Dec. 8, 1959 S. R. DETWILER 2,916,034

POST OPERATIVE ARM SLING

Filed Aug. 4, 1958 2 Sheets-Sheet 1

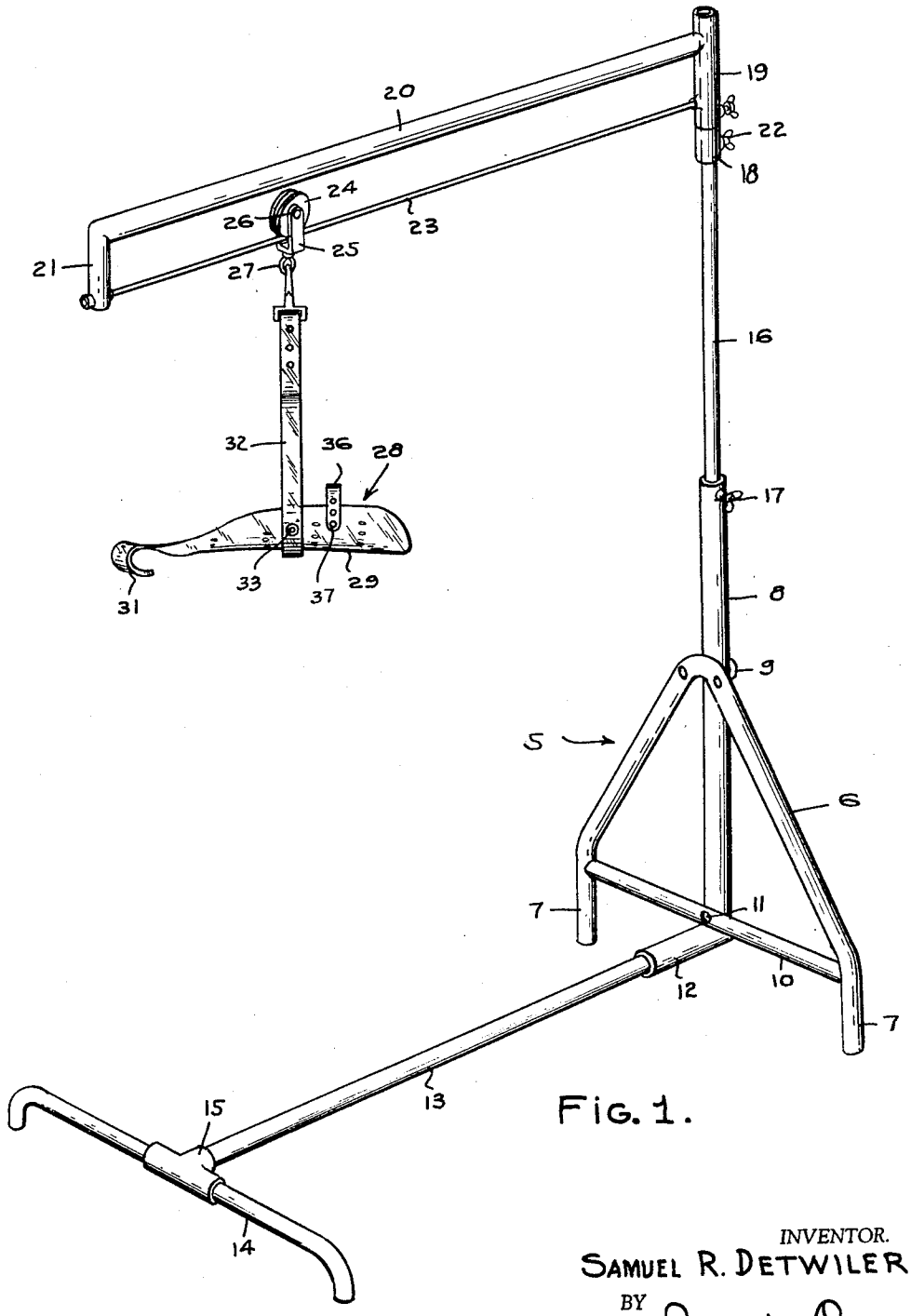


Fig. 1.

INVENTOR.
SAMUEL R. DETWILER,
BY James H. Ryles
ATTORNEY.

