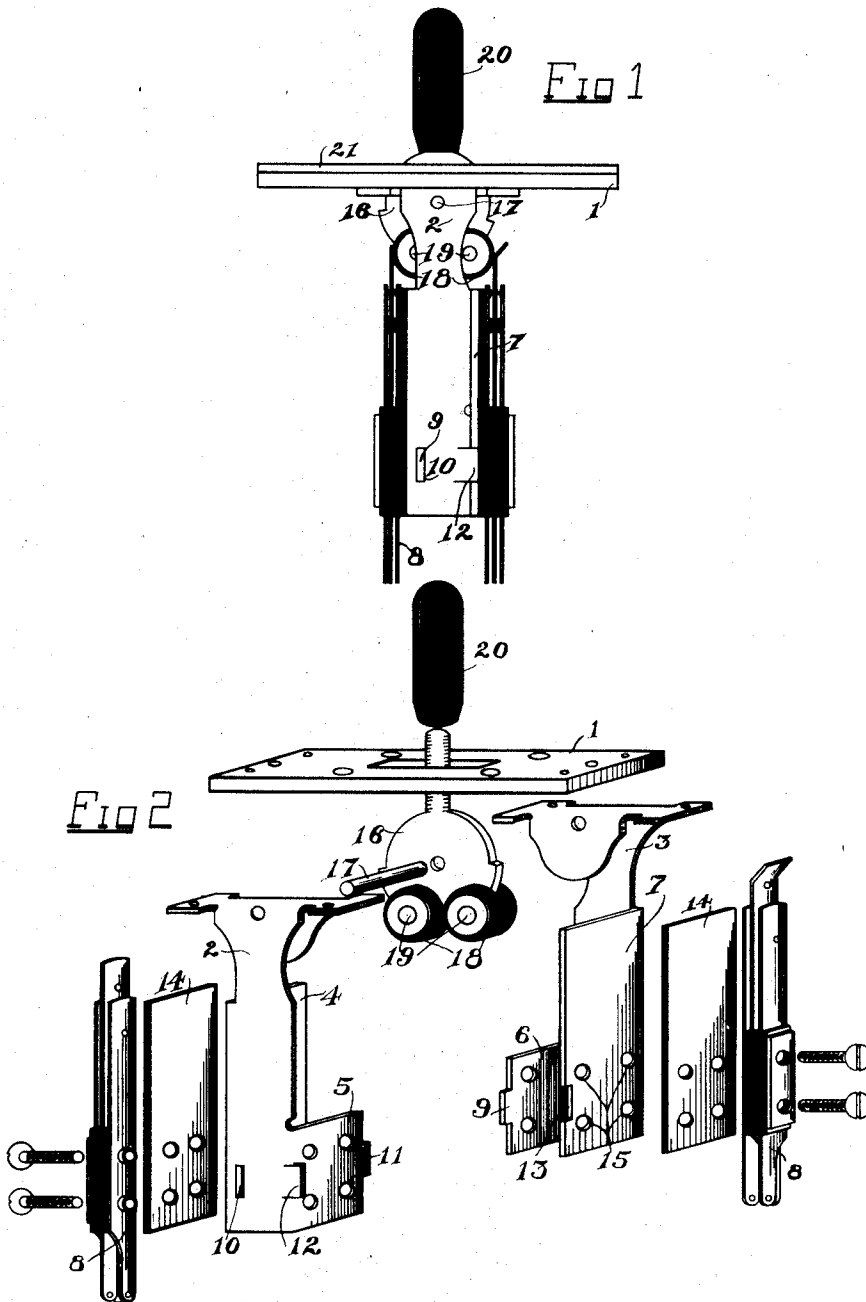


E. G. EIDAM.
SWITCHING KEY.
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1,043,307.

Patented Nov. 5, 1912.



Witnesses
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UNITED STATES PATENT OFFICE.

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SWITCHING-KEY.

1,043,307.

Specification of Letters Patent.

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To all whom it may concern:

Be it known that I, EDWARD G. EIDAM, a citizen of the United States, residing in Rochester, county of Monroe, and State of New York, have invented certain new and useful Improvements in Switching-Keys, of which the following is a specification.

