

Sept. 29, 1925.

1,555,690

I. MITNITZKY
CHANGEABLE EXHIBITOR

Filed June 4, 1925

2 Sheets-Sheet 1

Fig. 1,

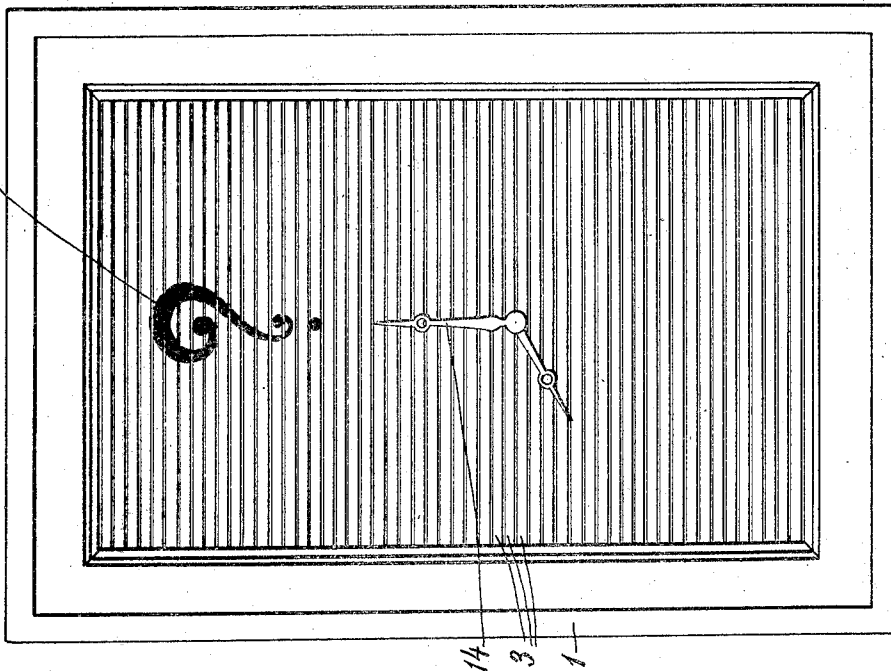
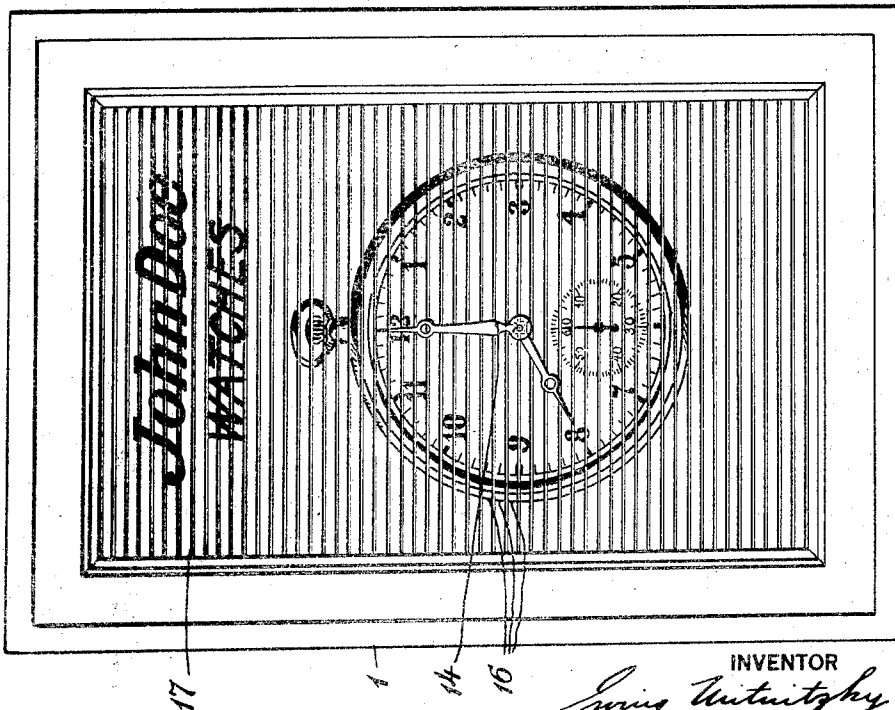


