J. S. POPPER.

FINGERPIECE.

APPLICATION FILED JAN. 19, 1921.

1,427,017. Patented Aug. 22, 1922.

Fig. 1.

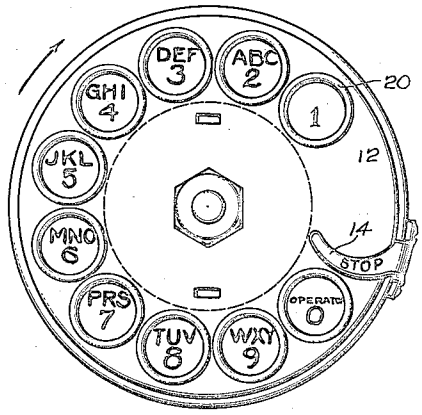


Fig. 2.

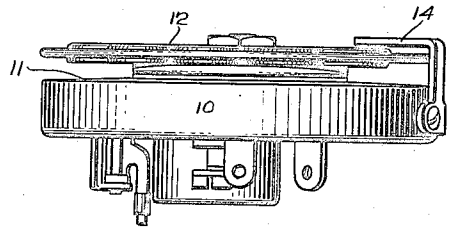


Fig. 5.

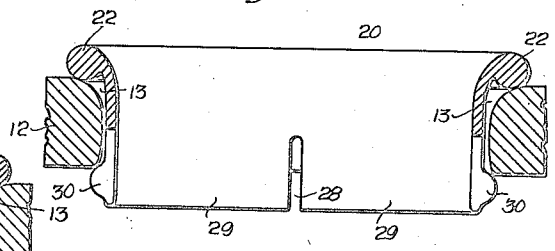


Fig. 3.

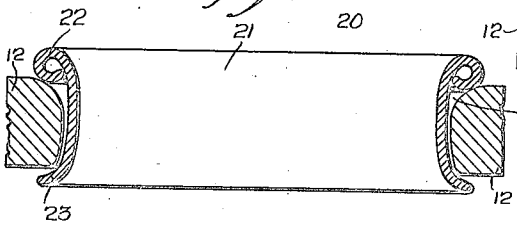


Fig. 6.

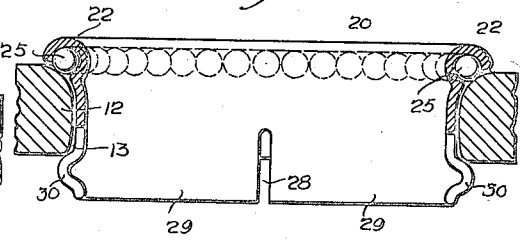


Fig. 4.

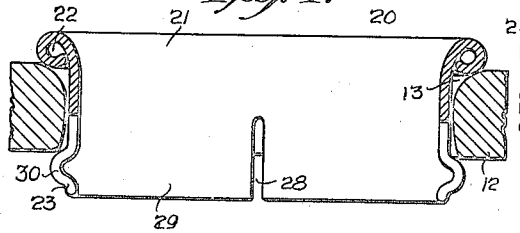


Fig. 7.

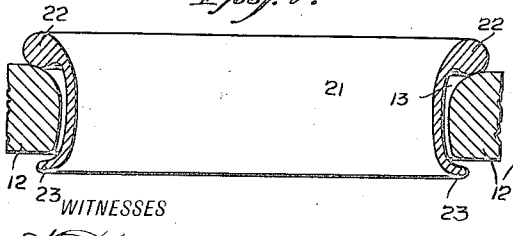
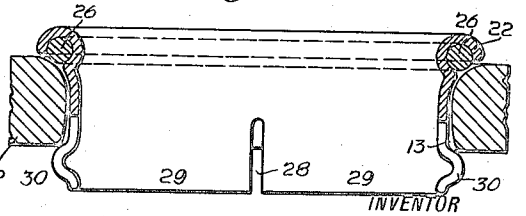


Fig. 8.



WITNESSES

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FINGER PIECE.

1,427,017. Specification of Letters Patent. Patented Aug. 22, 1922.

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To all whom it may concern:

Be it known that I, JULIUS S. POPPER, a citizen of the United States, and a resident of the city of New York, borough of Manhattan, in the county and State of New York, have invented a new and Improved Finger Piece, of which the following is a full, clear, and exact description.

The invention relates to dials of machine switching telephones, and its object is to provide a new and improved fingerpiece to enable the user to readily turn the dial to stop positions without danger of rendering the tip of the actuating finger callous with the required repeated turning of the dial in making calls. Another object is to permit of readily applying the fingerpiece to dials as now generally constructed. Another object is to provide a fingerpiece which is exceedingly simple and durable in construction and not liable to get easily out of order.

With these and other objects in view, the invention consists of certain novel features of construction as hereinafter shown and described and then specifically pointed out in the claims.

A practical embodiment of the invention is represented in the accompanying drawings forming a part of this specification, in which similar characters of reference indicate corresponding parts in all the views.

