Aug. 12, 1958 R. L. HOLCOMBE 2,847,057

WALKING AID

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FIG. 3

FIG. 2

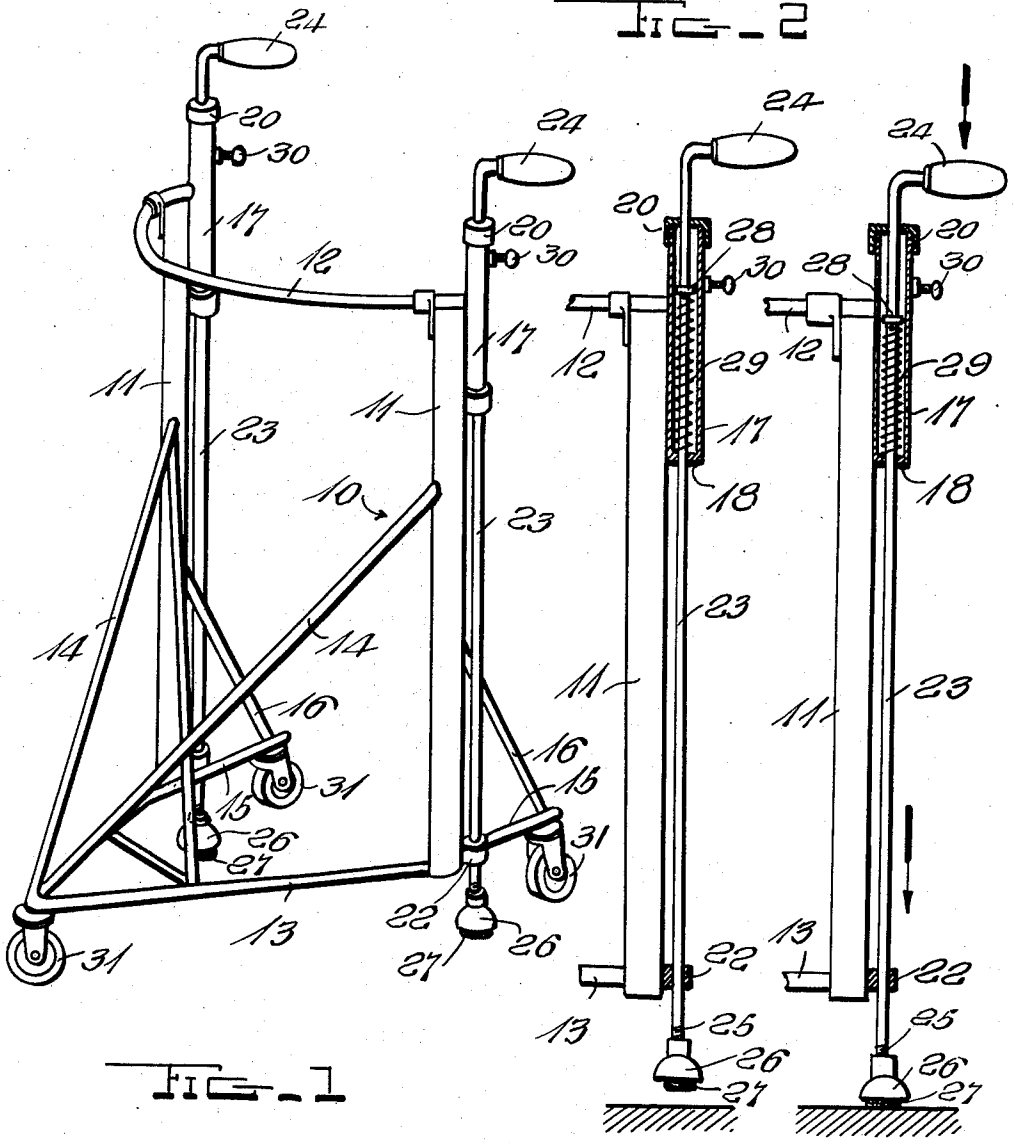


FIG. 1

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FIG. 4

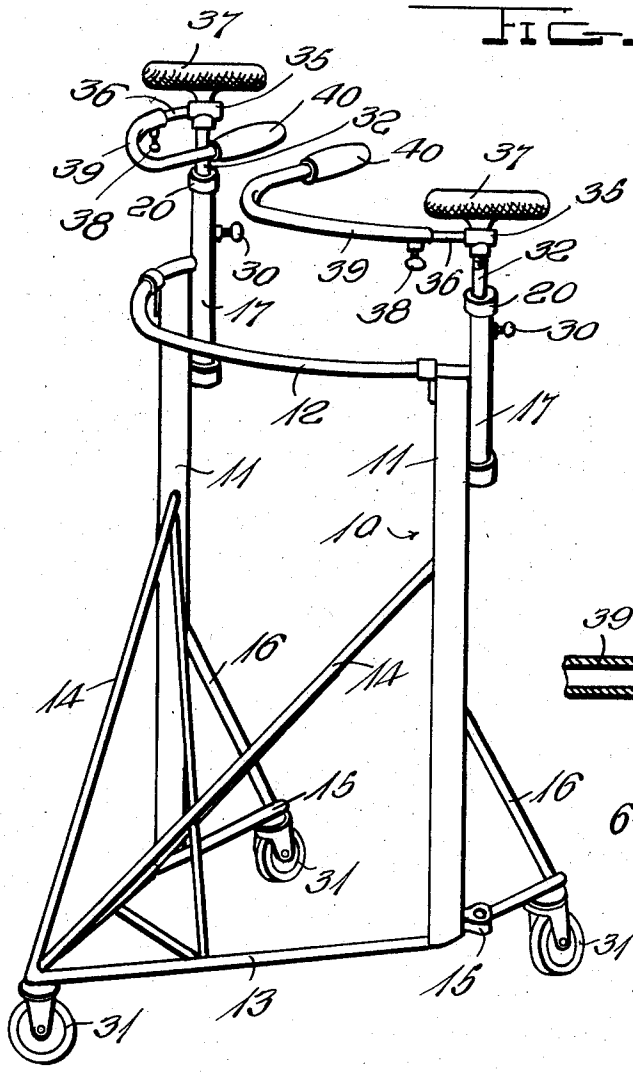


FIG. 5

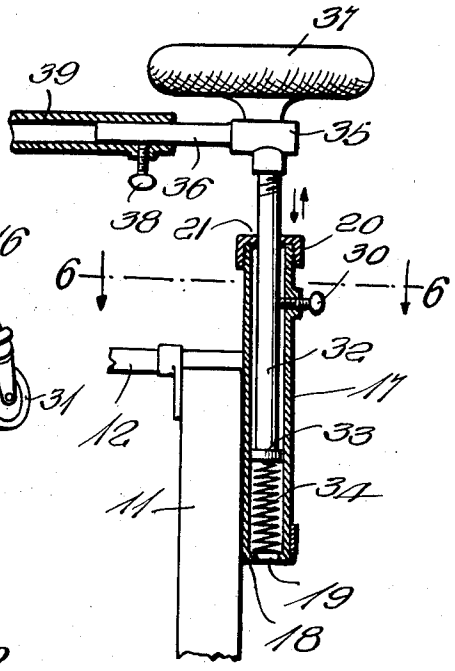
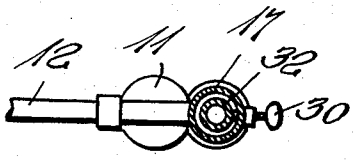


FIG. 6



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WALKING AID

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Application May 3, 1954, Serial No. 427,004

1 Claim. (Cl. 155—22)

The present invention relates to a walking aid and it consists in the combinations, constructions and arrangements of parts herein described and claimed.

Generally there is provided a wheeled device designed to provide assistance in walking to persons who are crippled or weakened for any reason whatsoever and who need physical support while walking or while again learning to walk after illness or injury. The device consists of a light frame supported upon casters or the like and has provided upon each side thereof a vertically extending cylinder through which extends an elongated shaft having a handle at the upper end thereof and a ground-engaging pad or anchor at the lower end thereof. Each of the cylinders contains a very weak spring which is adapted to normally maintain the shaft in such position that the anchor is spaced above the ground but which is of such nature that a slight pressure downwardly upon the handles will cause the anchors to grip the ground. In another form of the invention, a combined handle and elbow support is spring mounted in each of the cylinders and has provisions whereby the same may be locked in any desired position with respect to the frame. The device is such that it provides a psychological answer to the fear psychosis which is always extant in persons of the type referred to above when using crutches or other known devices.