Dec. 8, 1959 S. R. DETWILER 2,916,034

POST OPERATIVE ARM SLING

Filed Aug. 4, 1958 2 Sheets-Sheet 2

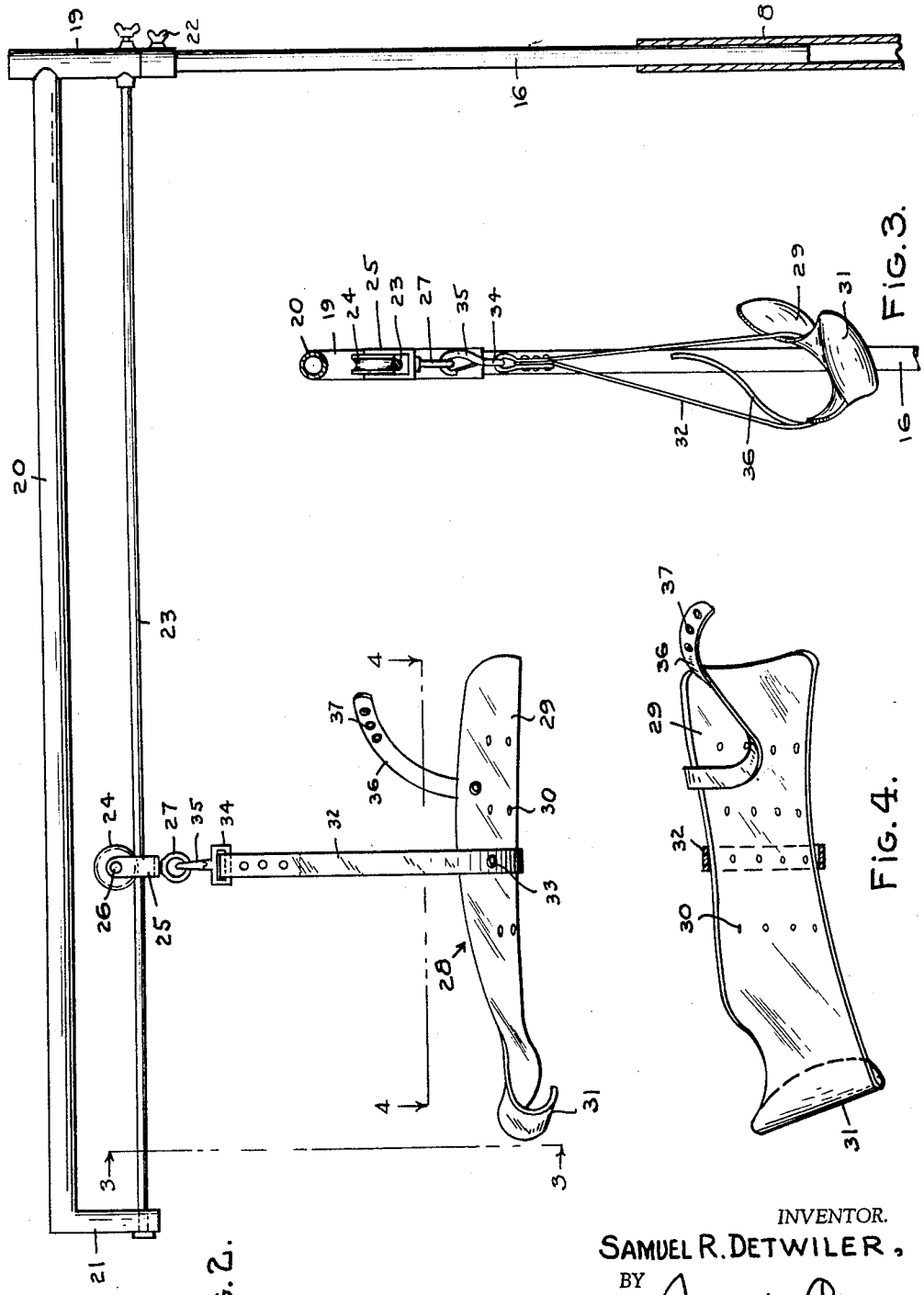


FIG. 2.

FIG. 3.

FIG. 4.

INVENTOR.
SAMUEL R. DETWILER.
BY James H. Ryles
ATTORNEY

United States Patent Office 2,916,034 Patented Dec. 8, 1959

2,916,034

POST OPERATIVE ARM SLING

Samuel R. Detwiler, Fort Lauderdale, Fla.

Application August 4, 1958, Serial No. 752,797

3 Claims. (Cl. 128—94)

This invention relates to a supporting sling for the support of the arm of a patient who has been injured and due to such injury or possibly an operation, requires that the arm be held in an elevated position due to circulatory problems and primarily for home use after breast operations.

It has been difficult and extremely tiring for an individual to support the arm in an elevated position for any considerable length of time either by manually holding the arm elevated or attempting to support it upon an adjacent object and the purpose of this device is to provide a very desirable conforming sling that is adjustable toward and from the patient and that may be elevated to a predetermined height in accordance with the necessary elevation of the arm.

A further object of the invention is to provide a novel form of a sling that is shiftable upon a trackway and with the trackway being carried by a supporting floor frame, whereby the frame may be elevated, shifted in a horizontal arc and with the base portion of the frame being engageable beneath a bed or other device upon which the patient is reclining or sitting.

Novel features of construction and operation of the device will be more clearly apparent during the course of the following description, reference being had to the accompanying drawings, wherein has been illustrated a preferred form of the device and wherein like characters of reference are employed to denote like parts throughout the several figures.

In the drawings:

Figure 1 is a perspective view of a device constructed in accordance with the invention,

Figure 2 is a somewhat enlarged side elevation of an upper frame member and a supporting sling movable thereon,

Figure 3 is a vertical section taken substantially on line 3—3 of Figure 2 and,

Figure 4 is a section taken substantially on line 4—4 of Figure 2.

