

No. 687,970.

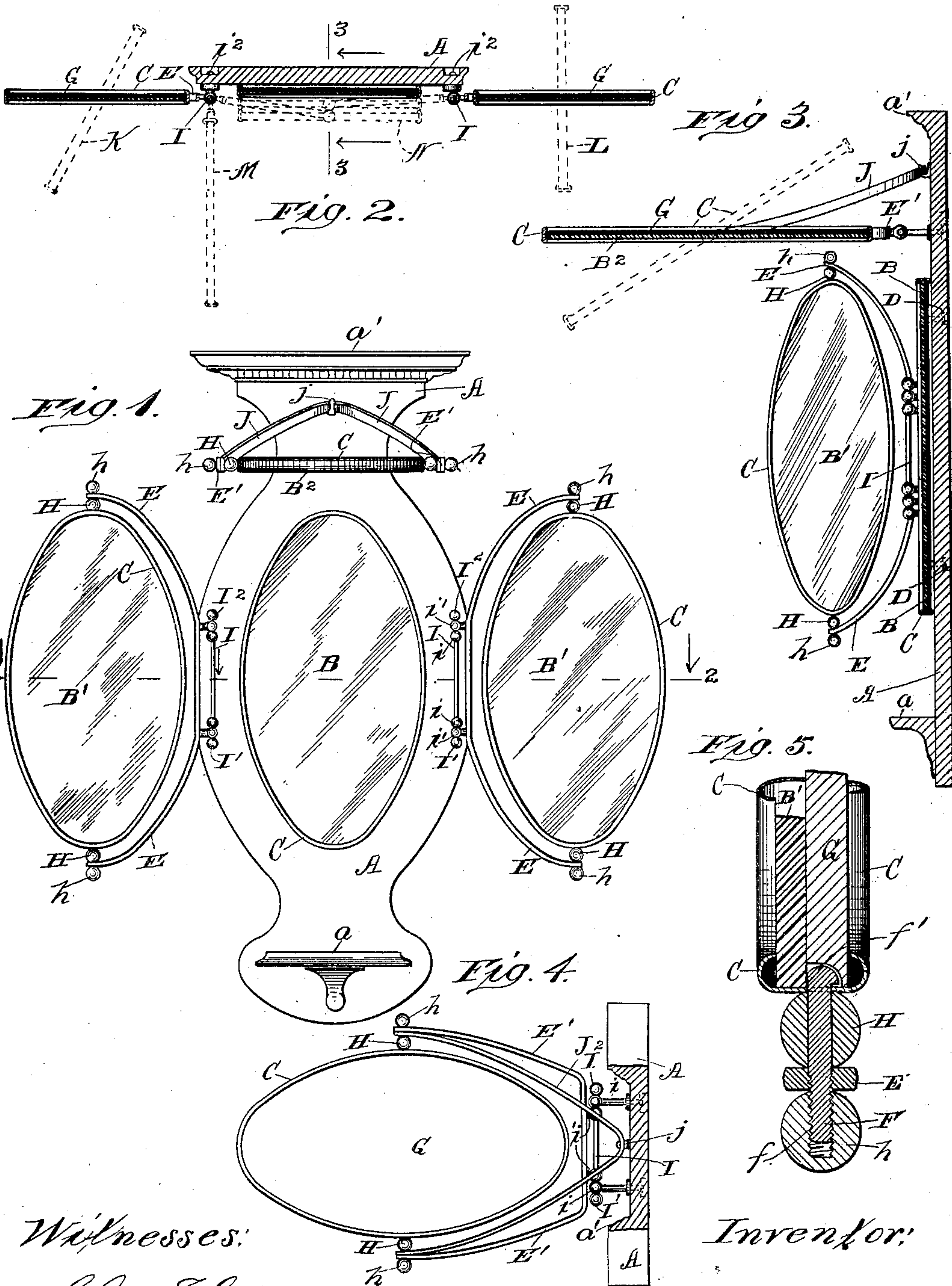
Patented Dec. 3, 1901.

H. A. SEYMOUR.
ADJUSTABLE MULTIPLE MIRROR.

(Application filed May 15, 1901.)

(No Model.)

2 Sheets—Sheet 1.



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UNITED STATES PATENT OFFICE.

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ADJUSTABLE MULTIPLE MIRROR.

SPECIFICATION forming part of Letters Patent No. 687,970, dated December 3, 1901.

Application filed May 15, 1901. Serial No. 60,393. (No model.)

To all whom it may concern:

Be it known that I, HARRY A. SEYMOUR, a citizen of the United States, residing at Chicago, county of Cook, and State of Illinois, have invented certain new and useful Improvements in Adjustable Multiple Mirrors, of which the following, when taken in connection with the drawings accompanying and forming a part hereof, is a full and complete description, sufficient to enable those skilled in the art to which it pertains to understand, make, and use the same.