My invention relates to listening and ringing keys for telephone switchboards.

The object of the invention is to improve the construction of switching keys of this character to make the parts readily accessible and removable.

My invention particularly relates to the construction of the frame upon which the switch springs of the key are mounted, which construction provides for inexpensive manufacture, rigidity of construction and ease in assembling.

My invention is illustrated in the accompanying drawing in which—

Figure 1 is a side elevation and Fig. 2 is a partially disassembled isometric drawing.

The frame of my switching key depends from the plate 1 and comprises the side plates 2 and 3, these being stamped from sheet metal and being exactly alike and preferably screwed to the top plate. These side plates are provided with parallel end plates 4, 5, 6 and 7 upon which the sets of switch springs 8 are mounted. The end plate 6 lies adjacent the inner face of the plate 4 and is provided with a projecting ear 9, adapted to extend through the opening 10 when the plates 2 and 3 are fitted together. Likewise the end plate 5 lies adjacent the inner face of the plate 7 and is provided with the ear 11, adapted to fit into an opening, not shown in the drawing, in plate 3, when the plates are fitted together. The ear 12 in plate 2 is sheared from the metal from which the plate is formed and is adapted to fit into the notch 13 in plate 7, there being similar ears and notches upon the concealed parts of the plates 3 and 2 so that when the parts are put together they are interlocked in a manner which prevents the lengthwise movement of one plate upon the other. The ears may then be riveted which completes the frame, leaving the lower portion box-like. The opposite ends of the box are of double thickness and are drilled and tapped as shown at 15 to provide means for securing the springs 8 to the frame. The hard rubber plates 14 are inserted between the

springs 8 and the plates 4 and 7 for insulating purposes.

The upper and inner portions of the plates 2 and 3 are turned downwardly to form guides for the spring actuating cam 16, which operates about the pivot pin 17 passing through aligned holes in the plates 2 and 3. The spring actuating cam is provided with insulating rollers 18 held in place by pins 19, these rollers being adapted to press outwardly upon the upper ends of the long springs to deflect them when the cam is tilted. The insulating handle 20 is secured to the screw extending upwardly from the cam to provide means for tilting the cam. The sets of springs used for the listening switch are preferably bent outwardly in a manner well known in the art to provide means for retaining the cam in actuated position when desired while the fingers are removed. An escutcheon plate 21 shown in Fig. 1 is preferably attached to provide a finished appearance to the upper surface.

While my improvement is described somewhat in detail, it is to be understood that many changes may be made therefrom without departing from the spirit or scope of my invention.

What I claim is:—

1. In an operator's key, a frame comprising side plates having downwardly and inwardly turned ears and an operating cam supported between and guided by said ears.

2. In an operator's key, a frame formed of two similar punchings secured together and forming a tubular lower portion, switch springs secured on the opposite sides of said tubular portion and means between the upper ends of said springs for operating the springs.

3. In an operator's key, a frame formed of two metal punchings, the lower portion of each of said punchings being formed into parallel plates, spaced from one another and having their edges connected by a third plate in a plane at right angles to the first plates, two portions of said frame being adapted to fit together so that surfaces of an outside and an inside face of one part are adjacent an inside and an outside face, respectively, of the other part.

4. In a switching key, a metal frame formed of two parts adapted to fit together so that surfaces of an outside and an inside face of one part are adjacent an inside and

an outside face respectively of the other part and ears formed of the metal for securing the parts together.

5 5. In a switching key, a frame formed of punchings, a horizontal cross-section of the lower portion of said punchings being substantially U shaped, said punchings being adapted to fit together with the outside face of a limb of one adjacent the inside face of a
10 limb of the other, and the inside face of the other limb of the first adjacent the outside face of the other limb of the second.

6. In a switching key, the combination with a frame formed of two similar punch-

ings secured together, each punching provided with a long and a short end plate, the short end plate of one falling within and adjacent the long end plate of the other when the parts are secured together and switch springs secured adjacent said long
20 end plates.

Signed by me at Rochester, county of Monroe, and State of New York, in the presence of two witnesses.

EDWARD G. EIDAM.

Witnesses:

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Copies of this patent may be obtained for five cents each, by addressing the "Commissioner of Patents, Washington, D. C."