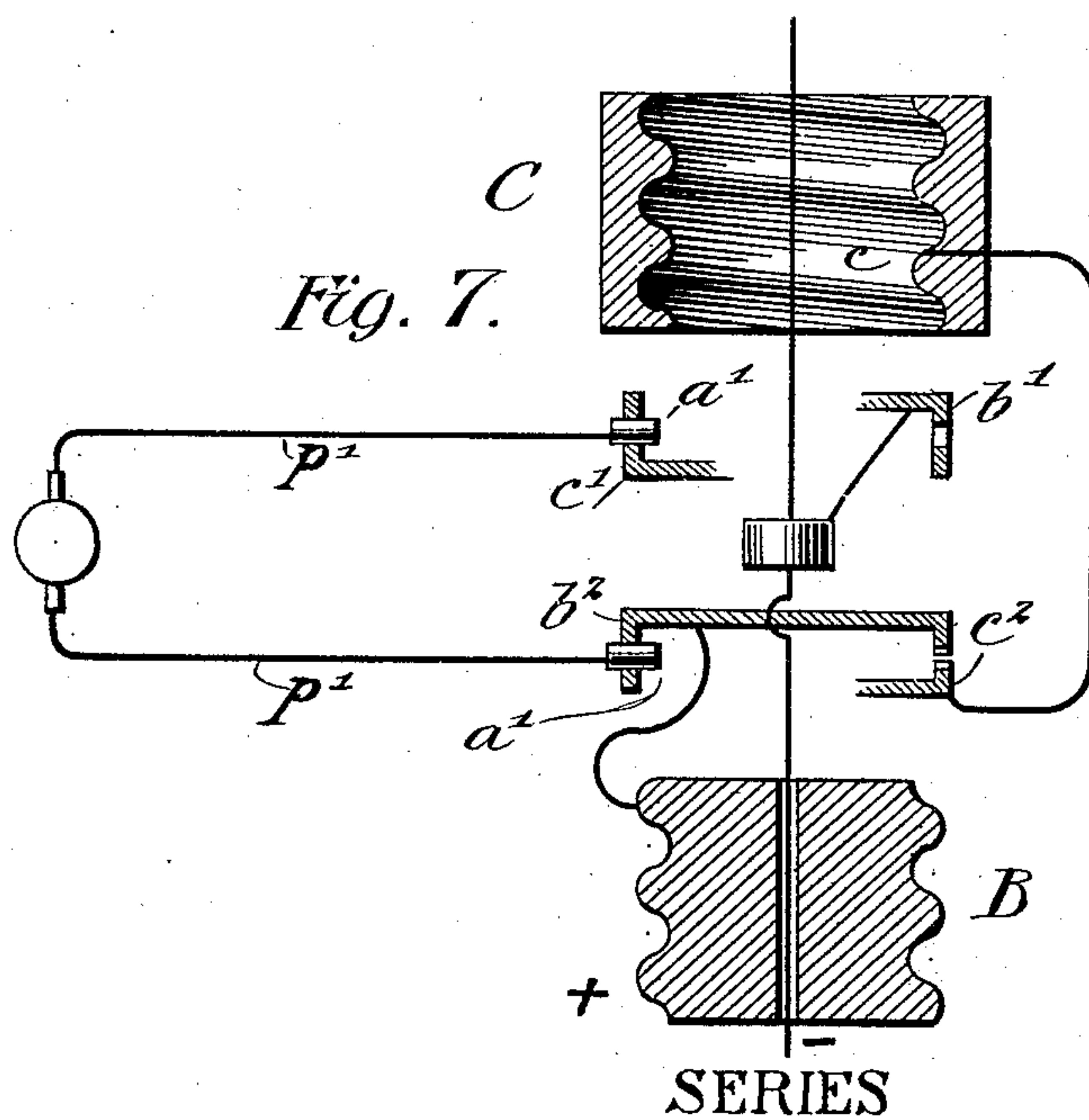
