

Oct. 15, 1940.

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2,218,302

POSE-OBSERVING APPARATUS

Filed May 23, 1939

6 Sheets-Sheet 1

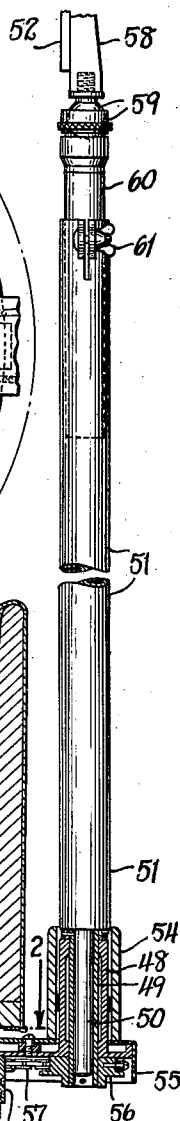
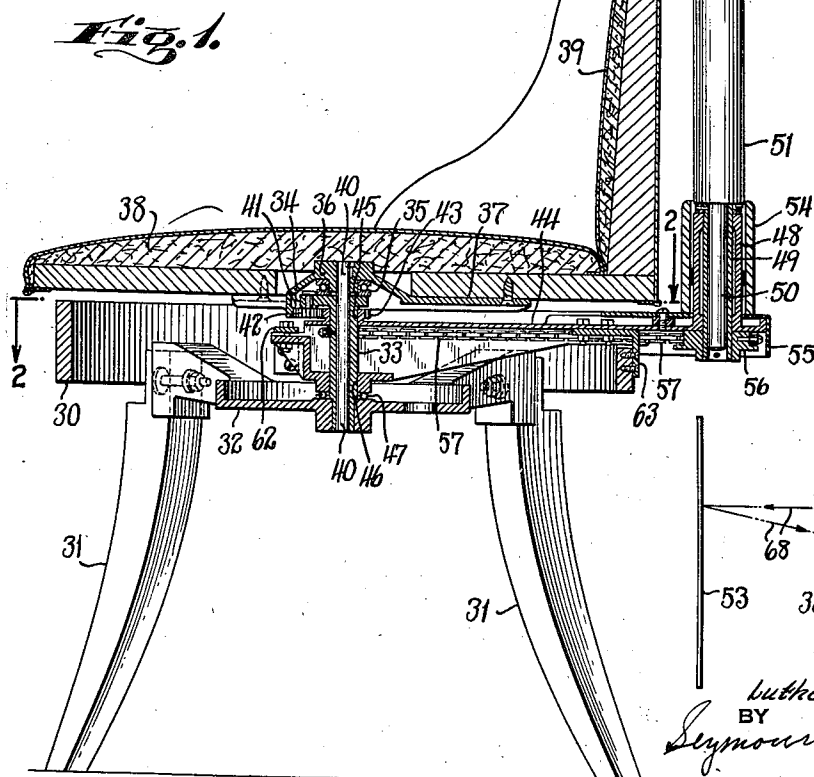
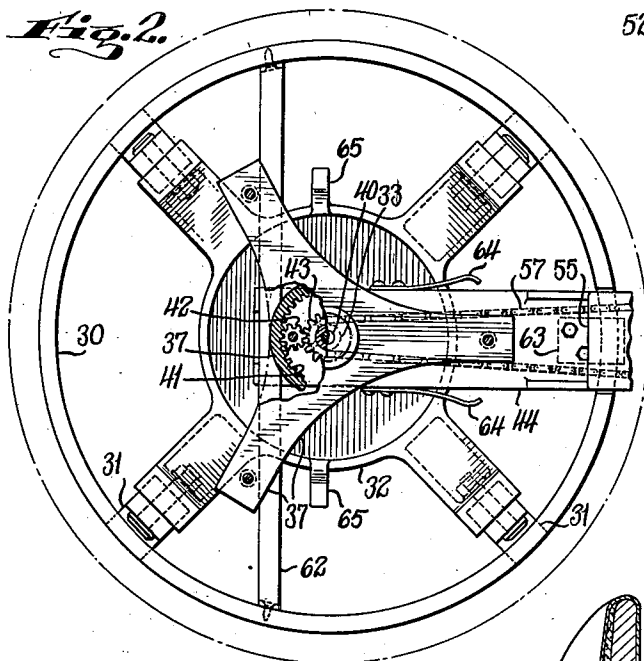


Fig. 3.

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Fig. 5.

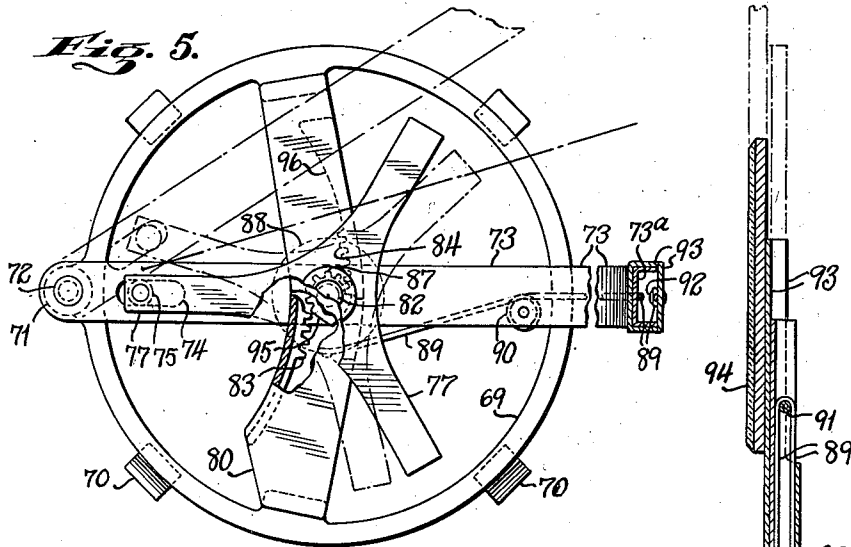


Fig. 4.

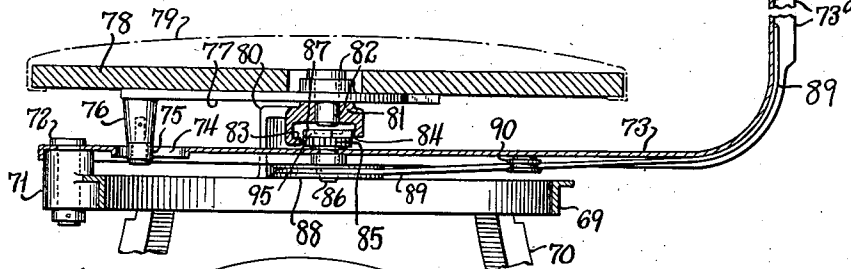


Fig. 7.

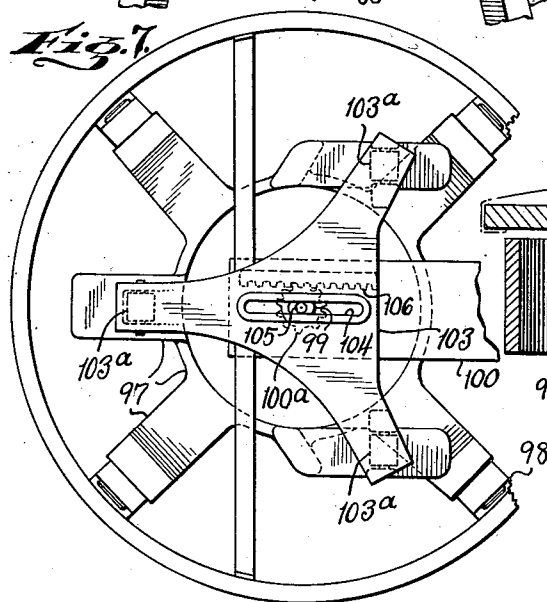
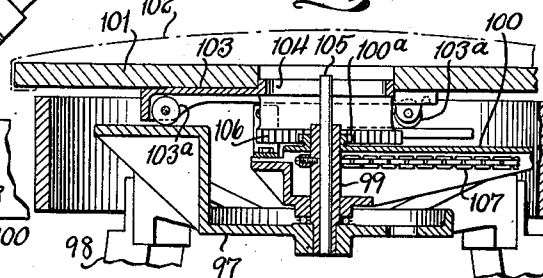


Fig. 6.