Referring specifically to the drawings, the numeral 5 designates generally a supporting frame embodying a generally V-shape tubular frame member 6, having spaced apart legs 7. Rigidly connected with the frame member 6 is a vertically arranged tubular standard 8. The standard 8 is connected with the frame 6 in any desirable manner by a clamp 9. The standard 8 is further connected to a cross member 10 of the frame 6 as at 11. The standard 8 at its lower end is shaped to form a tubular horizontal extension 12, receiving one end of a tubular horizontal rail 13, carrying at its forward end a generally U-shape member 14, through the medium of a socket clamp 15. Shiftable vertically in telescopic relation to the standard 8 is an upper tubular standard 16, adjustably fixed with respect to the standard 8 by a set screw 17. Adjustable upon the standard 16, as by a collar 18, is a tubular head 19, carrying a horizontally arranged tubular arm 20, having its outer end bent to a right angle, as at

21. The collar 18 is adjustably connected to the standard 16 by a set screw 22. Connected to the head 19 and the end portion 21 of the arm 20 is a cylindrical horizontal track 23, that is parallel with the arm 20. The head 19 may rotate upon the collar 18 to swing toward and from the individual that will employ the device and with the collar 18 forming a bearing for the head 19.

Shiftable upon the track 23, is a grooved roller 24 carrying a U-shaped suspension bracket 25. The suspension bracket 25 is supported upon the shaft 26 of the roller. The bracket 25 carries a swiveled eye 27, forming the connecting point for a sling device to be described. The roller 24 is preferably formed of nylon due to its inherent wearing qualities without the necessity of lubrication. The frame members previously described are all preferably formed of light weight aluminum, due to its rust and corrosion retarding qualities.

Supported from the roller 24, to be movable along the trackway 23, is a sling device 28. The sling device 28 embodies a shaped cradle 29, conforming generally to the contour of the forward portion of the arm of the user. The cradle 29 is perforated at 30 for ventilating purposes and the cradle terminates forwardly in a rounded hand grip 31 whereby the patient may support the arm within the cradle and grip the same with the hand. The cradle 29 has been formed of a suitable transparent plastic. Connected with the cradle 29 approximately intermediate its length, is a preferably flexible plastic suspension strap 32. The strap 32 is connected with the cradle 29 by snap fasteners 33 that are countersunk upon the inner sides of the cradle. The use of the snap fastener connection with respect to the cradle permits the cradle to be reversed and whereby to accommodate either the right or left arm of the user. The upper ends of the strap 32 are connected with the slotted head 34 of a snap hook 35 and whereby the cradle may be quickly removed for purposes of cleansing, replacement or for storage purposes. It will be apparent of course that the configuration of the cradle will vary in accordance with a particular situation however, the present application of the device is primarily for use as an arm support.

It has been found desirable that means be provided to retain the arm of the user in its resting support with respect to the cradle. For this purpose, there has been provided a flexible strap 36, fixed at one side of the cradle 29 and having an adjustable snap fastener connection 37 with the opposite side of the cradle thus being adjustable to the particular diameter of the arm supported within the cradle.

It will be apparent from the foregoing that a very novel form of sling device has been provided. The structure is simple, economical to manufacture, is strong, durable, easily assembled and disassembled and is highly effective for the purposes indicated.

It is to be understood that the invention is not limited to the precise construction shown, but that changes are contemplated as readily fall within the spirit of the invention as shall be determined by the scope of the subjoined claims.

Having described my invention, what I claim as new and desire to secure by Letters Patent is:

1. A post operative arm support for a person whose arm must be elevated, comprising a base frame that rests upon the floor and that may be shiftable beneath a bed, a perpendicular tubular standard rigidly connected to the base, a second tubular standard telescopic with respect to the first standard to be vertically adjustable, means for holding the standards in adjusted relationship, a tubular head rotatable upon the second standard to swing in a horizontal plane, the head also being vertically adjustable upon the second standard, a horizontal arm car-

ried by the head, a trackway jointly supported by the head and the arm, a grooved roller that traverses the trackway, a flexible suspension device supported from the roller and a cradle forming sling carried by the suspension device for receiving the arm to be supported at an elevation.

2. The structure according to claim 1, wherein the cradle is detachably connected to the suspension device and whereby the cradle may be reversed for use by the right or left arm.

3. The structure according to claim 1, wherein the suspension device is swivelled with respect to the roller, the said cradle being in channel form and shaped to conform to the human arm, one end of the cradle being rolled to form a hand grip, the said suspension device being detachably connected to the cradle by snap fasteners and whereby the cradle may be detached and reversed to accommodate either the right or left arm, and an adjustable strap that is connected to one side of the cradle to overlie the arm of the user to prevent accidental displacement of the arm from the cradle, the strap having snap means that engages companion snap means upon the other side of the cradle, the said cradle being perforated to ventilate the arm supported therein.

References Cited in the file of this patent

UNITED STATES PATENTS

1,479,536	Ferragamo	Jan. 1, 1924
1,821,435	Hamlin	Sept. 1, 1931