Figure 1 is a face view of a dial provided with the improved fingerpieces;

Figure 2 is an edge view of the same;

Figure 3 is an enlarged sectional side elevation of one of the improved fingerpieces in position on the dial; and

Figures 4, 5, 6, 7 and 8 are similar views of modified forms of the improved fingerpiece as applied.

On the body 10 of the dial of a machine switching telephone is mounted to turn a dial 11 provided with a finger wheel 12 having a series of openings 13 arranged in a circle and adapted to register with a fixed stop 14 to limit the turning movement of the dial by the user's finger abutting against the said stop on turning the dial in the direction of the arrow and with the finger engaging one of the openings 13. In order to prevent the finger of the user from becoming callous by repeatedly turning and releasing the spring-pressed finger wheel 12 of the spring-pressed dial 11 use is made of fingerpieces 20, one for each opening 13. Each of the fingerpieces 20 is mounted to turn in the opening 13 and consequently when the user engages one of the fingerpieces with the tip of one finger and turns the dial around until the finger moves into register with the stop 14 then the finger piece turns in the finger wheel 12 and hence the user's finger tip is not subjected to a rubbing friction by its engagement with the fingerpiece.

Each of the fingerpieces 20 may be made of any suitable material such as celluloid, fiber, hard rubber, bakelite, ivory, wood, metal or other material, and hence I do not limit myself to any particular material. Each of the fingerpieces 20 comprises a tubular body 21 having a turning fit relative to the wall of the corresponding opening 13, and the said body 21 is provided at its upper end with an outwardly extending flange 22 having a bearing on the upper face of the finger wheel 12. The lower end of the body 21 is provided with a retaining means 23 engaging the under side of the finger wheel 12 to hold the fingerpiece against accidental disengagement from the finger wheel. The flange 22 may be formed by a beading, as shown in Figures 3 and 4, or may be made solid, as shown in Figures 5 and 7, or the flange 22 may be in the form of an open bead, as shown in Figures 6 and 8, with either a ball bearing 25 or a bearing ring 26 arranged within the bead to contact with the face of the finger wheel 12.

The retaining means 23 may be of various forms; for instance, as shown in Figure 3, the retaining means are in the form of an outwardly flaring annular portion, or the retaining means may be formed by providing the lower portion of the body 21 with slits 28 to form spring tongues 29 provided with beads 30 engaging the under side of the finger wheel 12. It will be noticed that in this case the tongues 29 can be bent inward to permit of slipping the fingerpiece into position in the opening 13 of the finger wheel 12 to then allow the tongues to return to their normal position with the beads 30 extending on the under side of the finger wheel 12. The retaining means 23, as shown in Figure 3, may be used in the form shown in Figure 7, and the retaining means shown in Figure 4 may be used in conjunction with the fingerpiece illustrated in Figures 5, 6 and 8.

The wall of each opening 13 is preferably rounded off on the top and slightly at the

bottom to permit of easy turning of the fingerpiece on the finger wheel 12 when rotating the latter as above explained.

Although the finger wheel 12 is shown and described as rotating with the dial 11 it is evident that the dial may be stationary while the finger wheel 12 only is rotated by the operator, as above described.

Having thus described my invention, I claim as new and desire to secure by Letters Patent:

1. In machine switching telephones, a revoluble finger wheel provided with a series of tubular fingerpieces rotatably mounted on the finger wheel.

2. In machine switching telephones, a revoluble finger wheel provided with a series of openings, and fingerpieces, one for each opening and revolubly mounted therein.

3. In machine switching telephones, a revoluble finger wheel provided with a series of openings and fingerpieces, one for each opening and revolubly mounted therein, each fingerpiece having a cylindrical body fitting into the corresponding opening to turn therein, an annular flange integral with the upper end of the body, and means holding the body against disengagement from the finger wheel.

4. In machine switching telephones, a revoluble finger wheel provided with a series of openings and fingerpieces, one for each opening and revolubly mounted therein, each fingerpiece having a cylindrical body fitting into the corresponding opening to turn therein, an annular flange integral with the upper end of the body and extending above the face of the finger wheel, the other end of the body having retaining means engaging the under side of the finger wheel to hold the body against disengagement from the finger wheel.

5. In machine switching telephones, a revoluble finger wheel provided with a series of tubular fingerpieces rotatably and detachably mounted on the finger wheel.

6. In machine switching telephones, a revoluble finger wheel provided with a series of openings, and fingerpieces, one for each opening, revolubly and detachably mounted therein.

7. In machine switching telephones, a revoluble finger wheel provided with a series of openings, a fingerpiece for each opening consisting of a cylindrical body fitting into the corresponding opening for rotation, an annular integral flange at the upper end of the body, and resilient radially expansible means at the lower end of the body for holding the same against casual displacement and for permitting of removal of the body upon radial contraction of said means.

JULIUS S. POPPER.