

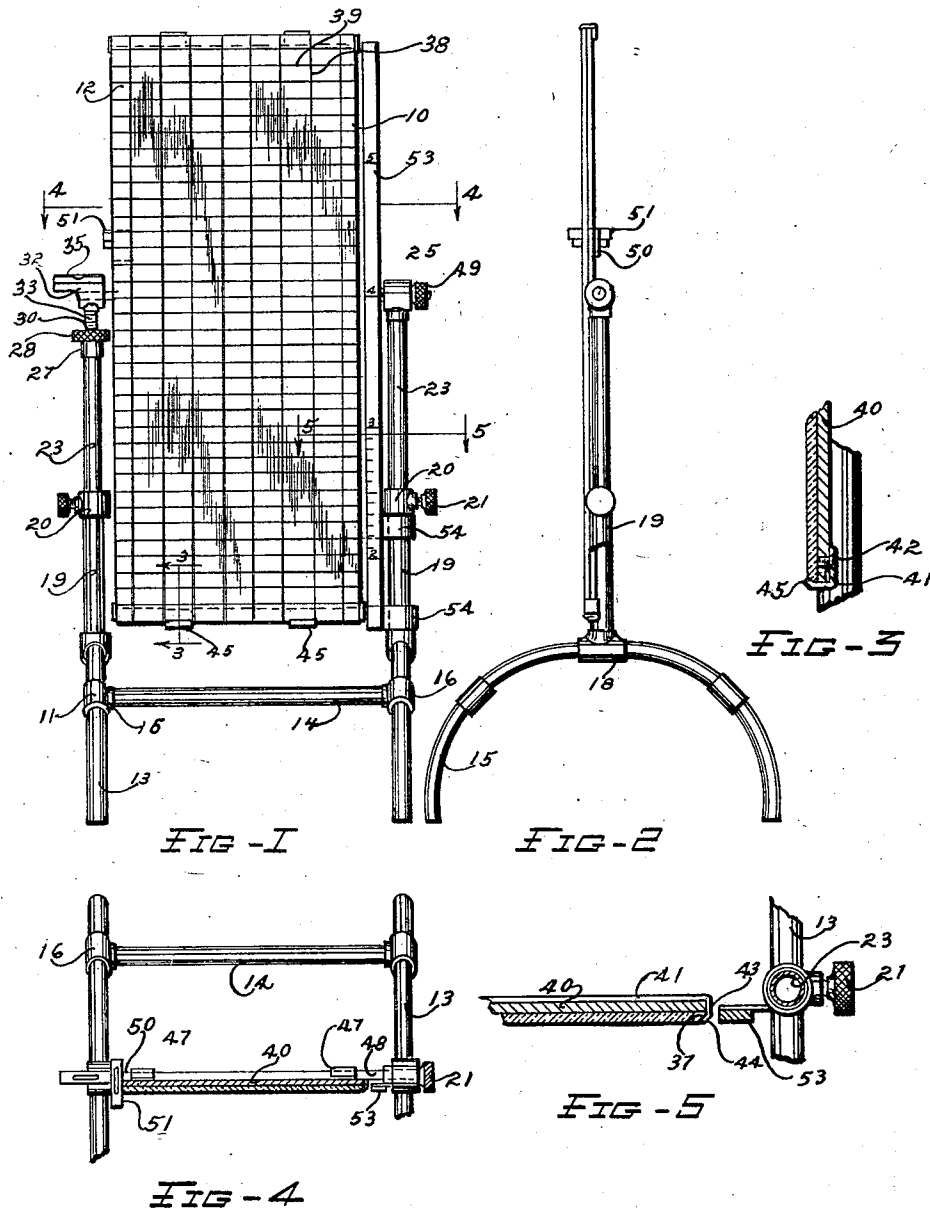
Nov. 17, 1931.

H. G. SCHRADER

1,832,248

MIRROR

Filed June 18, 1929



Inventor
Henry G. Schrader

By

Clarence S. Walker

His Attorney

UNITED STATES PATENT OFFICE

HENRY G. SCHRADER, OF FALCONER, NEW YORK

MIRROR

Application filed June 18, 1929. Serial No. 371,388.

This invention relates to an improvement in mirrors and more particularly to a mirror for the detection of error in the posture of individuals.

5 In its preferred embodiment this device consists of a mirror of determined height and breadth having graduations indicated or impressed on the face thereof and through the use of which an individual may detect any error in posture and at the same time perceive how to correct such error.

