

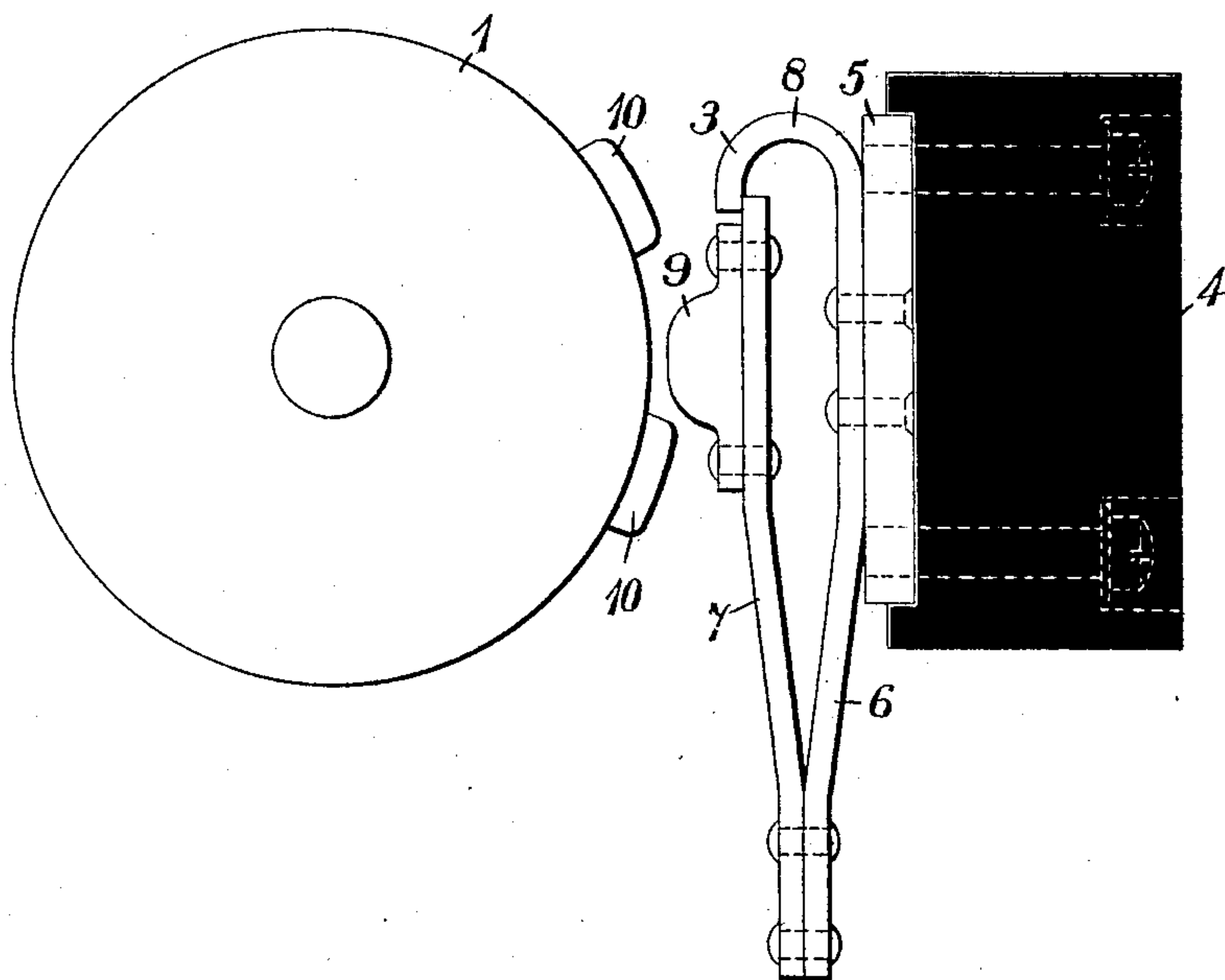
No. 879,245.

PATENTED FEB. 18, 1908.

W. COOPER.

CONTACT FINGER.

APPLICATION FILED MAY 21, 1908.