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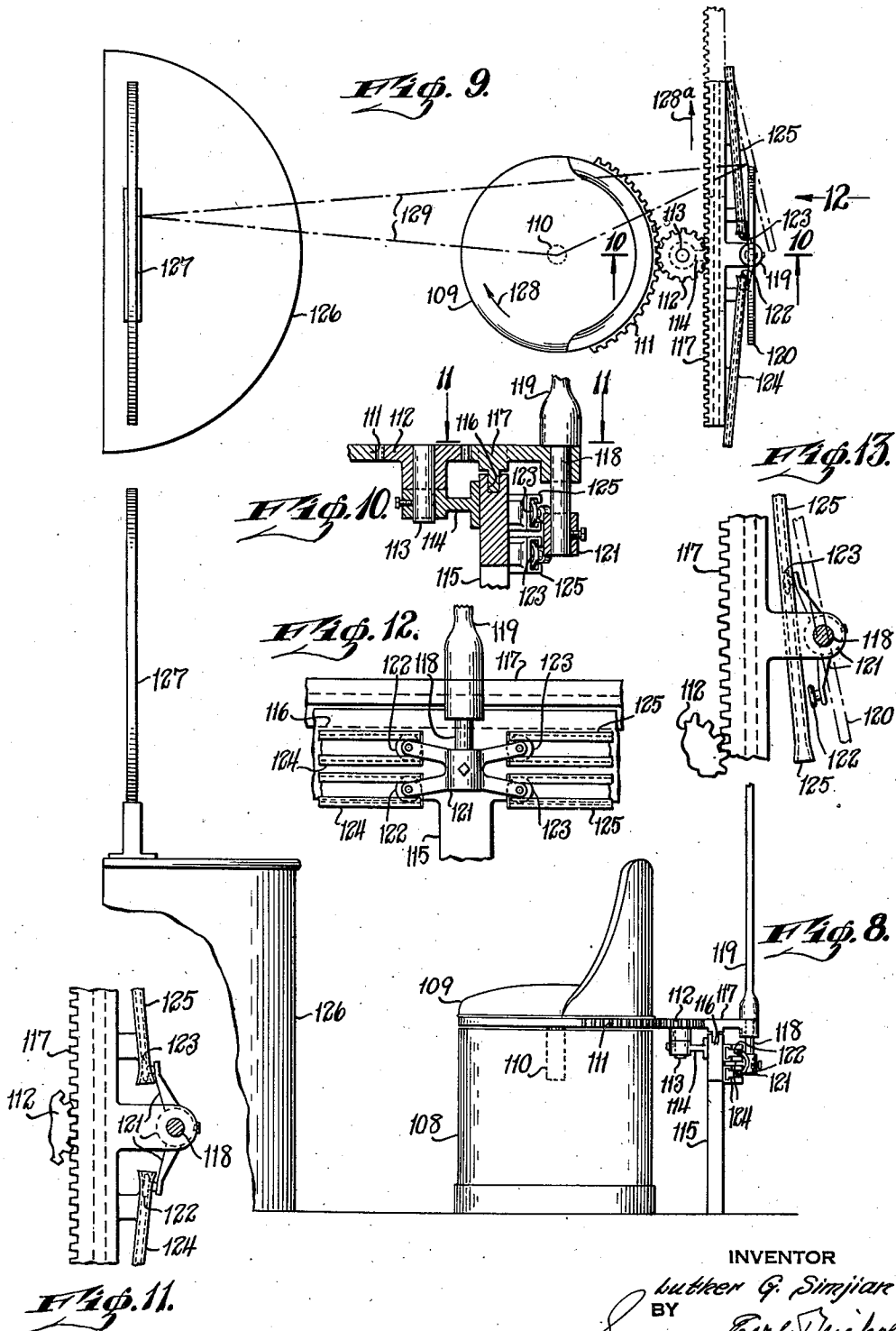
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POSE-OBSERVING APPARATUS

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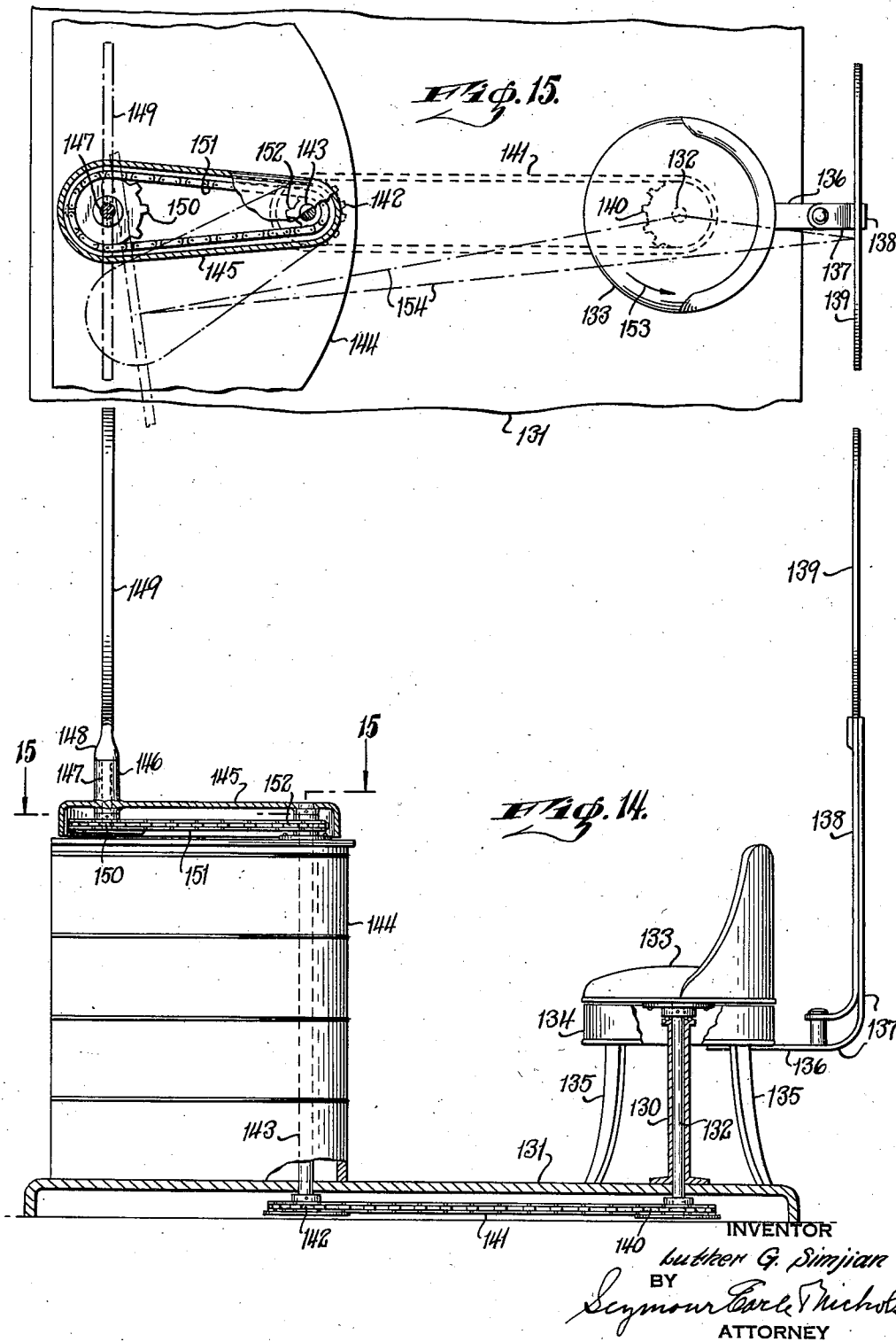
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POSE-OBSERVING APPARATUS