Fig. 2,



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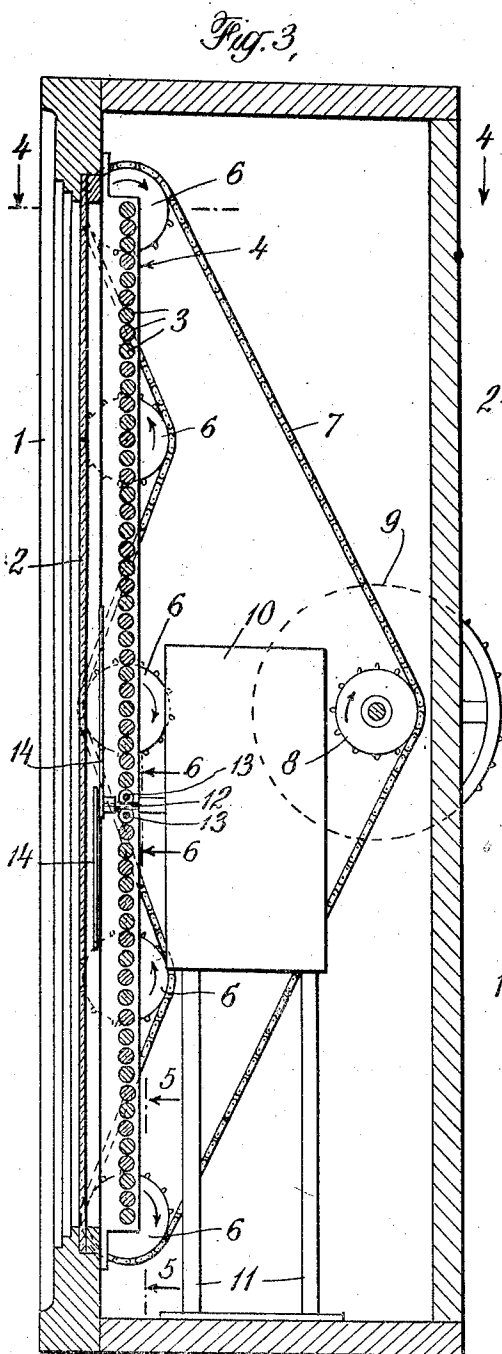
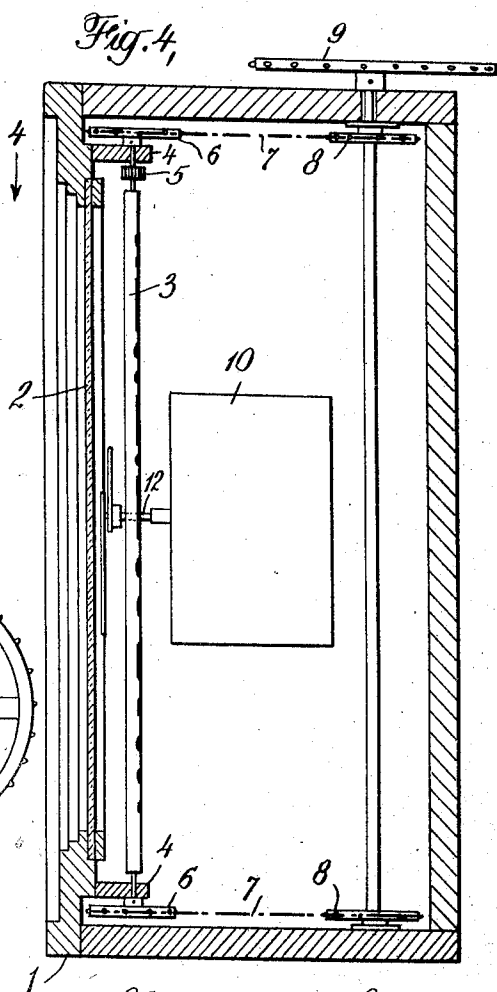
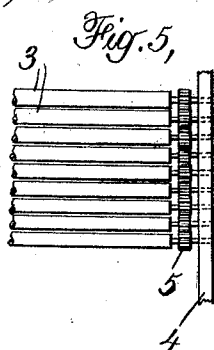
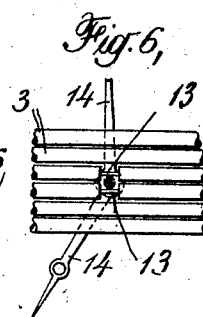
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CHANGEABLE EXHIBITOR

