Aug. 7, 1962 D. W. JACKSON 3,048,670

ELECTRICAL SWITCH

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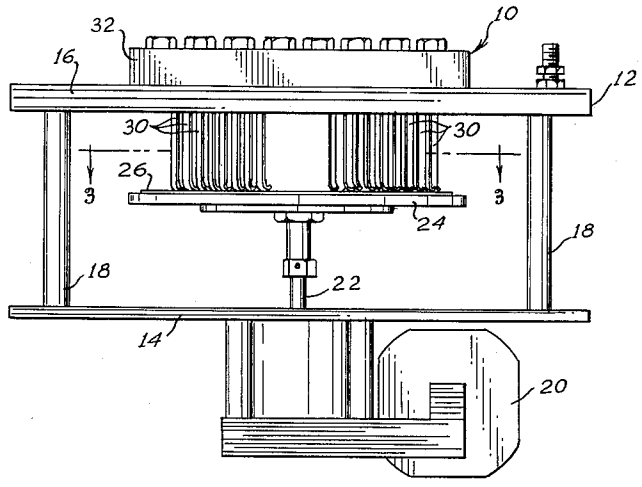


Fig. 1

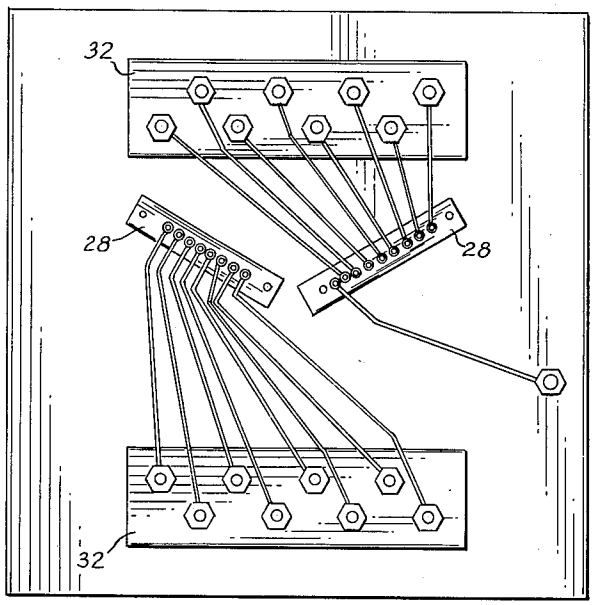


Fig. 2

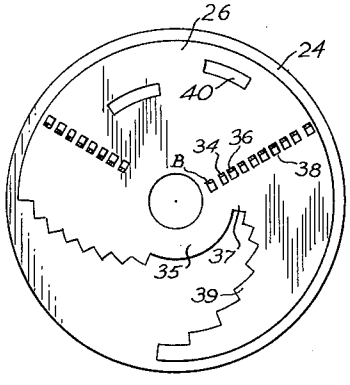


Fig. 3

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ELECTRICAL SWITCH

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This invention relates to electrical switches and more particularly to an electrical timing device for initiating, maintaining and terminating chosen electrical circuits in selected sequences.

Briefly described, the electrical switch of the present invention is characterized by a constant speed motor having an output shaft which carries a conductor template that is positioned for engagement by a plurality of resilient contact fingers radially arranged with respect to said conductor template so that a given contact finger engages a given arcuate portion of said conductor template during its rotation.

It can readily be seen that by simple variations of the overall shape of the conductor template and the disposition of the contact fingers variation in circuits may be obtained. The time duration which these circuits are maintained depends upon the length of the arcuate portion which is in contact with a given contact finger. The present electrical switch or electrical timing device provides a simple, economical and reliable timing mechanism where circuits are made and broken in sequence for varied time durations, one illustrative utilization of such a switch being for an electrical display sign which has different advertising messages illuminated in sequence for varied time intervals.

These and other features of the present invention are described in further detail below in connection with the accompanying drawings, in which:

FIG. 1 is a side elevational view of the electrical switch of the present invention;

FIG. 2 is a top plan view of the switch shown in FIG. 1 showing the manner in which the depending flexible contact fingers are connected to one side of an electrical potential source; and

FIG. 3 is a cross sectional view taken along line 3—3 of FIG. 1 showing the radial alignment of the flexible contact fingers with respect to the conductor template.

Referring now in detail to the drawings, the electrical switch, indicated generally by the reference numeral **10**, incorporates a frame **12** having a base plate **14** and an upper plate **16** which are held in spaced relation with respect to each other by standards **18**. A constant speed motor **20** is carried by the base plate **14** and includes an output shaft **22** which carries a revolving, insulated platen **24**. Disposed on said revolving, insulated platen **24** is removable conductor template **26** which may be of a varied shape to produce arcuate portions of different lengths at different positions along its radius. An illustrative example of such a conductor template is shown in FIG. 3. Conductor template **26** is electrically connected to one side of the potential source by a suitable conventional electrical connection, such as brush B. Attached to the upper plate **16** are removable, electrical plug-in terminals **28** which carry depending contact fingers **30**. Plug-in terminals **28** may be wired to terminal bars **32** which provide leads to the circuit being activated. It can readily be seen that variations in the overall shape of the conductor template along with the selective arrangement of the depending contact fingers can achieve a plurality of timed, sequential electrical circuits. For example, depending finger **34** which is in contact with a continuous, uninterrupted portion **35** of the conductor template will maintain an uninterrupted circuit. Depending finger **36** on the other hand will maintain an electrical contact for its circuity only as long as it is in contact with the arcuate portion of the conductor template designated by reference numeral **37** which is of a shorter time duration and varied in time sequence from the electrical circuity which is initiated and terminated by the depending finger **38** which contacts the portion of the conductor template designated by reference numeral **39**. Circuity can further be varied by having the template slotted as at **40** to interrupt the electrical circuity existing between a selected portion of the conductor template and a depending finger.

The present invention has been described in detail above for purposes of illustration only and is not intended to be limited by this description or otherwise except as defined in the appended claim.

I claim:

An electrical switch comprising a constant speed motor having an output shaft, an insulated platen mounted on said output shaft, a conductor template removably disposed on said insulated platen and electrically connected to one side of an electrical potential source, said conductor template being a disc formed with a plurality of arcuate portions of varying length disposed between its center and outer periphery at different points along the radius of said disc, and an electrical plug-in terminal removably positioned in spaced relation to said conductor template and carrying a plurality of stationary resilient contact fingers arranged to provide contact between a given contact finger and a given portion of said conductor template upon rotation thereof to complete a given circuit, the duration of said given circuit being dependent upon the length of the arcuate portion of the conductor template that is in contact with a depending contact finger and the sequence of said given circuit with respect to said other circuits being dependent upon the selective arrangement of said contact fingers with varied portions of said conductor template.

References Cited in the file of this patent

UNITED STATES PATENTS

1,404,761	Harris et al.	Jan. 31, 1922
2,055,031	Hutchings	Sept. 22, 1936
2,557,242	Simpson	June 19, 1951
2,658,963	Krahulec	Nov. 10, 1953
2,722,777	Simpson	Nov. 8, 1955
2,792,460	Bleeze	May 14, 1957
2,832,854	Doyle et al.	Apr. 29, 1958
2,886,661	Skelton et al.	May 12, 1959
2,966,881	Enssle	Jan. 3, 1961

FOREIGN PATENTS

259,620	Great Britain	Oct. 12, 1926
371,214	France	Jan. 16, 1907