July 13, 1943. J. C. SUTTON 2,324,334

PERSONAL HEIGHT GAUGE

Filed Nov. 26, 1941

Fig. 2

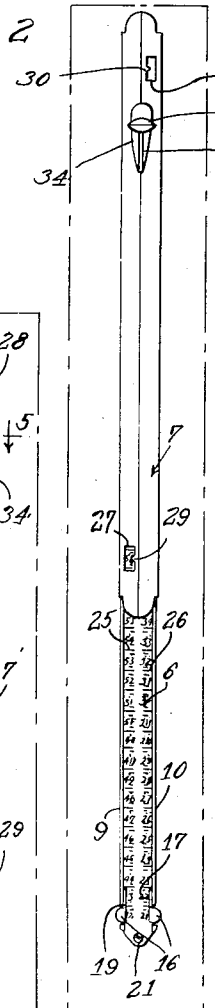


Fig. 4

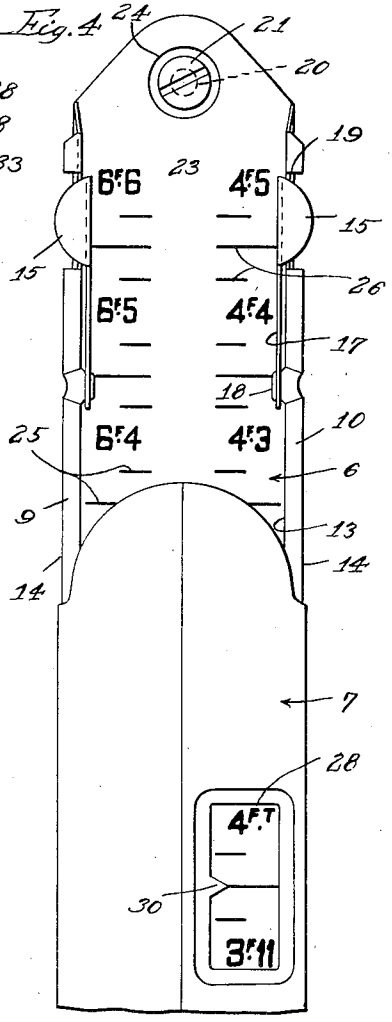


Fig. 3

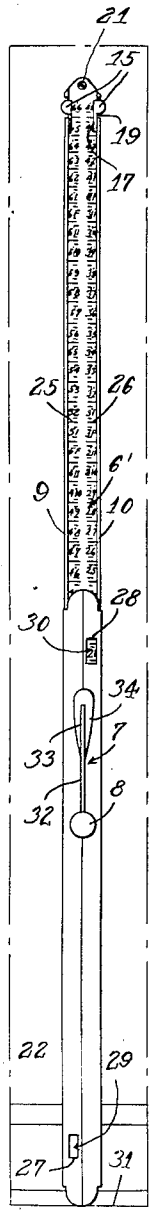


Fig. 1

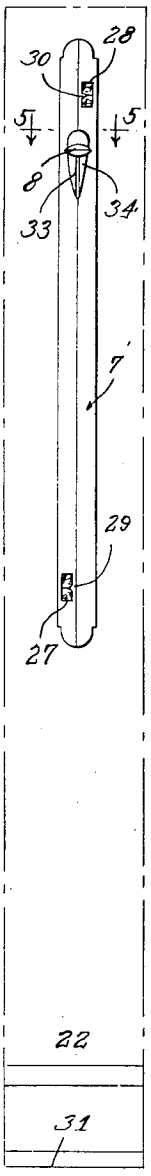
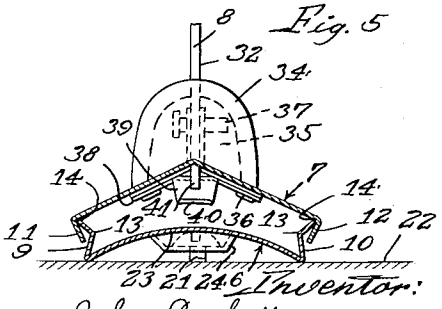


Fig. 5



Inventor:
John C. Sutton
By McCanna, Wintercorn & Morsbach
Attys.