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2 Sheets-Sheet 2



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UNITED STATES PATENT OFFICE.

IRVING MITNITZKY, OF SEA GATE, NEW YORK.

CHANGEABLE EXHIBITOR.

Application filed June 4, 1925. Serial No. 34,806.

To all whom it may concern:

Be it known that I, IRVING MITNITZKY, a subject of the Republic of Russia (who has declared his intention of becoming a citizen of the United States), residing at Sea Gate, Long Island, New York, in the county of Kings, State of New York, have invented certain new and useful Improvements in Changeable Exhibitors; and I do hereby declare the following to be a full, clear, and exact description of the invention, such as will enable others skilled in the art to which it appertains to make and use the same.

This invention relates to changeable signs or exhibitors of the type which may be used for advertising, amusement or similar purposes.

One object of the invention is to provide an improved changeable sign or exhibitor.

Another object is to provide a changeable sign or exhibitor in which an actual object, continually exposed to view and forming an essential part of a complete representation or subject, is supplemented periodically by a representation of the remaining portion of the complete subject to be exhibited.

A further object is to provide an improved device for advertising clocks or watches.

The invention has for another object to improve the details of construction of a changeable sign or exhibitor of the type having a display surface formed by a plurality of reversible or rotatable members.

One specific embodiment of the invention is useful for advertising clocks or watches and to this end may comprise a display surface in front of which is a pair of clock or watch hands operated by clock mechanism concealed behind the surface. At one time during the operation of the device nothing is presented to view except the hands, the display surface forming the background for the hands being entirely blank, except for the representation of a question mark which may be exhibited on the display surface at this time to assist in arousing curiosity. The device then operates to eliminate the question mark and to present on the display surface the dial and remaining portions of the representation of a clock or watch, together with an identification of the particular kind of clock or watch being advertised. The mechanism for changing the matter on the display surface is preferably similar to that employed in changeable signs of the type in

which the display surface is formed by a plurality of rotatable or reversible members.

The preferred embodiment of the invention is illustrated in the accompanying drawings in which

Fig. 1 is a front elevation of the device as it appears at one time during its operation,

Fig. 2 is a similar view showing how it appears at another time during its operation,

Fig. 3 is a vertical longitudinal cross-section through the complete device,

Fig. 4 is a horizontal section taken on the line 4—4 of Fig. 3,

Fig. 5 is a detail sectional view taken on the line 5—5 of Fig. 3 showing a portion of the driving mechanism for the rotatable members, and

Fig. 6 is a section taken on the line 6—6 of Fig. 3 illustrating a further detail of construction.

The preferred form of the device will be specifically described to make the construction and operation of at least one embodiment of the invention entirely clear. This particular embodiment comprises a suitable casing 1 for housing the operative parts of the device. The casing 1 is provided with a transparent panel 2 of glass or the like, immediately behind which is mounted a series of rollers or other rotatable or reversible members 3. The rollers 3 may be mounted in brackets 4 and are preferably connected with one another throughout the series by intermeshing pinions 5 (Fig. 5). Certain of the rollers have rigidly associated therewith sprocket wheels 6 cooperating with a sprocket chain 7. The chain 7 may be driven by a driving sprocket 8, suitably journaled within the casing 1, and which in turn may be driven by a sprocket 9 preferably located outside of the casing. The sprocket 9 may be driven from any suitable source of power. In this way the driving power is distributed to the rollers and less energy is required than if only one roller were driven from the source of power and all of the other rollers driven from that one. In the latter arrangement the long train of gearing would offer considerable resistance to the driving power of a single roller. In the particular arrangement shown in the drawings, five of the rollers are positively driven and they distribute their driving power to the remaining rollers.