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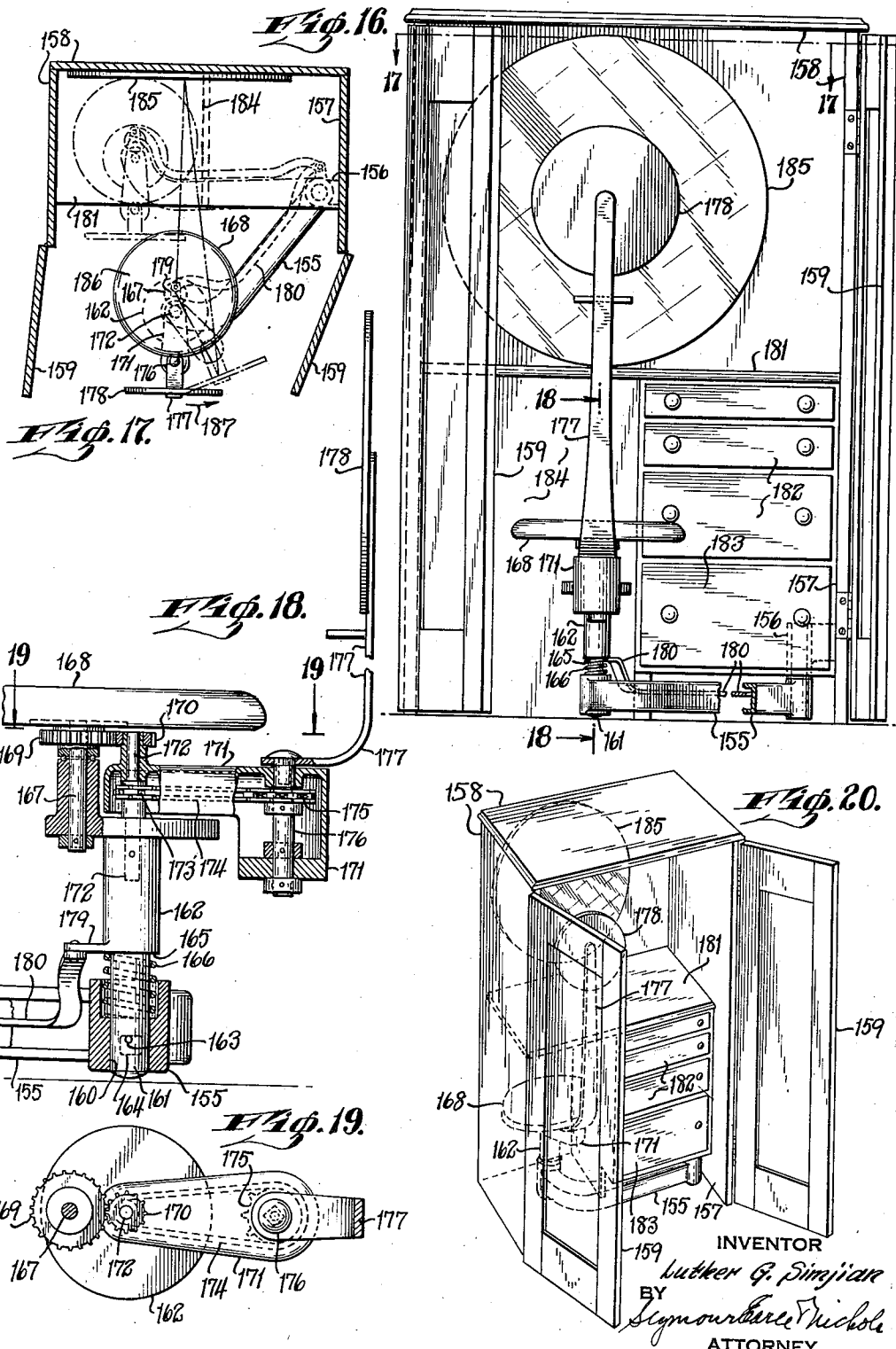
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POSE-OBSERVING APPARATUS

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UNITED STATES PATENT OFFICE

2,218,302

POSE-OBSERVING APPARATUS

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mesne assignments, to The Reflectone Corpora-
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Application May 23, 1939, Serial No. 275,135

20 Claims. (Cl. 88—74)

This invention relates to improvements in pose-
observing or image-reflecting apparatus or de-
vices and more particularly to that type of pose-
observing apparatus or devices by means of which
a poser may observe at will a wide variety of re-
flections of herself or himself.

The pose-reflecting apparatus or devices of the
present invention are adapted for use in a wide
variety of situations such, for instance, as in
boudoirs, millinery shops, dress shops, beauty
parlors, hairdressing establishments, hat shops,
etc., etc.

One of the main objects of the present inven-
tion is to provide a superior pose-observing appa-
ratus or device so constructed and arranged that
the required features of the apparatus may be
shifted to enable reflections of the poser to be
observed from various angles without requiring
the poser to employ her hands in effecting such
shifting, thus leaving the hands of the poser free
to make her coiffure, apply make-up, etc., etc.

Another object of the present invention is to
provide a superior pose-observing apparatus or
device so constructed and arranged that the re-
quired parts thereof may be adjusted to enable
the poser to observe her person from various
angles, by a mere shift in position while seated
and without requiring the employment of the
poser's hands.

A further object of the present invention is to
provide a superior pose-observing apparatus or
device which includes a movable-seat, together
with means responsive to movements of the said
seat for shifting appropriate portions of the ap-
paratus or device to enable the poser to observe
her person from different angles by mere shift-
ing of the said movable-seat.

Still another object of the present invention
is to provide a superior pose-observing apparatus
or device embodying both a movable-seat and
a movable-mirror so operatively related that a
movement of either the said movable-seat or the
said movable-mirror will automatically alter the
angular disposition of the said movable-mirror
with respect to the said movable-seat to enable a
poser to observe a wide variety of reflections of
herself.

With the above and other objects in view, as
will appear to those skilled in the art from the
present disclosure, this invention includes all
features in the said disclosure which are novel
over the prior art and which are not claimed in
any separate application.

In the accompanying drawings, in which cer-

tain modes of carrying out the present invention
are shown for illustrative purposes:

Fig. 1 is a view mainly in vertical central sec-
tion and partly in side elevation of one form which
a pose-observing apparatus or device embodying
the present invention may assume;

Fig. 2 is a broken horizontal sectional view
taken on the line 2—2 of Fig. 1;

Fig. 3 is a schematic view illustrating one of
the light paths which the apparatus of the pre-
ceding figures may provide for;

Fig. 4 is a fragmentary view in vertical central-
longitudinal section of another pose-observing
apparatus embodying the present invention;

Fig. 5 is a top or plan view of the apparatus
shown in Fig. 4 with the seat removed and the
mirror-carrying arm in horizontal section;

Fig. 6 is a broken view in vertical central sec-
tion of the operating mechanism and adjacent
parts of another form of the present invention;

Fig. 7 is a broken top or plan view of the parts
shown in Fig. 6 with the seat removed for clarity;

Fig. 8 is a view in side elevation of still another
form which the present invention may assume;

Fig. 9 is a top or plan view thereof;

Fig. 10 is a fragmentary sectional view on an
enlarged scale taken on the line 10—10 of Fig. 9;

Fig. 11 is a broken detail sectional view taken
on the line 11—11 of Fig. 10;

Fig. 12 is a broken elevational view viewing
certain of the parts from the direction of the ar-
row 12 in Fig. 9;

Fig. 13 is a view corresponding to Fig. 11 but
showing the parts shifted into the positions due to
them when the movable-mirror is shifted into the
position represented by broken lines in Fig. 9;

Fig. 14 is a view mainly in side elevation and
partly in vertical section of a further form which
a pose-observing apparatus embodying the pres-
ent invention may assume;

Fig. 15 is a broken top or plan view thereof with
a portion of the apparatus in section along the
line 15—15 of Fig. 14;

Fig. 16 is a view in front elevation of a so-
called "cabinet model" embodying the present in-
vention and showing the complemental doors of
the cabinet proper in partly-opened position and
the parts of the apparatus shown in the position
for use;

Fig. 17 is a sectional view thereof taken on the
line 17—17 of Fig. 16;

Fig. 18 is a broken view in vertical section taken
on the line 18—18 of Fig. 16;

Fig. 19 is a broken horizontal sectional view
taken on the line 19—19 of Fig. 18;

Fig. 20 is a perspective view of the apparatus of Figs. 16 to 19 inclusive, showing the seat and features carried thereby swung into their retired positions preparatory to closing the doors of the cabinet;

Fig. 21 is a view mainly in top plan and partly in horizontal section of another cabinet type of apparatus embodying the present invention and showing the complementary doors of the cabinet in their open position and the seat and associated parts in position suitable for use;

Fig. 22 is a view thereof in front elevation;

Fig. 23 is a top or plan view of another form of the present invention;

Fig. 24 is a view thereof mainly in side elevation but showing the base or platform in vertical section; and

Fig. 25 is a top or plan view of still another form of the present invention somewhat similar to the forms shown in Figs. 23 and 24, save that but one of the two mirrors is movable.

The structure of Figs. 1, 2 and 3

The structure of Figs. 1 to 3 inclusive comprises a finishing-ring 30 surrounding and shielding the upper ends of four (more or less) legs 31, which latter support a plate-like frame-member 32 centrally located within the finishing-ring 30.