10 Prior to this invention no definite attempt has been made to produce a device through the use of which children or other individuals might readily perceive, with a view to correcting, errors in posture. The average individual is prone to continue from day to day without due regard for correctness of carriage and, with the exception of occasional suggestions by either a doctor or physical instructor, he is little, or if at all, aware of the fact that gradually and through carelessness he is growing into a slight deformity of one kind or other. Tipped heads, drooping shoulders, body twists and other errors in posture, however slight, are exceedingly injurious and with children often develop and grow to assume proportions out of all contemplated reason. In the following specification, applicant discloses a mirror of a determined height and breadth having graduations both vertical and horizontal in the face thereof and by means of which the reflected image of the individual clearly indicates whether or not such individual holds himself correctly.

15 The principal object of this invention therefore is to provide a graduated mirror by means of which individuals may observe and appreciate errors in posture and determine how to correct them.

20 Another object of this invention is to provide a device of this type which is adjustable to accurately determine in inches or other forms of measurement the extent of which an individual's posture is in error.

25 Other and further objects of this invention will be apparent from a consideration of the following specification when taken in con-

junction with the accompanying drawings which form a part thereof; and in which

Fig. 1 is a front elevation of one modification of this invention;

Fig. 2 is a side elevation of the structure shown in Figure 1;

Fig. 3 is a fragmentary vertical sectional view taken substantially on the line 3—3 of Figure 1 and discloses means for supporting the mirror;

Fig. 4 is a horizontal sectional view taken on the line 4—4 of Figure 1 and discloses the pivotal support for the mirror; and

Fig. 5 is a fragmentary sectional view taken on the line 5—5 of Figure 1 and shows the relation between one of the supporting posts and the mirror.

Referring to the drawings this invention is generally indicated by the reference numeral 10 and is comprised of a frame 11 and mirror 12. The frame 11 consists of base members 13 suitably joined together and supported in spaced relation to each other by means of cross supports 14. In the present embodiment the frame is shown formed from suitably shaped sections of pipe joined together by unions 16. It is to be understood, however, that applicant contemplates producing this frame from other materials in slightly varying forms as may be consistent with the particular location and use of the device. The base members 13 are formed from a plurality of sections 15. The unions 16 are formed to receive the end of sections 15 and accommodate the ends of the supports 14. Centrally of the base members 13 and fitted into enlarged unions 18 are uprights or hollow posts 19. The posts 19 terminate in collars 20 upon which are mounted set screws 21. A telescoping post 23 is mounted within each of the posts 19 and adjustably secured by means of the set screw 21. One of the posts 23 terminates in a collar 27 fitted thereon in a manner such as to permit rotation thereof. The collar 27 is knurled as at 28 to facilitate ready rotation thereof and is formed with a centrally located opening 30 therethrough, said opening being threaded to receive the shaft 33 of the pivotal support 32. The support 32 corresponds to the housing 25 in that

it accommodates the rods which support the mirror. The upper portion of the support 32 is fitted to provide a spirit level for a purpose which will be later brought out. The shaft 33 of the support 32 is at all time in threaded engagement with the collar 27 and when said collar is rotated in one direction or another the shaft 33 is moved into or out of said collar.

The mirror 12 is preferably formed from the best grade plate glass obtainable and terminates upon its edges in a slight bevel 37. Prior to silvering, the mirror glass is ground or otherwise suitably provided with vertical graduations 38 and horizontal graduations 39. In the present embodiment, the vertical graduations 38 are three inches apart and the horizontal graduations 39 one and one-half inches apart. It is obvious, however, that the spacing of the graduations 38 and 39 may be differently arranged according to the particular use to which the mirror is put as, for instance, in determining any incorrectness in the posture of a small child, the graduations of necessity must be closer together, whereas, in determining the errors of a grown person, the graduations could remain substantially as they are shown in the drawings. When the graduations have been placed upon the rear face of the mirror, said mirror is silvered and a suitable backing 40 is placed thereagainst to protect the silvered surface. The backing 40 is held in place against the mirror by straps 41 which are secured by screws 42. The straps are preferably horizontally arranged along the backing and are formed with flanges 43, the ends 44 of which are bent to engage the beveled surface 37 of the mirror. It is contemplated that should the mirror be of such proportions that the straps 41 would not successfully support said mirror, the glass could be drilled and screws used to secure the backing 40 upon the mirror. The lowermost strap 41 is formed with two or more depending flanges 45 which engage the under beveled edge of said mirror.

Supported by straps 47, which in turn are secured in any suitable manner to the center horizontal strap 41, are pivot members 48 which extend beyond the vertical confines of said mirror and enter on the one side the housing 25 and on the other the support 32. A lock nut 49 is provided in the housing 25 tightening of which prevents any pivoting of the mirror.