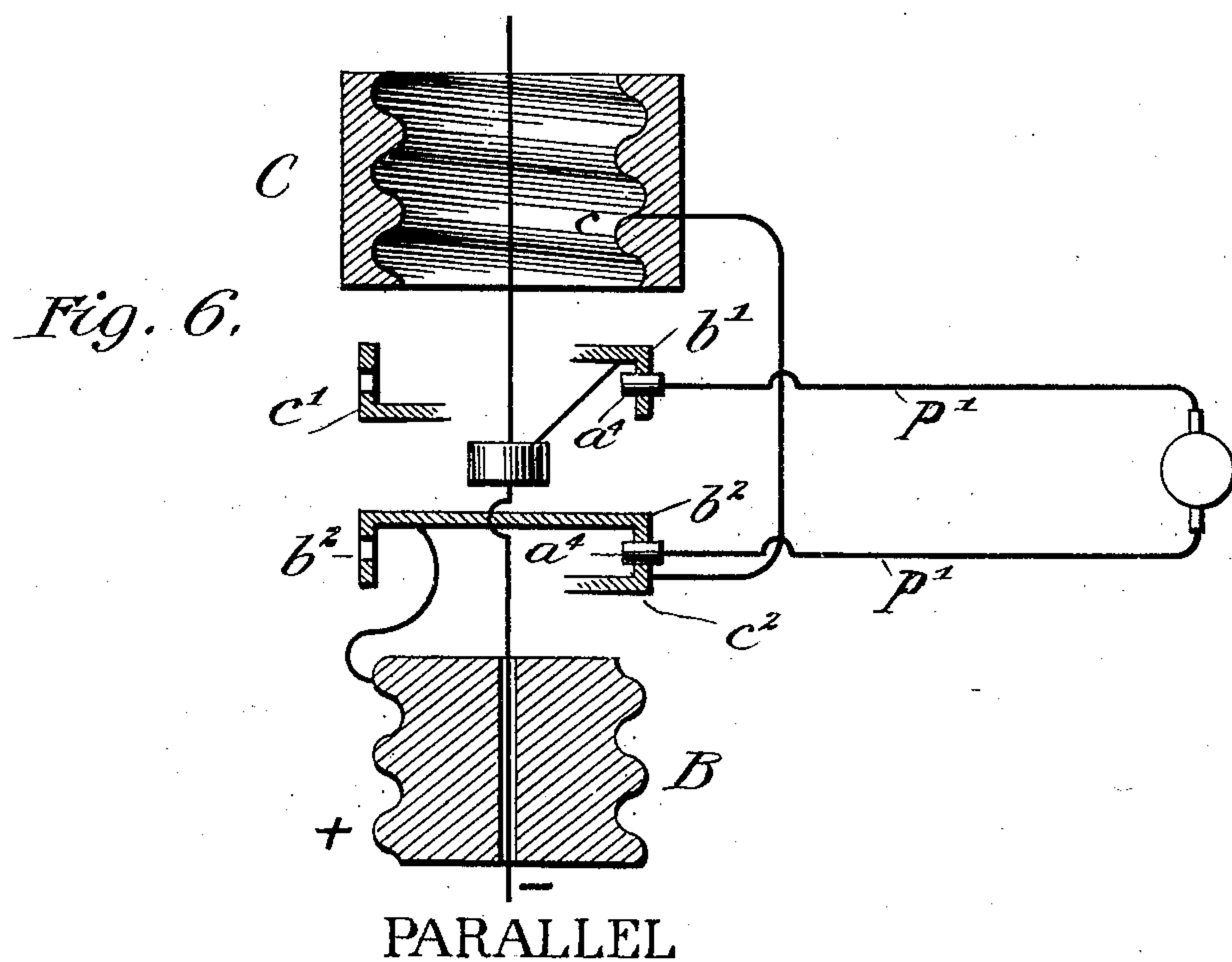