It is accordingly an object of the invention to provide a novel walking aid which is simple in construction, inexpensive to manufacture and yet effective and efficient in use.

Another object of the invention is to provide, in a device of the character set forth, a novel brake or anchor mechanism forming a part of the invention.

Still another object of the invention is to provide a combined hand grip and elbow support member forming a part of the invention.

Other and further objects of the invention will become apparent from a reading of the following specification taken in conjunction with the drawings, in which:

Figure 1 is a perspective view of an embodiment of the invention,

Figure 2 is a fragmentary side elevational view, partly in section, illustrating a combined hand grip and anchor forming a part of the invention and showing the same in disengaged position,

Figure 3 is a view similar to Figure 2 but illustrating the combined hand grip and anchor in ground-engaging position,

Figure 4 is a perspective view of a modified form the invention may assume,

Figure 5 is a fragmentary elevational view, partly in section, and somewhat enlarged, illustrating certain details of the device shown in Figure 4, and

Figure 6 is a sectional view taken along line 6—6 of Figure 5.

Referring more particularly to the drawings, there is shown therein a walking aid of the character set forth comprising a light weight frame generally indicated at

10 and consisting of a pair of spaced vertical standards 11 interconnected at their upper ends by a horizontally disposed forwardly extending arcuate bar 12 and interconnected at their lower ends by a horizontally disposed forwardly extending V-shaped member 13. A pair of angularly extending brace members 14 interconnects the apex portion of the member 13 with each of the standards 11 to provide rigidity to the device. To the lower end of each of the standards 11 is affixed a rearwardly extending arm 15 the rearward end of each of which is connected by a diagonal brace member 16 to its associated standard 11.