WITNESSES:

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CONTACT-FINGER.

No. 879,245.

Specification of Letters Patent.

Patented Feb. 18, 1908.

Application filed May 21, 1906. Serial No. 318,007.

To all whom it may concern:

Be it known that I, WILLIAM COOPER, a citizen of the United States, and a resident of Pittsburg, 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 controllers.

The object of my invention is to provide a resilient contact finger that shall be simple and durable in construction and that shall exert a relatively strong pressure against the contact surface with which it is adapted to engage without abnormally increasing the power required to change the position of the member having such contact surface.

The single figure of the accompanying drawing is a plan view of a switching device comprising a rotatable contact-carrying drum and cooperating contact fingers, which are constructed in accordance with my invention.

The device illustrated comprises a rotatably-mounted contact-carrying drum 1 and cooperating resilient contact fingers 3 which are mounted upon a stationary finger base support 4.

Each of the contact fingers 3 comprises a base 5 of conducting material, which is supported in a suitable groove in the finger base support, a spring member 6, and a contact-carrying member 7. The spring member 6 is riveted or otherwise rigidly attached to the finger base 5. It is bent into the form of a hook 8 at one end and is bent slightly away from the plane of the base at the opposite end to form a spring. One end of the contact-carrying member 7 is riveted or otherwise attached to the spring end of the member 6, and its other end is located at the rear of the end of the hook 8, whereby its forward movement is limited.

A contact member 9 is attached to the member 7 near the point of engagement with the hook 8. In this way, the motion of the contact member is limited, in one direction, by the hook 8 and a very high pressure may be exerted against an engaging contact surface such as contact segments 10

on the surface of the drum 1 without excessive wear upon the engaging parts as they are brought together or separated.

A further advantage of the contact finger of my invention lies in the fact that its points of support are directly back of the contact piece 9 and, consequently, the reactionary force exerted by the drum upon the finger does not tend to separate the finger from the insulating support to which it is attached.

The contact finger of my invention is not confined in its application to switching devices of the drum type, and I desire that only such limitations be imposed as are indicated in the appended claims.

I claim as my invention:

1. A contact finger comprising a resilient member having a hook at one end, a resilient contact-carrying member that is attached to one end of the hooked member and is limited in its motion in one direction by the hook.

2. A contact finger comprising a base of conducting material, a resilient strap bent at one end into a hook and attached to the base near its hooked extremity, and a contact strap which is attached to one end of the hooked strap and the free end of which engages the hook.

3. A contact finger comprising a resilient strap having a hook at one end so supported adjacent thereto that its other end constitutes a spring, and a second strap having one end attached to the spring end of the hooked strap and its other end engaged by the hook, and a contact member attached to the second strap.

4. A contact finger comprising a stationary supporting block, a V-shaped resilient member one leg of which has a hook at one end and is attached to the stationary support and the other leg of which tends to separate itself from the first and is restrained by the hook.

5. The combination with a contact-carrying drum, of an engaging finger therefor that comprises a resilient member having a hook at one end, a resilient contact-carrying member attached to one end of the hooked member and limited in its motion by the hook, and an insulating support to which the finger is attached in the line of the force exerted between the finger and the drum.

6. The combination with a rotatable mem-

ber having circumferentially disposed ring segments, of a contact finger comprising two spring arms having their outer ends riveted together, and a contact piece attached to the
5 inner end of one of them, and a support to which the inner end of the other arm is attached at a point which is in a line with the reactionary force exerted between the contact piece and the drum.

10 7. In a switch or controller, the combination with a movable member having contact segments, of a stationary base and a contact finger comprising two substantially parallel
15 spring arms one of which is provided with a contact piece near one end and the other of which is provided with a stop for the first

arm and is supported directly behind the contact piece.

8. A controller or switch finger comprising two spring members that are rigidly fastened
20 together at one end and the free ends of which engage each other in such manner as to permit rearward movement of one of them and to prevent forward movement thereof.

In testimony whereof, I have hereunto
25 subscribed my name this 17th day of May, 1906.

WILLIAM COOPER.

Witnesses:

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