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2,324,334

PERSONAL HEIGHT GAUGE

John C. Sutton, Rockford, Ill., assignor to The Brearley Company, Rockford, Ill., a corporation of Illinois

Application November 26, 1941, Serial No. 420,447

8 Claims. (Cl. 33—169)

This invention relates to a new and improved personal height gauge especially designed and adapted for use in the home but, of course, suitable for use elsewhere.

The principal object of my invention is to provide a height gauge which can be attached conveniently to the wall, or to a door, or door frame, and which when not in use is not too bulky and conspicuous but presents a neat and attractive appearance.

A salient feature of the present invention consists in the provision of a stationary graduated support of elongated form on which a cover carrying the extensible feeler for contact with the top of the head of the person being measured is slidable up or down, the cover having window openings in the opposite ends thereof with pointers for reading directly the indicated height in feet and inches, the window in the upper end serving for reading the heights from say 2 ft. 1 in. to 4 ft. 5 in., and the window in the lower end serving for reading heights from say 4 ft. 2 in. upwards to 6 ft. 6 in.

Another important object of the invention consists in the provision of a gauge of the kind mentioned made substantially entirely of light gauge sheet metal for economy and durability.

Still another object consists in the provision of a gauge constructed in the manner described including spring pressed friction detent members on the opposite ends of the support for engagement with the cover to hold the cover in adjusted position.

The invention is illustrated in the accompanying drawing, in which—

Fig. 1 is a front view of the gauge of my invention shown applied to a wall ready for use;

Fig. 2 is a similar view showing the cover in an adjusted position;

Fig. 3 is still another view similar to Figs. 1 and 2 illustrating the mode of installation, the feeler being shown folded in this view;

Fig. 4 is a full size view of the upper end portion of the gauge with the cover slid downwardly a short distance so as to disclose the support, and

Fig. 5 is a section on the line 5—5 of Fig. 1 on the same scale as Fig. 4.

The same reference numerals are applied to corresponding parts throughout the views.

The gauge comprises an elongated support 6 of one-piece, stamped, sheet metal construction and a cooperating slidable cover 7 of one-piece, stamped, sheet metal construction, carrying a feeler 8 foldable from an operative position extending substantially horizontally from the cover, as shown in Figs. 1 and 2, to an inoperative substantially vertical position alongside the cover, as shown in Fig. 3. The support 6 is generally channel-shaped in section, as clearly appears in Fig. 5, so as to provide longitudinally extending flanges 9 and 10 on which the generally channel-shaped cover 7 is slidably supported, the longitudinally extending flanges 11 and 12 on the cover having a telescoping fit on the outside of the flanges 9 and 10, as shown in Fig. 5, and being directed inwardly toward one another sufficiently to retain the cover against outward displacement from the support. The flanges 9 and 10 are bent inwardly to V-shaped section, as indicated at 13, to provide ample clearance for the free edge portions 11 and 12 of the cover, and in that way the cover has contact with the support only on the outer edges 14 of the flanges 9 and 10, these edge portions engaging the cover alongside the flanges 11 and 12, as clearly appears in Fig. 5. There is, therefore, minimum friction drag imposed on the sliding movement of the cover. On the other hand, the cover is not free to drift by gravity from an adjusted position by reason of the fact that spring pressed friction detents 15 and 16 are provided on the upper and lower ends of the support 6 for sliding engagement with the flanges 11 and 12 of the cover 7 to hold it releasably in adjusted position. When the cover is slid downwardly, as in Fig. 4, only the lower detents 16 are effective, and when the cover is slid upwardly, as in Fig. 2, only the detents 15 are effective, but when the cover is in an intermediate position, as shown in Fig. 1, as it is usually left when the gauge is not in use, both pairs of detents have engagement with the cover to hold it in place. The detents 15 and 16 are in the form of outwardly projecting ears provided on the free ends of leaf springs 17 riveted to the inner side of the flanges 9 and 10 of the support 6, as indicated at 18. The flanges are cut away, as indicated at 19, for projection of the ears 15 and 16 outwardly beyond the edges 14 of the flanges, as appears in Figs. 2, 3, and 4, so that the leaf springs 17 are deflected inwardly when the cover 7 slides over the rounded ears 15 and 16. These detent ears are thereby rendered effective to exert sufficient drag upon the movement of the cover to hold it securely in adjusted position.