E. B. MEYROWITZ.
ELECTRICAL TAP SOCKET.

(Application filed Aug. 27, 1901.)

(No Model.)

2 Sheets—Sheet 2.



Witnesses
Hauk S. Ober
Waldo M. Chapin

Inventor
Emil B. Meyrowitz
By his Attorney
M. A. Rosenbaum

UNITED STATES PATENT OFFICE.

EMIL B. MEYROWITZ, OF NEW YORK, N. Y., ASSIGNOR TO THE MEYROWITZ MANUFACTURING CO., A CORPORATION OF NEW JERSEY.

ELECTRICAL TAP-SOCKET.

SPECIFICATION forming part of Letters Patent No. 699,205, dated May 6, 1902.

Application filed August 27, 1901. Serial No. 73,442. (No model.)

To all whom it may concern:

Be it known that I, EMIL B. MEYROWITZ, a citizen of the United States, residing at the city of New York, in the borough of Manhattan and State of New York, have invented certain new and useful Improvements in Electrical Tap-Sockets, of which the following is a full, clear, and exact description.

This invention relates to tap-sockets for electric circuits, and has for its object the production of a simple, cheap, and compact form of electric tap by which the mains of an electric circuit running to the terminals of a lamp or other translating device may be so connected with a second translating mechanism, such as a motor or second lamp, that the two may be electrically joined in either series or multiple circuit, as desired.

It is of course understood that should a small motor, such as is frequently used for operating a dental engine or sewing-machine or in medical and laboratory work, be coupled in series with an ordinary incandescent lamp while the full pressure of the current be available on the former its resistance would reduce the effective candle-power of the latter to a greater or less degree. However, should the requirements of the service in which it is employed call for the development of a smaller amount of power in the motor at a time when the maximum illumination was desired the multiple connection would accomplish this object.

My invention will be described in detail hereinafter with reference to the accompanying drawings, in which—

Figure 1 shows the two main parts of my improved tap-socket in opposite perspective and separated for clearness of illustration. Fig. 2 is a perspective view of the circuit-controlling element. Fig. 3 is a side elevation of the complete socket, and Fig. 4 is a section on line $x x$ of Fig. 3. Fig. 5 is a perspective view of the plug and cord to be used in connection with the socket. Figs. 6 and 7 are diagrams of the circuits.

In its preferred form, as illustrated in the accompanying drawings, my invention comprehends a movable circuit-controlling device

A, composed of the end sections $a a$, made of hard rubber or other suitable insulating material, the connecting-rods a^2 , also of insulating material, except at their ends a' and a^4 , which are formed of any desired conducting substance. These ends terminate in the screws a^3 and a^5 , which are countersunk when in proper position to the level of the outer faces of the ends a and are drilled at the center for the admission of the electrodes of the plug P, constituting the terminals of the branch circuit.

B represents a plug forming one of the main parts of the device and having a threaded metal shell for screwing into the ordinary wall receptacle or other electric fixture as well as a center contact. C is a lamp-socket forming the other main part of the device and provided with the usual internal shell c and central contact c^4 , with which the terminals of a lamp engage when it is adjusted thereto. For the purpose of illustration the parts B and C are shown detached, with adjacent faces in opposite perspective.

b' and b^2 are metal strips secured to the face of plug B and connected with the electric mains through the shell b and central contact, as shown. c' and c^2 represent similar strips secured to the opposed face of the socket C by the screws c^3 and connected by the latter with the shell c of said socket C. The strips b^2 and c^2 , which face each other without touching, have curved notches at one end, and the strips b' , b^2 , and c' are perforated at one end for the reception of the ends of the rods a^2 . When the parts are assembled, the circuit-closer A has a slight transverse movement, the upturned ends of the strips b' , b^2 , c' , and c^2 serving as stops for the ends a , and thus fixing the limits of said transverse movement. The screws a^3 and a^5 serve to secure the ends a to the rods a^2 . As will be readily understood from the drawings, when the parts B and C are properly assembled and held by a screw projecting from the center of socket C into the boss on piece b' the right end of the strip c' will be in close proximity to the slotted end of b^2 ; but electric connection will not be established unless

the circuit-closer A is forced to the left, thus interposing the conducting end a^4 between and into contact with each.