Rigidly carried by and upwardly projected from the frame-member 32 is a supporting-sleeve 33 which is provided at its upper end with a forwardly-projecting arm 34. Located upon the upper face of the supporting-sleeve 33 and its arm 34 is an antifriction bearing 35 upon which latter rests the hub 36 of a spider-like seat-supporting frame 37 which is screwed or otherwise secured to the under face of a movable and rotary seat 38 which latter, in the instance shown, is provided with a back-rest 39.

The hub 36 of the seat-supporting frame 37 has keyed or otherwise secured to it a shaft 40 which extends downwardly from the said hub into the interior of the supporting-sleeve 33 before described, with capacity for turning movement therein. The said seat-supporting frame 37 is provided with an internal gear-sector 41 which meshes into and drives a pinion 42 carried by the arm 34 of the supporting-sleeve 33 with capacity for a rotary movement with respect thereto. The pinion 42 just referred to meshes into and drives a pinion 43 formed integral with or attached to the upper face of a skeletonized mirror-carrying arm 44.

The mirror-carrying arm 44 is formed with an upper bearing 45 turning freely upon the outer surface of the upper portion of the supporting-sleeve 33 just below the radial arm 34 thereof. The said mirror-carrying arm is also formed with a lower bearing 46 which turns upon the outer periphery of the supporting-sleeve 33 and rests upon an antifriction bearing 47 which latter, in turn, rests upon the upper surface of the frame-member 32.

The outer end of the mirror-carrying arm 44 is provided with a bearing-sleeve 48 which projects upwardly to the rear of the back-rest 39 of the seat 38 and has turning therein a bushing 49. Projecting into the interior of the bushing 49 and coupled thereto for coincidental rotation is a stem 50 depending from the lower end of a tubular post 51 which is bodily movable with the outer end of the mirror-carrying arm 44, as will more fully hereinafter appear, and is also rotatable with respect thereto. The upper end of the post 51 carries a mirror 52 designed for use,

for instance, with a second and normally stationary mirror 53 schematically shown in Fig. 3 of the drawings.

For the purpose of decorativeness, the upstanding bearing-sleeve 48 of the mirror-carrying arm 44 is enveloped by a tubular shield 54 and the outer portion of the arm 44 proper is covered by a shield 55.

The lower end of the bushing 49 has pinned or otherwise secured to it a peripherally-grooved pulley 56 to which is secured a belt-like operating-chain 57 which extends around the outer periphery of the supporting-sleeve 33 and is similarly secured thereto.

The movable-mirror 52 which, as before stated, is carried by the tubular post 51, is provided with a back-frame 58 which is interconnected by means of a ball-and-socket joint 59 to a shank 60 which telescopes within the upper end of the tubular post 51, as is shown in Fig. 1, and is held in various positions of vertical adjustments therein by means of a clamping-unit 61.

The finishing-ring 30, before described, has attached to it the respective opposite ends of a supporting-bar 62, as is shown particularly well in Fig. 2, and the said bar is secured about midway of its length to the forward portion of the mirror-carrying arm 44. At its rear, the finishing-ring 30 is further secured to the adjacent portion of the said mirror-carrying arm 44 by means of a bracket 63.

From the description just given it will be clear that the finishing-ring 30 will move with the mirror-carrying arm 44.

As is shown particularly well in Fig. 2, the mirror-carrying arm 44 is provided with two sheet-metal spring-buffers 64—64, respectively located on the opposite sides of the said arm and respectively adapted to engage with stop-arms 65—65 radially projecting from the respective opposite sides of the frame-member 32.

From the foregoing, it will be apparent that a poser seated upon the seat 38, may, by turning the said seat as an incident to a slight bodily movement, effect the swinging of the mirror-supporting arm 44 to one side or the other of its intermediate position. The swinging movement of the mirror-carrying arm as just referred to, will effect the bodily movement of the movable-mirror 52 and coincidentally will turn the said mirror a predetermined amount with respect to the said arm 44 to change the angular disposition of the said movable-mirror with respect to the seat 38 and with respect to the normally-fixed mirror 53 and hence also with respect to the poser who may be seated upon the said seat. The angular movement of the mirror 52, as just described, will be effected by the chain 57 or its equivalent.

To cause the mirror 52 to move into the position in which it is indicated by broken lines in Fig. 3, the seat 38 should be turned in the direction of the arrow 66 (Fig. 3) to thus, through the intermediary of the arm 44 and associated parts, effect the bodily movement of the said mirror in the direction of the arrow 67 indicated in Fig. 3. As the mirror 52 moves bodily with the outer end of the arm 44, it will also be slightly turned with respect to the said arm by the chain 57 and associated parts.

When the mirror 52 has been moved into the position in which it is indicated by broken lines in Fig. 3, a triangular pose-reflecting light-path, indicated by the broken line 68 in Fig. 3, will be provided.

The structure of Figs. 4 and 5

The image-reflecting apparatus or device shown in Figs. 4 and 5 includes a ring-like frame 69 to which is secured, in any suitable manner, the upper end of four (more or less) legs 70. The said ring-like frame 69 is provided with a forwardly-projecting ear or lug 71 carrying a stud 72 to which is pivoted the forward end of a mirror-carrying arm 73.

Adjacent its forward end, the mirror-carrying arm, just above referred to, is formed with a longitudinal actuating-slot 74 which receives an actuating-roller 75 rotatably mounted upon the lower end of a lug 76 depending from the adjacent portion of a seat-supporting frame 77. Secured to the upper face of the seat-supporting frame 77 is a seat-base 78 which, if desired, may be cushioned or padded as indicated by the broken line 79 in Fig. 4.

The frame 69 is formed with an integral bridge 80 extending substantially diametrically thereacross and provided centrally with a bearing-hub 81. Turning in the bearing-hub 81 of the frame 69 is a stud 82 depending from the seat-supporting frame 77.

On one side of its lateral-center the bridge 80 of the frame 69 is formed with a series of rearwardly-extending gear-teeth 83 which are arranged in an arc struck from the center of the stud 72. On the opposite side of its lateral-center, the said bridge 80 is formed with a series of forwardly-facing gear-teeth 84 also arranged in an arc having a center corresponding to the center of the stud 72, before referred to.

Adapted to be engaged with the rearwardly-projecting gear-teeth 83 is a semi-gear 85 secured to a vertical shaft 86 journaled in the mirror-carrying arm 73. Also secured to the shaft 86, as just referred to, but above the semi-gear 85, is a second semi-gear 87, which is adapted to be engaged with the forwardly-projecting series of gear-teeth 84 upon the bridge 80, in a manner as will more fully hereinafter appear.

Secured to the lower portion of the vertical shaft 86 and below the mirror-carrying arm 73 is a drum 88 to which is attached one end of a flexible cable 89 extending rearwardly from the said drum and passing over an idler-pulley 90. From the idler-pulley 90, the cable 89 passes rearwardly and then upwardly through the vertical reach 73a of the said arm 73 and over a roller 91 carried by the said vertical reach, which latter is of channel form in cross section, as shown. From the roller 91 the cable 89 extends downwardly and is secured by means of a rivet 92, or other suitable means, to a mirror-carrying frame 93, which has vertical sliding movement on the vertical reach 73a of the arm 73 and which carries a movable-mirror 94.

When the seated poser swings the seat-base 78 in a clockwise direction, the seat-supporting frame 77, acting through the actuating-roller 75 and the actuating-slot 74, will swing the mirror-carrying arm 73 toward the position in which it is indicated by broken lines in Fig. 5. During the movement referred to, the semi-gear 87 will be brought into engagement with the forwardly-facing gear-teeth 84 of the bridge 80, thus causing the drum 88 to revolve in a clockwise direction and draw forwardly upon the horizontal portion of the cable 89. The movement of the cable 89, as just referred to, will, in turn, "hoist," so to speak, the mirror-carrying frame 93 and the

movable-mirror 94 into the position in which it is indicated by broken lines in Fig. 4.

During the swinging movement of the mirror-carrying arm 73, as above described, the semi-gear 87 will ultimately pass out of engagement with the gear-teeth 84, by which time the flat face 95 of the said semi-gear 87 will have been brought into sliding engagement with an arcuate forwardly-facing restraining-surface 96 upon the bridge 80 to, in this manner, maintain the movable-mirror 94 in its elevated position.