The support 6 has holes 20 provided in the opposite ends thereof on the longitudinal center line of the support to receive screws 21 for fastening the same to a wall, as indicated at 22 in Fig. 3, or to a door, or door frame, or any other

suitable support. Due to the arched form of the web 23 of the support 6, indicated in Fig. 3, the screws 21 when tightened will spread the support 6 to a certain extent and accordingly flex the flanges 9 and 10 to grip the cover 7 more securely. If the cover 7 slides too freely on the support, despite the friction drag imposed by the detents 15 and 16, that difficulty can be remedied by tightening the screws 21. The holes 20 are provided in depressed portions 24 which, as indicated in Fig. 5, are normally in spaced relation to the wall 22 so as to allow for a predetermined range of tightening of the screws. There is, therefore, no danger of a gauge failing to function properly due to some slight irregularity of the production of the cover or support, because if the support happens to be slightly undersize, it can be spread enough to give the desired operation.

The support has two rows of graduations 25 and 26 paralleling the flanges 9 and 10, respectively. All of these graduations are in inches, half inches, and quarter inches, the graduations 25 being from 4 ft. 2 in. to 6 ft. 6 in., and the graduations 26 from 2 ft. 1 in. to 4 ft. 5 in. Two windows 27 and 28 are provided in the cover 7 near the opposite ends thereof for viewing the graduations 25 and 26, respectively, and there are pointer projections 29 and 30 in these two windows to indicate the height of the person being measured. For example, in Fig. 4 the pointer 30 indicates 3 ft. 11½ in. In fastening the gauge to the wall or other support, the support 6 must of course be located at the correct height in relation to the floor 31. That is accomplished very easily with the gauge of my invention by specifying in the directions for attaching the gauge to the wall that the cover 7 should be slid down until it reads 2 ft. 1 in.; then with the lower end of the cover resting on the floor 31 next to the wall 22, as shown in Fig. 3, the upper end of the support 6 should be fastened by means of a screw 21 in order to fix the cover at the correct elevation, and after that the cover should be slid up to uncover the screw hole in the lower end of the support 6 and another screw 21 should then be entered through that hole to complete the fastening of the support to the wall. When the gauge is so attached, it will indicate the correct height of a person when the feeler 8 is brought into contact with the top of the head of the person being measured. In measuring youngsters from 2 ft. 1 in. height upwards, the height is indicated in the window 28 by the pointer 30 on the graduations 26. In measuring others of a height upwards from 4 ft. 5 in., the height is indicated in the window 27 by the pointer 29 on the graduations 25. It is clear from inspection of Fig. 4 that one can read the height measurement directly through the window 27 or 28, as the case may be; there is no problem of converting so many inches to so many feet or making a certain addition or subtraction from the indicated measurement to determine the actual height, all of which calculations are quite apt to result in errors.

The feeler 8 has an arm 32 projecting through a slot 33 in a base 34 of ornamental streamline design suitably secured on the cover 7. The base 34 covers the projecting ends of angle plates 35 riveted, as indicated at 35, to the cover 7, and prevents displacement of a pivot pin 37 entered through registering holes in the plates 35 and arm 32 for pivotally mounting the arm on the cover. The rivets 36 also anchor the cross-portion 38 of a T-shaped leaf spring 39, the leg 40 of which has sliding engagement with the inwardly projecting end portion 41 of the arm 32, as clearly appears in Fig. 5, to hold the arm 32 releasably in an extended operative position substantially at right angles to the cover 7. When the feeler 8 is folded, the end 41 of the arm 32 swings away from the leg 40 of the leaf spring 39, thus relieving the spring of tension while nevertheless utilizing the spring to hold the feeler in close contact with the cover in its folded position.

It is believed the foregoing description conveys a good understanding of the objects and advantages of my invention. The appended claims have been drawn to cover all legitimate modifications and adaptations.

I claim:

1. A personal height measuring device comprising, in combination, an elongated support disposed substantially vertically on a wall or other support and having two rows of height graduations vertically arranged thereon, one row of graduations being in a lower height range and the other row of graduations being in a higher height range, and a slidable member on said support slidable vertically with respect thereto up or down with respect to the floor or other support on which the person to be measured will stand and having an outwardly extending feeler for contact with the head of the person being measured, and also having two vertically spaced means movable with the slidable member relative to the graduations to indicate directly the height of the person measured, the lower one of said means cooperating with the higher height range of graduations, and the upper one of said means cooperating with the lower height range of graduations.