Mounted upon the outer side of the upper end portion of each of the standards 11 is a hollow cylinder 17 having a bottom wall 18 provided centrally with an opening 19 and having a removably mounted cap 20 having a central opening 21 therein.

An apertured lug 22 is affixed to the outer side of each of the arms 15 in vertical registry with the cylinder 17 upon that side of the device.

An elongated shaft 23 extends slidably through the cap 20, the opening 19 and the lug 22 upon each side of the device and is provided at its upper end with a rearwardly extending hand grip 24. At the lower end of each of the shafts 23 is removably mounted as by threading 25, a downwardly directed cup 26 having extending from the lower end thereof a block of frictionally engageable material such as rubber or the like, as indicated at 27.

Each of the shafts 23 is provided adjacent its upper end with a collar 28 adapted to normally be positioned within the cylinder 17 and a compression spring 29 surrounds the shaft 23 within the cylinder 17 and bears against the bottom wall 18 at one of its ends and against the collar 28 at the other of its ends. The spring 29 is comparatively very weak so that a downward pressure of from two to four ounces upon the hand grip 24 will cause a downward movement of the shaft 23 against the action of the spring 29 whereby the member 27 may come into engagement with the ground beneath the device. A set screw 30 extends radially through each of the cylinders 17.

In the form of the invention illustrated in Figures 4 to 6, inclusive, the structure is identical with that heretofore described including three supporting casters 31 dependently carried by the apex portion of the member 13 and each of the arms 15 as illustrated. However, in this form of the invention, a relatively short vertical shaft 32 is slidably mounted in the cap 20 and provided at its lower end with a collar 33. A compression spring 34 is mounted in the cylinder 17 and bears against the bottom wall 18 at one of its ends and against the collar 33 at the other of its ends.

The upper end of each of the shafts 32 is threadably affixed to a bracket 35 having a forwardly extending arm 36 affixed thereto and having an elbow-supporting pad 37 mounted atop thereof. Adjustably connected by means of a set screw 38 to the forward end portion of each of the arms 36 is a curvular forwardly extending arm 39 each provided with a rearwardly extending hand grip 40.

In the operation of that form of the invention illustrated in Figures 1 to 3, inclusive, it will be apparent that the patient utilizing the same will normally grip with his hands the hand grips 24 and thus may utilize the device to guide him in walking but without furnishing him with any degree of support. The device in this state will, however, furnish a great psychological aid to the patient since any fear psychosis of falling is overcome due to the knowledge the patient has that in the event that he becomes weakened and needs support he has only to bear downwardly upon

the hand grips **24** thereby causing the brakes or anchors **27** to engage the ground beneath the device to thus hold the same rigid and form a secure supporting structure for him. When the weakness has passed, the downward pressure upon the handles **24** may be released and the patient may then again propel the vehicle forwardly, it being apparent that the very week spring **29** merely supplies sufficient energy to maintain the anchors **27** in spaced relation above the ground in normal use of the device.

If, in a less advanced state of cure, the patient should need some actual physical support while utilizing the device, it is only necessary to tighten the set screws **30** to hold the shafts **23** and consequently the brake members **27** in the position shown, for example, in Figure 2. In this condition, it will be apparent that the patient may place a great amount of his weight upon the hand grips **24** and thus be partially supported by the device as he utilizes the same to assist him in walking.

In the form of the invention illustrated in Figures 4 to 6, inclusive, the shafts **23** and allied mechanisms have been removed from the cylinders **17** and the shafts **32** and their attached devices substituted in lieu thereof. In this form of the invention, it will be apparent that the patient may place his hands upon the hand grips **40** while at the same time supporting his weight upon the elbow-supporting pads **37**. With the set screws **30** loosened, the springs **34** will act as shock absorbers as the device is moved along the ground and will also furnish a spring support for the elbows of the patient making the latter more comfortable. Should the patient desire to lock the supports **37** in any desired position with respect to the frame, it is only necessary to lock the shaft **32** in the cylinder **17** by means of the set screws **30**. In any event, it should be noted

that with this form of the invention the elbows of the patient form the points of contact for the support of the patient's body and since the elbows do not fatigue as rapidly as the underarm areas of the patient, a great advantage is provided over, for example, the ordinary crutch.

While but two forms of the invention have been shown and described herein, it will be readily apparent to those skilled in the art that many minor modifications may be made without departing from the spirit of the invention or the scope of the appended claim.

What is claimed is:

A device of the character described comprising a frame, wheels supporting said frame, a hollow cylinder mounted on each side of said frame, a shaft extending vertically from each of said cylinders and yieldably mounted therein, an elbow-supporting pad affixed to the upper end of each shaft, a forwardly and inwardly extending arm affixed to the upper end portion of each shaft, an integrally formed rearwardly extending portion for each of said arms, and a hand grip mounted upon the rearward end of each of said rearwardly extending portions.

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