries with it the flanged sleeve 28, which in turn actuates the brushes 23 and 24, causing them to either contact or break their contact with the conducting strips 13 and 14, positioned upon the commutator 12. When the chain is released the spiral spring 38 reverses the movement of the clutch plate 29 and carries the stop 34 against one end wall of the recess 5. In the reverse movement of the clutch plate, the

spur 37 automatically disengages from the notched sleeve 28. When the parts are positioned, as disclosed in Fig. 5, the circuit is broken but should the chain be pulled once the brushes will move so as to overlap the conducting strips 13 and 14, which will close the circuit, allowing the current to flow in through the binding post 7, the contact plate 44, which is secured to the under side of the base 4, through the lamp, socket 20, screw 18, thence from the conducting strip 13 via the brushes to the conducting strip 14 and then out through the binding post 8.

The spring 38 may be readily tightened by raising the spindle 21, rotating the same, and again seating it within the bottom of the recess formed within the commutator 12.

It is to be understood that while I have shown and described the preferred embodiment of my invention, I do not wish to be limited to this exact construction and arrangement of parts, but may make such changes as will fall within the scope and spirit of the invention.

Having thus described my invention, what I claim is:—

1. In a pull socket for electric lamps, the combination with the movable part of a pawl and ratchet circuit breaker, of an operating part consisting of a segmental plate having its periphery formed with a plurality of slits, the alternate portions between said slits being bent downwardly and outwardly, whereby a chain guide is formed, and a depending apertured stop also formed upon the periphery of the clutch plate.

2. A binding post comprising a body portion having angularly bent ends, said ends being apertured for the reception of fastening members, a sleeve formed upon one side of the body portion adjacent one end thereof, spaced lateral projections formed adjacent the other end of said body portion, and a clamping screw threaded through said post for the purpose of retaining a wire thereon, the wire passing through the lateral projections and sleeve.

3. A binding post having a sleeve formed adjacent one end thereof and lateral projections formed adjacent the other end thereof, said binding post being provided with a threaded opening, and a clamping screw threaded within said opening for the purpose of holding a wire, said wire being looped around the screw and passing through said projections and sleeve, substantially as described.

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

LOUIS F. LINDSTROM

Witnesses:

ASMUS PHILIPPSEN,
ERNEST FFLABOCZLEY.