When the seat-base 78 is turned in a counter-clockwise direction, after having been first turned in a clockwise direction as above described, the mirror-carrying arm 73 will be swung toward its central position, and in the course of such movement the teeth of the semi-gear 87 will be re-engaged with the forwardly-facing teeth 84 of the bridge 80, to thus effect the reverse turning movement of the drum 88, and thereby permit the mirror-carrying frame 93 and the movable-mirror 94 to descend into their retired positions by gravity, as indicated by full lines in Fig. 4.

When the mirror-carrying arm 73 is swung toward a position on the opposite side of the center from that above referred to, the semi-gear 85 will be engaged with the rearwardly-facing series of gear-teeth 83 upon the bridge 80 and effect the lifting of the movable mirror 94 in the same manner as has been described above in connection with the movement of the arm 73 in the opposite direction. Also, the restoration of the mirror-carrying arm 73 to its central position will permit the mirror 94 to be lowered by gravity into its lower or retired position.

The mirror-carrying arm 73, or its equivalent, which is pivoted forwardly of the pivot-point of the seat of the structure of Figs. 4 and 5, to thereby dispense with the need for pivoting the mirror 94, or its equivalent, with respect to the said mirror-carrying arm 73, is specifically claimed in my co-pending application, Serial No. 230,827, filed September 20, 1938.

The structure of Figs. 6 and 7

In Figs. 6 and 7, a plate-like frame-member 97 is employed which is provided with a plurality of depending-legs 98 and which, like the structure of Figs. 1, 2 and 3, is provided with a rigid vertically-extending supporting-sleeve 99 upon which is journaled a mirror-carrying arm 100 corresponding in all substantial details to the mirror-carrying arm 44 before described, and like the same, carrying a suitable movable-mirror which may be supported in the said arm in the same manner as is the movable-mirror 52 in its arm 44.

In the structure shown, a seat-base 101 is employed which does not turn, as do the seats of the preceding structures, but which is adapted for reciprocation forwardly and backwardly with respect to the assembly in a manner as will presently appear.

The seat-base 101 may be cushioned or upholstered to a point indicated by the broken line 102 and is secured to a seat-supporting frame 103 provided with three (more or less) rollers 103a riding upon the adjacent upper surfaces of the frame-member 97 before referred to.

The seat-supporting frame 103 is formed substantially centrally with a guide-slot 104 extending lengthwise from front to rear of the structure and receiving the upper end of a vertical guide-pin 105 rigidly installed within the interior of the supporting-sleeve 99. Like the mirror-carrying arm 44 of the structure of Figs. 1 to 3 inclusive,

the mirror-carrying arm 100 is provided with a pinion 109a which is rigid with the said arm, so as to turn therewith and which is adapted to mesh into a rack 106 secured to the seat-supporting frame 103 and hence to the seat-structure represented by the seat-base 101 and the upholstery 102.

The supporting-sleeve 99 has extending around and secured to it a chain 107 corresponding in function and arrangement to the chain 57 of the structure of Figs. 1 to 3 inclusive.

When the seat-supporting frame 103 is moved forwardly from the position in which it is shown in Figs. 6 and 7, it will effect the counterclockwise turning movement of the pinion 109a and hence effect the corresponding turning movement of the mirror-carrying arm 100. Conversely, when the seat-supporting frame 103 is moved rearwardly (as is also the rack 106 carried thereby), the pinion 109a, and hence the mirror-carrying arm 100, will be turned in a clockwise direction.

The structure of Figs. 8 to 13, inclusive

The pose-observing or image-reflecting apparatus of Figs. 8 to 13, inclusive, comprises a cylindrically-contoured seat-support 108, above which is located a movable-seat 109 which is provided with a depending-shaft 110 rotatively received in the upper portion of the seat-support 108. The movable-seat 109 is also provided at its rear with a gear-sector 111 which meshes into a pinion 112 rotatable upon a stud 113 carried by a bracket 114 forwardly-projecting from the upper end of a T-shaped post 115 (Fig. 12). The said post 115 is rigidly secured to and upstands from the same surface as that upon which the seat-support 108 rests. The upper face of the T-shaped post 115 is provided with an upwardly-opening groove-like guide-way 116 receiving, with a free sliding fit, the lower portion of a toothed mirror-carrying slide 117. Mounted for turning movement in the projecting rear portion of the mirror-carrying slide 117 is the shaft-like trunnion 118 of a mirror-carrying post 119 carrying a mirror 120 (Fig. 9) at its upper end.

Rigidly attached to the lower end of the trunnion 118 of the mirror-carrying post 119 is a lever 121 which carries on one side of its center a pair of rollers 122—122 and also carries on the opposite side of its center a similar pair of rollers 123—123. The rollers 122—122 are respectively adapted to ride in a given one of a pair of channel-like guide-members 124—124 forming a rigid feature of the post 115, as is shown particularly well in Fig. 12. In a similar manner, the opposite guide-rollers 123—123 are respectively adapted to ride in the adjacent one of a pair of channel-like guide-members 125—125 of the post 115, all for the purpose as will more fully hereinafter appear.

Located forwardly of the seat-support 108 and the seat 109 is a dressing-table 126, upon the upper surface of which is mounted a normally-stationary mirror 127, as is shown particularly well in Figs. 8 and 9.

To make clear the operation of the apparatus illustrated in Figs. 8 to 13 inclusive, let it be assumed that a poser, seated upon the seat 109, turns the said seat in the direction of the arrow 128 of Fig. 9. The result of the movement just described will be to shift the mirror-carrying slide 117 in the direction of the arrow 123a (Fig. 9) and similarly bodily shift the movable-mirror 120.

During the shifting movement just above referred to, the rollers 123—123, which are attached to the mirror-carrying post 119, as before described, will ride through the complemental guide-members 125—125 and gradually turn the mirror 120 about the trunnion 118 as a center until the said mirror assumes the position in which it is indicated by broken lines in Fig. 9, and certain of the other parts affected by the movement assume the positions in which they are shown by full lines in Fig. 13.

When the movable-mirror 120 has reached the position just above described and as indicated by broken lines in Fig. 9, a triangular pose-reflecting light path will be formed, as is indicated by the broken lines 129 in Fig. 9.

As the mirror-carrying slide 117, and the parts carried thereby, moves into the position in which it is indicated by broken lines in Fig. 9 and by full lines in Fig. 13, the rollers 122—122 will emerge from the inner ends of the guide-members 124—124 so as not to prevent the mirror-carrying post 119 from being turned as required and as above described.

Conversely, when the seat 109 is turned in a reverse direction from that indicated by the arrow 128, the rollers 122—122 will ride in the guide-members 124—124 to slightly turn the movable-mirror 120 in a direction opposite to that above described in detail and readily understood from the accompanying drawings.

The structure of Figs. 14 and 15

In the figures now under consideration, an image-reflecting apparatus is shown which comprises a seat-support 130 which is of tubular form and which rests upon a platform 131. Extending downwardly through and turning in the tubular seat-support 130 is a shaft 132 which has rigidly attached to it at its upper end a seat 133.

Surrounding the upper end of the tubular seat-support 130 and located immediately below the under face of the seat 133, is a stationary ring-like decorating-band 134 supported by a suitable number of legs 135. Rigidly attached to the unit comprising the decorating-band 134 and the legs 135 is the horizontal reach 136 of a normally-stationary L-shaped mirror-carrying arm 137. The L-shaped mirror-carrying arm 137 also includes a relatively-long vertical reach 138 carrying at its upper end a normally-stationary mirror 139 which is located to the rear of the seat 133.

The lower end of the shaft 132 before referred to, is provided with a sprocket-wheel 140 rigidly attached to the said shaft and engaged by an endless sprocket-chain 141 which extends forwardly beneath the raised upper surface of the platform 131 and around a sprocket-wheel 142 rigidly attached to the lower end of a shaft 143. The said shaft 143 extends vertically through a dressing-table 144, and its upper end is rigidly attached to the adjacent end of a mirror-carrying arm 145 at a point above the top surface of the said dressing-table 144.

The mirror-carrying arm 145 is formed with a cavity in its under surface, as shown in Figs. 14 and 15, and at its end, remote from its point of attachment to the shaft 143, is provided with a bearing-sleeve 146 in which rotates the trunnion 147 of a mirror-carrying post 148 supporting a movable-mirror 149.

The lower end of the trunnion 147 of the mirror-carrying post 148 has rigidly secured to it a sprocket-wheel 150 around which extends an end-

less sprocket-chain 151 which also extends around a stationary sprocket-wheel 152 concentrically positioned with respect to the shaft 143 before referred to, but rigidly attached to the upper surface of the dressing-table 144, as is indicated in Fig. 14.

