E. E. ROSE.

CONTACT FINGER.

APPLICATION FILED FEB. 2, 1907.

1,005,316. Patented Oct. 10, 1911.

Fig. 1.

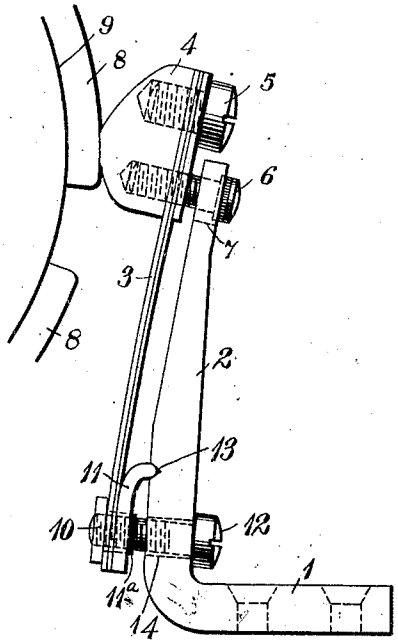


Fig. 4.

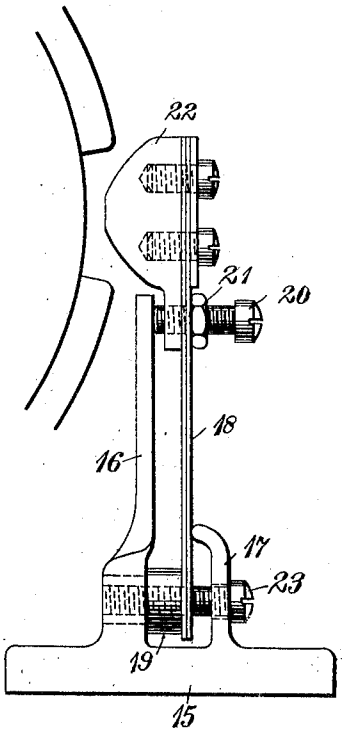


Fig. 2.

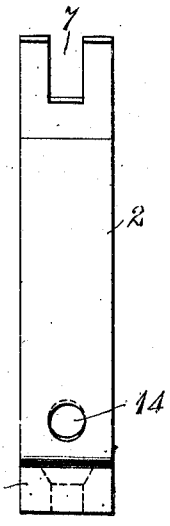
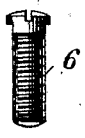


Fig. 3



WITNESSES:

Fred H. Miller

R. J. Dearborn

INVENTOR

Edward E. Rose

BY

Hosley & Sears

ATTORNEY

UNITED STATES PATENT OFFICE.

EDWARD E. ROSE, OF SWISSVALE, PENNSYLVANIA, ASSIGNOR TO WESTINGHOUSE ELECTRIC & MANUFACTURING COMPANY, A CORPORATION OF PENNSYLVANIA.

CONTACT-FINGER.

1,005,316. Specification of Letters Patent. Patented Oct. 10, 1911.

Application filed February 2, 1907. Serial No. 355,500.

To all whom it may concern:

Be it known that I, EDWARD E. ROSE, a citizen of the United States, and a resident of Swissvale, in the county of Allegheny and State of Pennsylvania, have invented a new and useful Improvement in Contact-Fingers, of which the following is a specification.

My invention relates to contact fingers for controllers or switching devices and has special reference to such fingers as are adapted to engage the contact ring segments of drum type controllers.

The object of my invention is to provide a resilient contact finger that shall be simple and durable in construction and adjustable as to the limits of its movement and as to the pressure exerted against the engaging contact surface.

Contact fingers of the prior art have usually been so arranged as to permit an adjustment of the contact surface in order to allow for variations in the diameter of the rotatable drum with which the fingers were adapted to engage. According to my present invention, I provide a contact finger having adjustable means for limiting the movement of the contact surface in one direction, and means for adjusting the pressure exerted against the engaging contact surface.

Figure 1, of the accompanying drawing, is an end elevation of a contact finger constructed in accordance with my invention. Figs. 2 and 3 are details of the finger shown in Fig. 1, and Fig. 4 is a view similar to Fig. 1, of a modified structure which may be used in lieu of that shown in Fig. 1, within the scope of my invention.

Referring to Figs. 1, 2, and 3 of the drawings, the contact finger illustrated comprises a stationary supporting member 1 having a rigid projection 2 substantially at right angles thereto and a resilient contact-bearing finger 3 which is attached to the rigid projection 2 near its lower end and extends outwardly therefrom substantially parallel to the projection 2. A contact block 4 of conducting material is attached to the outer extremity of the finger 3 by means of a screw 5 and the movement of this end of the finger is limited in one direction by the adjacent surface of the rigid projection 2 and in the other direction by an adjustable stop in the form of a screw 6 which projects loosely through a slot 7 near one end of the projection and is screw threaded into the contact block.