The spirit level 35, formed in the upper part of the support 32, is provided to determine whether or not the mirror is vertically aligned. If it is found through the spirit level that the mirror tips slightly to the left, the collar 27 is rotated causing the shaft 30 to be extended, thus raising the pivot 32 and vertically aligning said mirror. While it is true that a certain amount of adjustment may be had by adjusting the telescoping posts 23,

it has been found that this adjustment is not sufficiently accurate. Above the spirit level 35, and secured to the backing 40, is a bracket 50 upon which is formed a second spirit level 51. The level 51 is mounted to move with the mirror and determines the vertical alignment thereof in a manner at right angles to that of the spirit level 35. While the graduations 38 may be absolutely vertically adjusted, the mirror might be tipped forwardly or backwardly thus causing the horizontal graduations 39 to render inaccurate dimensions. In connection with the spirit level 51, it is contemplated to provide a chart which will indicate that upon tipping the mirror to a certain angle, registered by the spirit level, the individual, whose image is to be reflected, will know he is required to stand a given distance from said mirror in order that it may accurately register the reflection.

A further aid in determining the extent of error in posture is made possible through the use of a rule 53 mounted adjacent one vertical edge of the mirror. This rule is secured by brackets 54 to the post 19 and is arranged to measure the distance from the floor to the top of the mirror which, as shown in the drawings, is approximately six feet. Whether the mirror 12 be raised or lowered, so long as one of the horizontal graduations 39 is in line with one of the inch or foot graduations of the rule 53, it is possible to very quickly calculate the extent of error in posture of an individual standing before the mirror.

Although applicant has shown and described but one modification of this invention, it is not intended that he be limited thereto, since other modifications or adaptations may be made without departing from the spirit and scope of this invention as set forth in the hereunto annexed claims.

Having thus set forth my invention what I claim as new and for which I desire protection by Letters Patent is:

1. A device for the detection of errors in posture comprising a frame having upstanding hollow members, posts telescopically engaging said members, a mirror pivotally mounted on said posts, means forming one of said mirror pivots adapted to indicate vertical alignment of said mirror and further means formed in said mirror for defining the extent of posture error.

2. A device for the detection of errors in posture comprising a frame having hollow upstanding members, posts engaging said members, set screws adjustably securing said posts in said members, a mirror, means pivotally joining said mirror to said posts, and vertical and horizontal lines formed in and distinguishable from the face of said mirror, said lines defining the extent of posture error.

3. A device for the detection of errors in posture comprising a frame, adjustable posts telescopically engaging said frame, a mirror,

backing secured to said mirror, pivot members mounted on said backing and engaged with said posts, one of said pivots being formed to provide micrometer adjustment to vertically align said mirror, and means
5 formed in said mirror distinguishable from the face thereof to measure the extent of posture error.

4. In a device for the detection of errors in posture, a mirror, backing secured to said
10 mirror, pivot members secured to said backing, supports engaging said pivot members, a horizontally disposed spirit level forming part of one of said posts, horizontal and vertical graduations formed in and distinguish-
15 able from the face of said mirror whereby to define the extent of posture error.

5. In a device for the detection of errors in posture, a frame, a mirror pivotally supported on said frame, horizontal and vertical
20 intersecting lines formed in and distinguishable from the face of said mirror, a measurement indicator mounted on said frame, said horizontal graduations being adapted to correspond to certain of the graduations on said
25 indicator whereby to understand and determine the extent of posture error.

6. A device for the detection of errors in posture comprising a frame having hollow
30 upstanding members, posts telescopically engaging said members, set screws adjustably securing said posts in said members, a mirror, backing secured to said mirror, pivot members mounted on said backing and supported
35 in said posts, vertical and horizontal intersecting lines formed in and distinguishable from the face of said mirror, said line defining the extent of posture error.

7. A device for the detection of errors in
40 posture comprising a frame having hollow upstanding members, posts telescopically engaging said members, set screws adjustably securing said posts in said members, a mirror, a threaded shaft and collar mounted on one
45 of said posts and adapted to vertically align said mirror, backing secured to said mirror, pivots supported on said backing and engaged with said posts, vertical and horizontal intersecting lines formed in and distinguish-
50 able from the face of said mirror, a measurement indicator mounted on said frame parallel with the vertical edge of said mirror, said horizontal graduations being adapted to correspond with the graduations of said indi-
55 cator whereby to determine the extent of posture error.

In testimony whereof I have affixed my signature.

HENRY G. SCHRADER.