The object of this invention is to obtain a frame and mirrors therein which will be ornamental in appearance and which will contain movable parts, permitting the mirrors to be adjusted relative to each other so as to enable the person using the same to obtain many views of the thing desired to be observed.

A further object of this invention is to obtain an apparatus of the kind described which will be economical in construction and durable.

In the drawings referred to as forming a part of this specification, Figure 1 is a front elevation of a frame and mirrors embodying this invention. Fig. 2 is a sectional view on line 2 of Fig. 1 viewed in the direction indicated by the arrow, and Fig. 3 is a vertical sectional view on line 3 3 of Fig. 2 viewed in the direction indicated by the arrows. Fig. 4 is a top plan view with a portion of the top molding broken away to expose to view the working parts thereunder. Fig. 5 is a vertical sectional view on line 5 5 of Fig. 4 viewed in the direction indicated by the arrow. Fig. 6 is a plan view of a hinge forming an element in the construction embodying this invention. Fig. 7 is a horizontal sectional view of such hinge and of the position of the frame of the apparatus which is adjacent thereto on line 7 7 of Fig. 10; Fig. 8, a vertical sectional view on line 8 8 of Fig. 6; Fig. 9, a horizontal sectional view on line 9 9 of Fig. 10, and Fig. 10 a vertical sectional view on line 10 10 of Fig. 6. Figs. 5 to 10, inclusive, are on an enlarged scale, and the direction of the view of such Figs. 5, 7, 8, 9, and 10 is indicated by the respective arrows on the lines indicating the view. Fig. 11 is a front eleva-

tion of a modification of the hinge illustrated in Figs. 1, 2, 3, and 4.

A reference-letter applied to designate a given part is used to indicate such part throughout the several figures of the drawings wherever the same appears.

In an apparatus embodying this invention there are preferably four mirrors, three of which are arranged in vertical planes and one of which is in a horizontal plane. The center one of the vertical mirrors is stationary, and the remaining two of such vertical mirrors are movably mounted on the sides of the stationary mirror in the ordinary position of mounting three mirrors. The fourth mirror is movably mounted above the stationary mirror and arranged to be swung into a vertical, horizontal, or any intermediate plane, as desired.

A is a frame, termed by me the "stationary" frame of the apparatus.

B is a mirror.

C is a frame in which one of the mirrors B is mounted. Frame C is preferably attached to frame A by means of bolts D D. I prefer to construct the frame C of ductile sheet metal, as brass, which may be formed or spun or pressed up into the desired shape. In making the apparatus embodying this invention with large mirrors B B, I find it necessary to form up the metal frames C C. Stationary frame A is preferably provided with bracketed shelf *a* and ornamented top *a'*, although the same form no part of this invention.

B' B' and B² are respectively mirrors of the same size and shape, or substantially so, as the mirror B and are respectively contained in frames which are duplicates of frame C and lettered the same.

E E are brackets in which the mirrors B' B' are rotatably mounted, and E' is a bracket in which the mirror B² is similarly mounted. In Fig. 5 there is shown on an enlarged scale the manner of mounting the frames C C in the brackets E E E', respectively. In such figure, F is a bolt provided with the screw-threads *f* at one end thereof and the head *f'* at the other end thereof. G is the back board of the mirrors B B'. Bolt F is extended through a

hole in frame C corresponding therewith, so that the head f' will engage with the frame, and sphere H or other washer corresponding thereto is mounted on the bolt F. Bracket
 5 E is also mounted on bolt F, and the nut h is turned on the end of the bolt F. I prefer that nut h be made of spherical form to correspond with the washer H.

The several brackets E E and E' are
 10 hinged to the stationary frame A by hinges, such hinges being duplicates and one thereof being shown in Figs. 7, 8, 9, and 10 of the drawings. In attaching brackets E E to the stationary frame A the hinges (lettered I) are
 15 placed in substantially a vertical plane, while in attaching the bracket E' to such stationary frame A the hinge is placed in a horizontal plane. Bracket E' is maintained in a horizontal plane by means of metal strap J,
 20 Figs. 1 and 3, engaging with the hook j on frame A and provided with holes at the ends thereof, through which the bolts F F of frame C extend.