Clock mechanism represented at 10 is suitably supported within the casing 1, as by means of the standard 11, and the shaft or arbor 12 of this clock mechanism projects forwardly between the two adjacent rollers 3. For this purpose these two rollers at this point may be reduced in diameter as shown at 13 in Fig. 6 to provide a sufficient clearance for the arbor. It will be understood in this connection that the rollers should be positioned quite close together in order to present a display surface which appears to be unbroken, or at least a display surface in which the subject displayed thereon is not seriously affected by the open spaces between the rollers. If the rollers are sufficiently far apart to accommodate the arbor 12, of course the necessity of reducing the diameter of the two rollers adjacent the arbor will be eliminated. The arbor 12 has associated therewith a pair of clock or watch hands 14 which move over the display surface formed by the rollers 13, as clearly shown in Figs. 1 and 2.

The rollers 3 are provided on one side with the component parts of the representation of a question mark shown at 15 in Fig. 1. At one time during the operation of the device these component parts of the question mark will be simultaneously brought into view by reason of the rotation of the rollers. At this particular time in the operation of the device, it is preferable that nothing else be exposed to view except the question mark and the hands of the clock or watch. The opposite sides of the rollers are provided with the component parts of the representation of the remaining portion of a clock or watch as shown at 16 in Fig. 2 and the same side of the rollers may also be provided with the component parts of reading matter which may identify the particular make of clock or watch being advertised. Such an identification is shown at 17. It will now be seen that when the rollers continue to rotate after having presented to view the question mark shown in Fig. 1, they first eliminate from view the question mark and then bring into view the representation of the watch dial and other parts of the watch. As the rollers are further rotated these representations are obliterated leaving exposed to view only the hands, and then the representation of the question mark returns to view.

The effect produced by the device is a particularly pleasing and surprising one, and when only the hands of the watch and the question mark are exposed to view considerable curiosity is aroused, and the onlooker anxiously awaits for the completion of the entire representation. It will be understood that the hands of the watch or clock, being actuated by the clock mechanism within the casing, continually move over the display

surface and will indicate the correct time whenever the hands are supplemented by the representation of the watch dial.

The rotatable members 3 may be made in any desired form to alternately present to view the two sets of matter provided thereon, but preferably they are in the form of rollers as shown in the drawings. The representations may be provided on the rollers in any suitable way as by painting them thereon.

The hands of the clock or watch constitute the actual object which is permanently exposed to view by the device. This object forms an essential part of the complete representation or subject that is to be displayed and when the mechanism of the changeable sign operates in the manner above described, the actual object is supplemented by a representation of the remaining part of the complete subject.

While the preferred embodiment of the invention is a device for advertising clocks or watches and has been specifically described as such, the device may be made in other forms to produce other effects. For instance, in place of the watch or clock hands any other actual object, either movable or stationary, may be used and supplemented by the remaining portion of a complete representation by the mechanism of the changeable sign. Moreover, the hands 14 need not be watch or clock hands, but may constitute an indicator of any sort adapted to cooperate with any kind of a scale brought to view by the mechanism of the changeable sign. While the mechanism, comprising the rotatable or reversible members 3, is the preferred means for supplementing the hands of other actual object by the remainder of the complete representation, it will be understood that this may be accomplished by other means.

I claim:

1. A changeable exhibitor comprising movable means adapted to cause an incomplete representation to be exposed to view, and a movable indicator constituting a completing part of the representation and arranged to cooperate with the incomplete representation while the latter is so exposed.