For the purpose of making clear the operation of the apparatus illustrated in Figs. 14 and 15, let it be assumed that a poser, seated upon the seat 133, turns the said seat in the direction of the arrow 153 (Fig. 15).

The turning of the seat 133, as just above referred to, will act through the intermediary of the parts 132, 140, 141, 142 and 143 to turn the mirror-carrying arm 145 in a counterclockwise direction toward the position in which the said arm is indicated by broken lines in Fig. 15. As the mirror-carrying arm 145 turns, as just described, the mirror 149 will be carried bodily therewith and will also have its angular relationship with respect to the said arm changed by virtue of the stationary sprocket-wheel 152, sprocket-chain 151 and sprocket-wheel 150, as is also indicated in Fig. 15.

When the movable-mirror 149 has been shifted as above described, a triangular pose-reflecting light path, indicated by the broken lines 154 in Fig. 15, will be provided which extends from the poser rearwardly to the stationary mirror 139, thence forwardly to the now-shifted movable-mirror 149 and thence back to the poser upon the seat 133.

When the seat 133 is turned in the direction opposite to that above described, the mirror-carrying arm 145 will be also oppositely shifted to enable a poser to view her right semi-profile or profile.

The structure of Figs. 16 to 20 inclusive

In this group of figures there is illustrated a pose-reflecting apparatus which includes a seat-carrying arm 155 which at one end is pivotally connected to a bracket 156. The said bracket 156 is secured to the adjacent side-wall 157 of a cabinet designated as a whole by the reference character 158 and which is provided with two complementary doors 159—159 adapted to close the otherwise-open front face of the cabinet.

The end of the seat-carrying arm 155 opposite the bracket 156 is provided with a vertical bearing-passage 160 receiving the shank 161 of a seat-supporting member 162 with capacity for vertical movement and slight turning movement. The movement of the shank 161 and hence of the seat-supporting member 162 with respect to the seat-carrying arm 155 is limited by a limiting-pin 163 in the shank 161 and coacting with the walls of a limiting-recess 164 formed in the bearing-passage 160 of the said seat-carrying arm 155 (Fig. 18). At the upper terminus of the shank 161, the seat-supporting member 162 is formed with a downwardly-facing shoulder 165 against which presses the upper end of a helical spring 166 which surrounds the shank 161 and is seated at its lower end in the adjacent portion of the seat-carrying arm 155.

Eccentric to the axis of the shank 161 and rotatably mounted in the upper end of the seat-supporting member 162 is a rotary shaft 167 carrying at its upper end a rotary seat 168, and also carrying a gear-wheel 169 immediately below the said seat. The gear-wheel 169 meshes into a pinion 170 rigidly attached to the forward end of a mirror-carrying arm 171. The forward end of the said mirror-carrying arm is adapted to

turn on a post 172 secured to and upstanding from the seat-supporting member 162.

Rigidly attached to the intermediate portion of the post 172 is a stationary sprocket-wheel 173 receiving a sprocket chain 174 which also extends around a sprocket-wheel 175 located at the rear end of the mirror-carrying arm 171. The said sprocket-wheel 175 is secured to a shaft 176 which is rotatable in the rear portion of the mirror-carrying arm 171 and carries an L-shaped mirror-carrying post 177 having a movable-mirror 178 at its upper end.

The seat-supporting member 162 is provided with a radially-extending arm 179 to which is pivoted the outer end of a link 180 which has its inner end pivotally connected to the bracket 156 to which the seat-carrying arm 155 is also pivotally connected.

Within the cabinet 158 is a horizontal shelf 181 below one end of which is located a series of three (more or less) drawers 182 located above a panel 183 which latter, in effect, constitutes a "dummy drawer."

The space to the left of the drawers 182 and below the left-hand portion of the shelf 181 provides a recess 184 for the accommodation of the seat 168 and associated parts in a manner as will hereinafter appear. Above the shelf 181 of the cabinet 158 is a normally-stationary mirror 185 which is adapted to cooperate with the movable-mirror 178 before referred to.

For the purpose of making clear the functioning of the apparatus of Figs. 16 to 20 inclusive, let it be assumed that the seat-carrying arm 155 is swung into the position in which it is shown by full lines in Figs. 16 and 17. When now a poser seated upon the seat 168 turns the said seat in the direction of the arrow 186 (Fig. 17), the mirror-carrying arm 171 (and the mirror etc. carried thereby) will be swung in the direction of the arrow 187 (Fig. 17). As the mirror-carrying arm 171 is swung as just described, the mirror post 177 will be swung about a center represented by the shaft 176 so as to have its angular disposition changed with respect to the said arm 171 and to ultimately arrive at the position in which it is indicated by broken lines in Fig. 17.

The swinging of the seat 168 in a direction opposite to that indicated by the arrow 186 will effect the exactly reverse movement of the mirror-carrying arm 171 and the parts carried thereby.

It may here be noted that when a poser seats herself upon the seat 168, the said seat together with the seat-supporting member 162 and the parts carried thereby including the mirror 178, will be depressed against the tension of the helical spring 166 until the lower end of the shank 161 engages the floor surface to thus, in effect, anchor the outer end of the seat-carrying arm 155 against unintentional movement.

When the person has completed her make-up, hairdressing, or the like and rises from the seat 168, the spring 166 will assert itself and lift the seat-supporting member 162 and the parts carried thereby to thus disengage the lower end of the shank 161 from the floor surface and permit the seat-carrying arm 155 to be swung inwardly until the parts assume the positions in which they are shown by broken lines in Fig. 17 and by full lines in Fig. 20. During the swinging movement above referred to, the link 180 will turn the seat-supporting member 162 with respect to the outer end of the arm 155 so as to maintain the movable-mirror 178 in parallelism with the normally stationary mirror 185. It may be ex-

plained in this connection that when the poser is ready to swing the arm 155 into the cabinet 158, the mirror post 177 should be first turned into its intermediate position in which it is represented by full lines in Fig. 17.

When the seat, the outer end of the seat-carrying arm 155 and the parts carried by the latter, are swung into the recess 184 in the cabinet 158, the doors 159—159 thereof may be closed to conceal the nature of the contents of the cabinet.

The structure of Figs. 21 and 22

In Figs. 21 and 22 is shown a structure which includes a cabinet 188 having two complementary swinging doors respectively numbered 189 and 190. The door 189 is provided close to its top with an angularly-disposed arm 191 provided with a longitudinal slot 192 and in which is adapted to slide a pin 193 secured to the outer end of an arm 194 forming a rigid feature of the door 190. The two arms 191 and 194 serve to couple the two doors 189 and 190 together, so that when one thereof is open or closed the other thereof will automatically be similarly affected.

Secured to the lower portion of the door 189 is a dressing-table 195 surmounted by a normally-stationary mirror 196 also secured to the said door 189. Centrally in the cabinet 188 is a shelf 197 providing a convenient surface upon which to place cosmetics, hairpins and the like.

Projecting perpendicularly from the inner face of the door 190 is a bracket 198 mounting a rotary seat 199, a movable-mirror 200 together with parts corresponding in all essential details to the structure carried by the swinging arm 155 of the structure of Figs. 16 to 20 inclusive and therefore not requiring further detailed description herein.

From the foregoing it will be seen that when the doors 189 and 190 of the cabinet 188 are swung into their open positions as shown by full lines in Figs. 21 and 22, a variable pose-reflecting apparatus is provided to enable a person seated upon the seat 199 to observe her person from various angles by the mere turning of the seat 199.

When the doors 189—190 are swung into their closed positions the apparatus will be concealed in the cabinet 188 as is indicated by broken lines in Fig. 21.

It may here be noted that if desired the cabinet 188 may readily be dispensed with and the doors 189—190, or their equivalent, arranged to cover a built-in recess in the wall of a building.

The structure of Figs. 23 and 24

In Figs. 23 and 24 is shown a platform 201 having a downwardly-opening cavity 202 therein. The said platform 201 is provided centrally with a bearing boss 203 and adjacent its opposite ends respectively with bearing bosses 204 and 205. Mounted for rotation in the central bearing boss 203 is a shaft 206 carrying a seat 207 at its upper end. At its lower end the shaft 206 carries two pulleys 208—209 both of which are located in the cavity or recess 202 within the platform 201 as is shown especially well in Fig. 24. Extending around the pulley 208, just referred to, is an endless belt 210 having its reaches crossed and also extending around a pulley 211 rigidly attached to the lower end of a mirror-carrying post 212 journaled in the boss 205 before referred to. The upper end of the mirror-carrying arm 212 carries a mirror 213 which, generally speaking, faces inwardly toward the seat 207.