Referring to Figs. 7 to 11, both inclusive,
 25 $i i'$ are posts, preferably ornamental in shape, provided with laterally-extending holes there-through for the pintle i^5 and with screw-threaded holes extending longitudinally from one end thereof to and communicating with
 30 the laterally-extending holes. $i^2 i^2$ are headed screws, the threads whereof fit into the threads in the longitudinally-extending holes in the posts. i^3 , Figs. 7 and 10, is a headless screw, the threads whereof fit into the threads in
 35 the longitudinally-extending holes of the posts and is "set" against the flattened part i^4 of pintle i^5 . The parts of the hinge which are secured to the stationary frame A comprise post i , screws $i^2 i^2$, and washers $i^7 i^7$, and
 40 in securing or attaching such part in place it is simply necessary to set the screws $i^2 i^2$ firmly in place, as illustrated in Figs. 7 and 10. The headless screw i^3 is firmly set against the flattened part i^4 of pintle i^5 to prevent it
 45 from turning relative to the post in which such headless screw is placed. Screw i^3 may be omitted if the adjustment about to be described, whereby adjacent posts are forced against each other laterally, is omitted. I' I'
 50 are screw-threaded nuts fitting on the respective ends of the pintle i^5 , by means of which the posts $i i'$ are forced laterally into close contact with each other to constitute friction, so that the brackets E E will not easily jar
 55 from an adjusted position. Nuts I' I' are preferably made of the same shape as are the ends of the posts $i i'$, and I have shown them as spherical. Posts $i i'$ are secured to frame C by putting screws $i^2 i^2$ through correspond-
 60 ing holes in the frame and setting such screws firmly in place in the manner illustrated in Figs. 8, 9, and 10 of the drawings. When a long hinge is desired, additional posts, as $i^9 i^{10}$, Fig. 11, are used. The hinge illustrated
 65 in Fig. 11 is a modification of the hinge illustrated in Figs. 1 to 6, inclusive, obtained by the addition of the posts i^9 and i^{10} .

Dotted lines K and L, Fig. 2, indicate the movement of the mirror-frames C C in brackets E E, and dotted lines M N indicate the
 70 movement of the mirrors B B and frames C C on hinges L I. Dotted line O, Fig. 3, indicates one of the different positions of which mirrors B B are susceptible.

I am aware that three mirrors have been
 75 heretofore mounted in a similar relative position as are the three vertically-mounted mirrors in the apparatus embodying my invention; but so far as I am aware four mirrors have not been so mounted, and the me-
 80 chanical means by which all the mirrors are mounted is different in my apparatus from any heretofore made.

Having thus described the construction and operation of an apparatus embodying my in-
 85 vention, what I claim, and desire to secure by Letters Patent, is—

1. A stationary frame, a mirror provided with an additional frame, means for rigidly attaching such additional frame to the sta-
 90 tionary frame, an additional mirror, a frame to such additional mirror, a bracket, pivotal connections between the bracket and the frame of the additional mirror, a hinge connected to the bracket and to the station-
 95 ary frame, such hinge comprising posts respectively provided with a laterally-extending hole and a screw-threaded hole extending longitudinally thereinto from the rear there-
 100 of, headed screws the threads whereof correspond with the threads in the longitudinally-extending holes, whereby the posts are rigidly attached to the bracket and the station-
 105 ary frame, respectively, and a pintle extending through the laterally-extending holes in all the posts and means to maintain the hinge in a determined position; substantially as de-
 110 scribed.

2. A stationary frame, a mirror, a metal frame containing the mirror, means for secur-
 110 ing the metal frame rigidly to the stationary frame, additional metal frames respectively containing additional mirrors, brackets, a piv-
 115 otal connection between the additional metal frames and the brackets, respectively, and hinges connecting the respective brackets to the stationary frame, such hinges comprising
 120 posts respectively provided with a longitudinally-extending screw-threaded hole from the rear end thereof thereinto, headed screws the threads whereof correspond with the threads
 125 in the longitudinally-extending holes of the posts, a pintle extending laterally through the posts, and nuts on the pintle whereby adjacent posts may be forced laterally into close
 130 contact.

3. In an apparatus comprising a stationary frame and a plurality of frames and mirrors, a bracket, a pivotal connection between such
 130 bracket and the frames of the respective mirrors, and a connection between the respective brackets and the stationary frame, such connection consisting of a hinge comprising posts
 135 respectively provided with a laterally-extend-

ing hole therethrough and provided with a screw-threaded hole extending longitudinally from one end of the post to and communicating with the laterally-extending hole, a pintle to each hinge passing through the laterally-extending holes of all the posts of the hinge, a headless screw in one of the posts adjustable against the pintle to prevent rotation of such pintle in the post, and headed screws in the respective posts whereby such posts are respectively attached to the stationary frame and to the respective mirror-frames, and nuts on the pintle whereby the posts may be forced laterally into close contact with adjacent posts; substantially as described.

4. The combination of posts provided, re-

spectively with a laterally - extending hole therethrough and with a longitudinally-extending screw-threaded hole from one end of the post to and communicating with the laterally-extending hole, a pintle to fit the laterally-extending holes in the posts, means to lock the pintle to one of the posts, and screws extending longitudinally into the posts, with means to bring adjacent posts into close contact; substantially as described.

Signed at Chicago, Illinois, this 13th day of May, 1901.

HARRY A. SEYMOUR.

In presence of—

CHARLES TURNER BROWN,
JACOB LOWENTHAL.