The outer surface of the contact block 4 is adapted to engage the ring segments 8 on the surface of the contact bearing drum 9 and excessive wear between the contact surfaces may be avoided by suitably adjusting the screw 6 to limit the forward movement of the contact block 4. The pressure exerted by the resilient contact-bearing finger 3 against the contact segments 8 may be varied by means of an adjusting device 10. This device comprises a rigid pawl 11 which engages the surface of the finger 3 for a short distance from its inner end and the outer end of which projects laterally outward from the finger. The pawl 11 is attached to the resilient contact-bearing finger by means of a hollow bushing or rivet 11^a which is screw threaded for engagement with an adjusting screw 12. The rigid projection 2 from the support 1 is provided with a notch 13, which may be engaged by the extremity of the pawl 11, and with a hole 14 through which the adjusting screw 12 may project loosely. The arrangement of parts is such that the pressure exerted by the resilient contact-bearing finger 3 against an external object or the limiting set screw 6 may be varied by the adjusting screw 12.

The head of the set screw 6 is notched so that it may enter for a short distance into the groove 7 and may in this way be locked in any suitable position.

Referring to Fig. 4, the contact finger, here illustrated, comprises a stationary support 15 having a rigid projection 16 which corresponds to the projection 2 of the support 1 and a projection 17 which takes the place of the pawl 11 of Fig. 1 and is substantially parallel to the projection 16 but the outer end of which is inclined toward said projection 16. A resilient contact-bearing finger 18, which corresponds to the finger 3 of Fig. 1, is attached to a screw threaded bushing 19 at one end extremity and the motion of its free end is limited in one direction by the rigid projection 16 and an adjustable set screw 20 having a set nut 21 and projecting through the finger adjacent to a contact block 22. The adjustment of the pressure exerted by the resilient finger is effected by an adjusting

screw 23 that projects loosely through a hole in the projection 17 and engages the screw threaded bushing 19.

It will be readily understood that variations in size and arrangement of details may be effected within the scope of my invention and I desire that only such limitations be imposed as are indicated in the appended claims.

I claim as my invention:

1. A contact device comprising a stationary supporting member, a resilient arm or finger attached thereto and projecting therefrom, and a means for adjusting the resistance exerted by the resilient finger against external rearward pressure without moving it forward when free from such pressure.

2. A contact device comprising a stationary supporting member having a rigid projection, a resilient contact-bearing finger attached to the body of the support and extending therefrom substantially parallel to said rigid projection, and a limiting means for restricting the degree of forward movement of the contact member, said means being adjustable in relation to said finger.

3. A contact device comprising a stationary supporting member having a rigid projection, a resilient contact-bearing finger attached to the main body of the support and extending substantially parallel to the rigid projection, means for limiting the movement of the finger at its outer end, and means for adjusting the resistance exerted by the finger against external rearward pressure without changing its position when free from such pressure.

4. A contact device comprising a stationary supporting member having a rigid projection, a resilient contact-bearing finger attached to the main body of the support and extending substantially parallel to the rigid projection, adjustable means for limiting the movement of the outer end of the finger, and means for adjusting the finger pressure in a predetermined position.

5. A contact device comprising a stationary support having a rigid projection, a resilient contact-bearing finger attached to the support and extending substantially parallel to the rigid projection, a contact block attached to the free end of the finger, an adjusting screw which enters a tapped hole in the contact block and engages said rigid projection and means for adjusting the pressure exerted by the resilient finger against said rigid projection.

6. A contact device comprising a stationary support having a rigid projection, a resilient contact-bearing finger attached to the support and extending substantially parallel to the rigid projection, a contact block attached to the free end of the finger, an adjusting screw which enters a tapped hole in the contact block and engages said rigid projection, and means for adjusting the pressure exerted by the resilient finger against said rigid projection.

7. A contact device comprising a stationary supporting member, a resilient contact-bearing finger attached to said member and projecting therefrom, and a single adjusting means for varying the resistance of said finger to external rearward pressure without varying the position of the contact-face of the finger when free from such pressure.

In testimony whereof, I have hereunto subscribed my name this 31st day of January, 1907.

EDWARD E. ROSE.

Witnesses:
C. E. BEDELL,
BIRNEY HINES.