The pulley 209 at the lower end of the shaft 206 of the seat 207 has an endless belt 214 extend-

ing therearound and also around a pulley 215 rigidly attached to the lower end of a mirror-carrying post 216. The said mirror-carrying post 216 is journaled in the boss 204 of the platform 201 and carries, at its upper end, a mirror 217 corresponding in substance to the mirror 213 before referred to, and, like the same, facing in general toward the seat 207.

When the seat 207 is turned in the direction indicated by the arrow 218 (Fig. 23) both of the mirrors 213 and 217 will be simultaneously swung respectively in the direction indicated by the arrows 219 and 220 thus providing a pose-reflecting light-path of an angular character such as is indicated by the broken line 221 in Fig. 23.

It will be also understood that when the seat 207 is turned in a direction opposite to that indicated by the arrow 218 the mirrors 213 and 217 will be turned in a direction opposite to that respectively indicated by the arrows 219 and 220.

The structure of Fig. 25

In Fig. 25 the image-reflecting apparatus includes a platform 222 upon which is mounted a rotary seat 223. The said seat 223 is provided with a vertical shank 224 which is journaled in the platform 222 and which carries a collar 225 having two radial arms 226 and 227 respectively projecting from its opposite sides.

At the opposite end of the platform 222 from the seat 223 is a mirror-carrying post 228 journaled for turning movement in the said platform 222 and carrying a collar 229 which is rigid with the said post and which is provided with two arms 230 and 231 respectively, extending in opposite directions from the said collar 229. Pivotaly connected to the arm 230 of the collar 229 is a push-rod 232 which extends toward the seat 223 into a position so that its end is adjacent the radial arm 226 operated by the said seat 223.

Similarly, the arm 231 of the collar 229 has pivotaly connected to it one end of a push-rod 233 corresponding to the push-rod 232 just above described and, like the same, extending toward the seat 223. The end of the push-rod 233 is located in position to be actuated by the radial arm 227 which is connected to the seat 223.

The upper end of the mirror-carrying post 228 carries a mirror 234 which acts in conjunction with a second and normally stationary mirror 235 located on the opposite side of the said seat to provide a pose-reflecting light-path such, for instance, as that indicated by the broken lines 236.

When the seat 223 is turned in the direction indicated by the arrow 237 the finger 227 which turns with the said seat will, after an interval, engage the end of the push-rod 233 and thus turn the movable-mirror 234 in the direction of the arrow 238 and into the position in which the said mirror is indicated by broken lines.

Should the seat 223 be turned in a direction opposite to that indicated by the arrow 237, the arm 226 will engage the push-rod 232 and effect the swinging movement of the mirror 234 in a direction opposite to that indicated by the arrow 238.

The apparatus or device of Fig. 25 may aptly be termed a delayed-action device since the movement of the mirror 234 does not occur until after the seat 223 has been moved to a considerable extent. The arms 226 and 227 and the push-rods 232 and 233 do, however, constitute an operative-interconnection between the said seat and the said mirror.

The invention may be carried out in other spe-

cific ways than those herein set forth without departing from the spirit and essential characteristics of the invention, and the present embodiments are, therefore, to be considered in all respects as illustrative and not restrictive, and all changes coming within the meaning and equivalency range of the appended claims are intended to be embraced therein.

I claim:

1. A variable image-observing apparatus for use in conjunction with an observing-mirror, and comprising: a seat-support; a movable-seat carried by the said seat-support for relative movement with respect thereto; a movable-mirror having its reflecting-surface facing in the general direction of the said movable-seat and mounted with capacity for movement with respect to both the said seat-support and the said movable-seat; and actuating-means operatively interconnecting the said movable-seat and the said movable-mirror to automatically cause the said movable-mirror and the said movable-seat to both move simultaneously and with respect to each other and also with respect to the said seat-support when the said movable-seat is moved.

2. A variable image-observing apparatus for use in conjunction with an observing-mirror, and comprising: a seat-support; a movable-seat carried by the said seat-support for relative movement with respect thereto; a rotatable-mirror having its reflecting-surface facing in the general direction of the said movable-seat and mounted with capacity for changing its angular disposition with respect to both the said seat-support and the said movable-seat; and actuating-means operatively interconnecting the said movable-seat and the said rotatable-mirror to automatically cause the said rotatable-mirror and the said movable-seat to both move simultaneously with respect to each other and also with respect to the said seat-support when the said movable-seat is moved.

3. A variable image-observing apparatus for use in conjunction with an observing-mirror, and comprising: a seat-support; a rotatable-seat carried by the said seat-support for turning movement with respect thereto; a movable-mirror having its reflecting-surface facing in the general direction of the said movable-seat and mounted with capacity for movement with respect to both the said seat-support and the said rotatable-seat; and actuating-means operatively interconnecting the said rotatable-seat and the said movable-mirror to automatically cause the said movable-mirror and the said rotatable-seat to both move simultaneously and with respect to each other and also with respect to the said seat-support when the said rotatable-seat is turned.

4. A variable image-observing apparatus for use in conjunction with an observing-mirror, and comprising: a seat-support; a rotatable-seat carried by the said seat-support for turning movement with respect thereto; a rotatable-mirror having its reflecting-surface facing in the general direction of the said movable-seat and mounted with capacity for changing its angular disposition with respect to both the said seat-support and the said rotatable-seat; and actuating-means operatively interconnecting the said rotatable-seat and the said rotatable-mirror to automatically cause the said rotatable-mirror and the said rotatable-seat to both turn simultaneously and with respect to each other and also

with respect to the said seat-support when the said rotatable-seat is turned.

5. A variable image-observing apparatus for use in conjunction with an observing-mirror, and comprising: a seat-support; a movable-seat carried by the said seat-support for relative movement with respect thereto; a movable-mirror having its reflecting-surface facing in the general direction of the said movable-seat and mounted with capacity for movement with respect to both the said seat-support and the said movable-seat; and actuating-means operatively interconnecting the said movable-seat and the said movable-mirror and constructed and arranged to automatically cause the said movable-mirror and the said movable-seat to both move simultaneously with respect to the said seat-support and also in opposite directions with respect to each other when the said movable-seat is moved.

6. A variable image-observing apparatus for use in conjunction with an observing-mirror, and comprising: a seat-support; a movable-seat carried by the said seat-support for relative movement with respect thereto; a rotatable-mirror having its reflecting-surface facing in the general direction of the said movable-seat and mounted with capacity for changing its angular disposition with respect to both the said seat-support and the said movable-seat; and actuating-means operatively interconnecting the said movable-seat and the said rotatable-mirror and constructed and arranged to automatically cause the said rotatable-mirror and the said movable-seat to both move simultaneously with respect to the said seat-support and to also move in reverse directions with respect to each other when the said movable-seat is moved.

7. A variable image-observing apparatus for use in conjunction with an observing-mirror, and comprising: a seat-support; a rotatable-seat carried by the said seat-support for turning movement with respect thereto; a movable-mirror having its reflecting-surface facing in the general direction of the said movable-seat and mounted with capacity for movement with respect to both the said seat-support and the said rotatable-seat; and actuating-means operatively interconnecting the said rotatable-seat and the said movable-mirror and constructed and arranged to automatically cause the said movable-mirror and the said rotatable-seat to both move simultaneously with respect to the said seat-support and to also move in opposite directions with respect to each other when the said rotatable-seat is turned.

8. A variable image-observing apparatus for use in conjunction with an observing-mirror, and comprising: a seat-support; a rotatable-seat carried by the said seat-support for turning movement with respect thereto; a rotatable-mirror having its reflecting-surface facing in the general direction of the said movable-seat and mounted with capacity for changing its angular disposition with respect to both the said seat-support and the said rotatable-seat; and actuating-means operatively interconnecting the said rotatable-seat and the said rotatable-mirror and constructed and arranged to automatically cause the said rotatable-mirror and the said rotatable-seat to both turn simultaneously with respect to the said seat-support and to also turn in reverse directions with respect to each other when the said rotatable-seat is turned.