2. A changeable exhibitor comprising movable means adapted to cause an incomplete representation to be exposed to view, and a rotatable indicator constituting a completing part of the representation and permanently exposed to view for cooperating with the incomplete representation while the latter is so exposed.

3. A changeable exhibitor comprising movable means adapted to cause an incomplete representation to be exposed to view, and a movable indicator constituting a completing part of the representation and permanently exposed to view for cooperating

with the incomplete representation while the latter is so exposed, said indicator moving in a plane substantially parallel to the exposed incomplete representation.

5 4. A changeable exhibitor comprising movable means adapted to cause an incomplete representation to be exposed to view, and a rotatable indicator constituting a completing part of the representation and
10 adapted to cooperate with the incomplete representation while the latter is so exposed, said indicator being mounted upon a shaft which extends behind the incomplete representation, and means associated with the
15 shaft behind the incomplete representation for rotating the same.

5. A changeable exhibitor comprising a plurality of rotatable members forming a display surface, an object positioned in
20 front of said surface so as to be permanently exposed to view and constituting a portion only of a composite representation, said members being provided on one side only with the component parts of the remainder
25 of said representation, and means to simultaneously rotate said members whereby at one time the permanently exposed portion only of the representation is exposed to view and at another time the representation
30 is completed by rotation of said members.

6. A changeable exhibitor comprising a plurality of rotatable members forming a display surface, a movable indicator permanently exposed to view in front of said
35 surface, said members being provided on one side only with the component parts of a representation with which the indicator is adapted to cooperate, and means to simultaneously rotate said members whereby at
40 one time the indicator only is exposed to view and at another time both the indicator and the representation with which it cooperates are exposed to view.

7. A changeable exhibitor comprising a plurality of rotatable members forming a display surface, indicating means permanently exposed to view in front of said
45 surface, means for imparting movement to said indicating means, said members being provided on one side only with the component parts of the representation of a scale with which said indicating means is adapted to
50 cooperate, and means for rotating said members whereby at one time said indicating means only is exposed to view and at another time both the indicating means and the scale are exposed to view.

8. An advertising device comprising a plurality of rotatable members forming a
60 display surface, hands of a timepiece positioned in front of said surface, timepiece mechanism concealed behind said surface for actuating said hands, said members having on one side only component parts of the

representation of a timepiece dial without
the hands, and means to rotate said mem- 65
bers whereby at one time the hands only are exposed to view and at another time the complete representation of a timepiece is
70 exposed to view.

9. An advertising device comprising a plurality of rotatable members forming a display surface, timepiece mechanism located behind said members and having an
75 arbor projecting between two adjacent members to a point in front of said surface, timepiece hands mounted on and actuated by said arbor, said members being provided on one side only with the component parts of the representation of a timepiece dial, and
80 means to rotate said members whereby at one time said hands only will be exposed to view and at another time the complete representation of a timepiece will be exposed to
85 view.

10. An advertising device comprising a plurality of rotatable members forming a display surface, a movable object adapted to be moved over said surface, and constituting a portion only of a complete representation, an actuating shaft projecting
90 through said surface between two adjacent members and to which said object is operatively connected, means located behind said surface for operating said shaft, said members being provided on one side only with the component parts of the remainder of
95 said representation, and means to rotate said members whereby at one time the movable object will appear without the remainder of the representation and at another time the complete representation will appear.

11. An advertising device comprising a plurality of rotatable members forming a
105 display surface, an object mounted to move over said surface, means for so moving the object over said surface, said object constituting a portion only of a complete representation, the rotatable members being provided on one side only with the component
110 parts of the remainder of said representation, and means to rotate said members whereby at one time the movable object will appear without the remainder of the representation, and at another time the complete representation including the movable object will appear.

12. The combination with a changeable display surface having a partial representation
120 alternately brought to view and obliterated thereon, of an actual object located in front of said surface and exposed to view, said object constituting a supplement to the partial representation brought to view on the display surface.

In testimony whereof I affix my signature.
IRVING MITNITZKY.