2. A personal height measuring device comprising, in combination, an elongated support disposed substantially vertically on a wall or other support and having two substantially parallel and adjacent rows of height graduations vertically arranged thereon, the one row reading upwardly from a low height measurement to an intermediate height measurement and the other row reading upwardly from an intermediate height measurement to a high height measurement, and a slidable member on said support slidable vertically with respect thereto up or down with respect to the floor or other support on which the person to be measured will stand and having an outwardly extending feeler for contact with the head of the person being measured, and also having two vertically spaced means movable with the slidable member on the opposite end portions thereof relative to the graduations to indicate directly the height of the person measured, the lower one of said means cooperating with the higher height range of graduations, and the upper one of said means cooperating with the lower height range of graduations.

3. A personal height measuring device comprising, in combination, an elongated support disposed substantially vertically on a wall or other support and having two substantially parallel and adjacent rows of height graduations vertically arranged thereon, the one row reading upwardly from a low height measurement to an intermediate height measurement and the other row reading upwardly from an intermediate height measurement to a high height measurement, and a slidable cover on said support slid-

able vertically with respect thereto up or down with respect to the floor or other support on which the person to be measured will stand and having an outwardly extending feeler for contact with the head of the person being measured, and also having two vertically spaced windows in the opposite end portions thereof movable with the slidable cover relative to the graduations to indicate directly the height of the person measured, the lower window cooperating with the higher height range of graduations, and the upper window cooperating with the lower height range of graduations.

4. A device of the class described comprising, in combination, an elongated support of channel-shaped cross-section adapted to be mounted on a wall or other support and providing spaced longitudinal flanges on its substantially parallel longitudinal edge portions, a slidable cover having a telescoping fit on the flanges of said support, said support having two rows of height measurement graduations thereon in spaced parallel relation running lengthwise of the support between the flanges, the one row of graduations being in a lower height range and the other row of graduations being in a higher height range, windows provided in the opposite end portions of said cover each in register with one of the rows of graduations, indicator means in conjunction with each window to indicate height measurement when the cover is adjusted endwise to a given position, and a feeler movable with the cover and adapted by engagement with the head of a person being measured to determine the position of adjustment of the cover.

5. A device of the class described comprising, in combination, a one-piece sheet metal support of channel-shaped cross-section adapted to be mounted on a wall or other support and providing spaced longitudinal flanges on its substantially parallel longitudinal edge portions, a slidable cover of one-piece sheet metal construction having spaced longitudinal flanges on its substantially parallel longitudinal edge portions in telescoping relation on the outside of the longitudinal flanges of said support so as to be held against outward displacement from said support, said support having two rows of height measurement graduations thereon in spaced parallel relation running lengthwise of the support between the flanges, the one row of graduations being in a lower height range and the other row of graduations being in a higher height range, windows provided in the opposite end portions of said cover each in register with one of the rows of graduations, indicator means in conjunction with each window to indicate height measurement when the cover is adjusted endwise to a given position, and a feeler movable with the cover and adapted by engagement with the head of a person being measured to determine the position of adjustment of the cover.

6. A device as set forth in claim 5, wherein the support has portions of its longitudinal flanges cut away to provide openings, said device including spring pressed detent means on said support and projecting through said openings for engagement with the flanges on the cover to frictionally resist endwise movement of the cover from adjusted position.

7. A device as set forth in claim 5, wherein the support has the web portion thereof arched transversely so that the support when engaged with the wall or other support has contact therewith along the outer longitudinal edges, the device including attaching means entered through openings provided in said web portion along the longitudinal center line of said support and adapted when tightened to tend to flatten the arch and accordingly spread the longitudinal flanges of the support into closer contact with the flanges of the cover.

8. A device as set forth in claim 5, wherein the support has portions of its longitudinal flanges at opposite ends of the support cut away to provide openings, said device including spring pressed detent means on the opposite ends of said support projecting through said openings for engagement with the flanges on the cover to frictionally resist endwise movement of the cover from adjusted position when extended from either end of the support.

JOHN C. SUTTON.