9. A variable image-observing unit for use in

conjunction with an observing-mirror, and comprising: a seat-structure including a seat-support and a movable-seat mounted upon the said seat-support for relative movement with respect thereto; a movable-mirror having its reflecting-surface facing in the general direction of the said movable-seat and organized with and carried by the said seat-structure with capacity for movement with respect to both the seat-support and the movable-seat thereof; and actuating-means operatively interconnecting the movable-seat of the said seat-structure with the said movable-mirror to automatically cause the said movable-mirror and the movable-seat of the said seat-structure to both move simultaneously with respect to each other and also with respect to the seat-support of the said seat-structure when the said movable-seat is moved.

10. A variable image-observing unit for use in conjunction with an observing-mirror, and comprising: a seat-structure including a seat-support and a movable-seat carried by the said seat-support for relative movement with respect thereto; a rotatable-mirror having its reflecting-surface facing in the general direction of the said movable-seat and organized with and supported by the said seat-structure with capacity for turning movement to change its angular disposition with respect to both the seat-support and the movable-seat thereof; and actuating-means operatively interconnecting the movable-seat of the said seat-structure with the said rotatable-mirror to automatically cause the said rotatable-mirror and the movable-seat of the said seat-structure to both move simultaneously with respect to the seat-support of the said seat-structure and also with respect to each other when the said movable-seat of the said seat-structure is moved.

11. A variable image-observing unit for use in conjunction with an observing-mirror, and comprising: a seat-structure including a seat-support and a rotatable-seat carried by the said seat-support; a movable-mirror having its reflecting-surface facing in the general direction of the said movable-seat and organized with and carried by the said seat-structure and mounted with capacity for movement with respect to both the seat-support and the rotatable-seat of the said seat-structure; and actuating-means operatively interconnecting the rotatable-seat of the said seat-structure and the said movable-mirror to automatically cause the said movable-mirror and the rotatable-seat of the said seat-structure to both move simultaneously with respect to the seat-support of the said seat-structure and also with respect to each other when the said rotatable-seat is turned.

12. A variable image-observing unit for use in conjunction with an observing-mirror, and comprising: a seat-structure including a seat-support and a rotatable-seat carried by the said seat-support for turning movement with respect thereto; a rotatable-mirror having its reflecting-surface facing in the general direction of the said movable-seat and organized with and carried by the said seat-structure with capacity for turning movement to change its angular disposition with respect to both the seat-support and the rotatable-seat of the said seat-structure; and actuating-means operatively interconnecting the rotatable-seat of the said seat-structure with the said rotatable-mirror to automatically cause the said rotatable-mirror and the rotatable-seat of the said seat-structure to both turn simultaneously with respect to the seat-support of the said seat-

structure and also with respect to each other when the said rotatable-seat is turned.

13. A variable image-observing unit for use in conjunction with an observing-mirror, and comprising: a seat-structure including a seat-support and a seat mounted upon the said seat-support for relative movement with respect thereto; a movable-mirror having its reflecting-surface facing in the general direction of the said movable-seat and organized with and carried by the said seat-structure with capacity for movement with respect to both the seat-support and the seat thereof; and actuating-means operatively interconnecting the movable-seat of the said seat-structure with the said movable-mirror and constructed and arranged to automatically cause the said movable-mirror and the movable-seat of the said seat-structure to both move simultaneously in reverse directions with respect to each other and to also move with respect to the seat-support of the said seat-structure when the said movable-seat is moved.

14. A variable image-observing unit for use in conjunction with an observing-mirror, and comprising: a seat-structure including a seat-support and a seat carried by the said seat-support for relative movement with respect thereto; a rotatable-mirror having its reflecting-surface facing in the general direction of the said movable-seat and organized with and supported by the said seat-structure with capacity for turning movement to change its angular disposition with respect to both the seat-support and the movable-seat thereof; and actuating-means operatively interconnecting the movable-seat of the said seat-structure with the said rotatable-mirror and constructed and arranged to automatically cause the said rotatable-mirror and the movable-seat of the said seat-structure to both move simultaneously in reverse directions with respect to each other and to also move with respect to the seat-support of the said seat-structure when the said movable-seat of the seat-structure is moved.

15. A variable image-observing unit for use in conjunction with an observing-mirror, and comprising: a seat-structure including a seat-support and a rotatable-seat carried by the said seat-support; a movable-mirror having its reflecting-surface facing in the general direction of the said movable-seat and organized with and carried by the said seat-structure and mounted with capacity for movement with respect to both the seat-support and the rotatable-seat of the said seat-structure; and actuating-means operatively interconnecting the rotatable-seat of the said seat-structure and the said movable-mirror and constructed and arranged to automatically cause the said movable-mirror and the said rotatable-seat of the said seat-structure to both move simultaneously in reverse directions with respect to each other and to also move with respect to the seat-support of the said seat-structure when the said rotatable-seat is turned.

16. A variable image-observing unit for use in conjunction with an observing-mirror, and comprising: a seat-structure including a seat-support and a rotatable-seat carried by the said seat-support for turning movement with respect thereto; a rotatable-mirror having its reflecting-surface facing in the general direction of the said movable-seat and organized with and carried by the said seat-structure with capacity for turning movement to change its angular disposition with respect to both the seat-support and the rotatable-

ble-seat of the said seat-structure; and actuating-means operatively interconnecting the rotatable-seat of the said seat-structure with the said rotatable-mirror and constructed and arranged to automatically cause both the said rotatable-mirror and the rotatable-seat of the said seat-structure to both turn simultaneously with respect to the seat-support of the said seat-structure and to also turn in reverse directions with respect to each other when the said rotatable-seat is turned.

17. A variable image-observing unit for use in conjunction with an observing-mirror, and comprising: a seat-structure including a seat-support and a rotatable-seat carried by the said seat-support for turning movement with respect thereto; a mirror-carrying arm organized with and carried by the said seat-structure with capacity for turning movement to change its angular disposition with respect to both the seat-support and the rotatable-seat of the said seat-structure; a substantially vertical mirror having its reflecting-surface facing in the general direction of the said movable-seat and carried by the said mirror-carrying arm in position for movement back of the said seat-structure; and actuating-means operatively interconnecting the rotatable-seat of the said seat-structure with the said mirror-carrying arm to simultaneously automatically move the same with respect to both the rotatable-seat and the seat-support of the said seat-structure when the said rotatable-seat is turned; whereby as the said mirror-carrying arm is moved the said substantially vertical mirror carried thereby is also automatically moved to change its angular disposition with respect to both the rotatable-seat and the seat-support of the said seat-structure.

18. A variable image-observing system, comprising: an observing-mirror; a seat-support located in front of the said observing-mirror; a movable-seat carried by the said seat-support for relative movement with respect thereto; a movable-mirror having its reflecting-surface facing in the general direction of the said movable-seat and mounted with capacity for movement with respect to both the said seat-support and the said movable-seat and located on the side of the said seat normally opposite the said image-observing mirror; and means operatively inter-

connecting the said movable-seat with the said movable-mirror to simultaneously automatically move the said movable-mirror with respect to the said movable-seat, seat-support and image-observing mirror when said movable-seat is moved; the said movable-mirror being movable to maintain a pose-reflecting light-path extending in a substantially horizontal plane from the said seat to the aforesaid movable-mirror and then to the said image-observing mirror and from the latter back to the said movable-seat when the said movable-seat and the said movable-mirror are simultaneously moved in either direction from their respective intermediate positions.

19. A variable image-observing apparatus, comprising: a seat-support; a movable-seat carried by the said seat-support with capacity for relative movement with respect thereto; a mirror-support remote from the said movable-seat and substantially in front thereof; a movable mirror having its reflecting-surface facing in the general direction of the said movable-seat and carried by the said mirror-support with capacity for movement with respect thereto; a second mirror located to the rear of the said movable-seat on the opposite side thereof from the said movable-mirror; and actuating-means operatively interconnecting the said movable-seat and the said movable-mirror in front of the said movable-seat to automatically cause the said movable mirror and the said movable-seat to both move simultaneously and with respect to each other and also with respect to the said seat-support when the said movable-seat is moved.

20. A structural-unit for variable image-observing apparatus, comprising: a first frame adapted to be connected to a seat-support; a seat-supporting frame movably attached to the said first frame; a movable mirror-carrying arm carried by the said first frame; and actuating-means operatively interconnecting the said seat-supporting frame and the said movable mirror-carrying arm and constructed and arranged to automatically cause the said mirror-carrying arm and seat-supporting frame to both be simultaneously moved with respect to each other and also with respect to the said first frame when the said seat-supporting frame is moved with respect to the said first frame.

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