When the various parts are secured in the proper position, as described, the insertion of the plug P into the holes a^3 should be accompanied by a movement of the circuit-closer A to the left, which forces the conducting ends a' out of contact with the left ends of strips b^2 and c' , but simultaneously completes contact between the ends a^4 and the strips b' , b^2 , and c^2 . In this position the current entering by the positive main, as shown, passes to the shell of plug B, thence to the strip b^2 . At the right end of the latter it will be seen that a portion of the current will be shunted through the plug P to the branch circuit P', returning therefrom through the strip b' to the center screw c^4 and negative main. The other part of the current will be diverted through the strip c^2 to the shell c of the lamp-socket C and thence through the filament of lamp to the central screw and negative main. It is thus evident that by the insertion of the plug P into the right end of the part A the lamp and branch circuit will be connected in parallel. When a series connection between the lamp and branch circuit is desired, the plug P is inserted into the holes a^5 at the left side of the part A and the latter forced to the right, breaking the previously-described contacts at a^4 and completing circuit at a' between the branch and the strips b^2 and c' . In this position the passage of the current may be traced as follows: from the positive main to the strip b^2 , as before, thence by contacts at a' to the branch circuit P', returning to strip c' , to the shell c of socket C, and thence through the lamp-filament to the central screw and negative main, thus throwing the branch circuit and lamp in series. It will therefore be seen that either series or multiple connection of the translating devices may be readily accomplished by the insertion of plug P into the proper end of the part A and forcing that end inward and that when the various parts are assembled they form a small and compact whole of few members and simple construction, containing no pins, binding-posts, or other permanent projecting portions, the latter constituting objectionable features of similar devices heretofore in use.

It is to be noted that the distinctive features of my invention reside in the parts included between the plug and socket and that the type of socket, whether it be the "Edi-

son," "Westinghouse," or other, is not material to my invention. The plug and socket merely represent two bodies each carrying two circuit-terminals with which the parts between them are connected as described.

Having described my invention, I claim—

1. In a tap-socket, the combination of plug and socket parts, a circuit-controller contained therein, and having a reciprocating movement in a transverse direction and circuit-terminals whereby two circuits can be put into series or parallel with each other at will.

2. In a tap-socket, the combination of plug and socket parts, a circuit-controller contained therein and movable to project from one side or the other and circuit-terminals arranged so that when the circuit-controller is projecting from one side two circuits will be in parallel and when projecting from the other side the two circuits will be in series.

3. In a tap-socket, the combination of a circuit-controller movable to project from one point or the other thereof, and a branch circuit adapted to be connected with the projecting part of the circuit-controller to thereby be connected in series or parallel with the second circuit.

4. In a tap-socket, the combination of a circuit-controller having a portion adapted to be moved to change the relation of the circuits and a branch circuit whose terminals are removably connected with said portion, substantially as described.

5. In a tap-socket, the combination of a movable circuit-controller, fixed contacts adapted to coöperate therewith, said circuit-controller being double-ended and adapted when pushed inward on one side to project from the other side and means whereby the terminals of a branch circuit can be connected with either end of the circuit-controller to thereby connect the branch circuit in series or parallel with the second circuit, substantially as described.

6. In a tap-socket, the combination of plug and socket parts secured together, two contacts mounted thereon and adapted for parallel connection with a branch circuit, and two other contacts mounted thereon and adapted for series connection with a branch circuit.

In witness whereof I subscribe my signature in presence of two witnesses.

EMIL B. MEYROWITZ.

Witnesses:

D. K. UTTAL,
R. W. HOOD, Jr.