May 4, 1954 I. E. PRUSAN 2,677,488

SAFETY HARNESS

Filed May 21, 1953

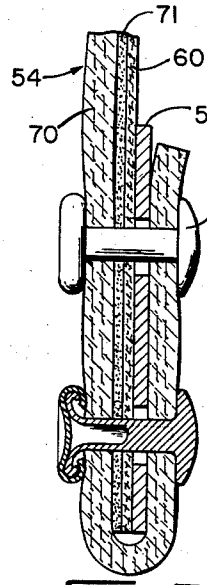


FIG. 2

FIG. 1

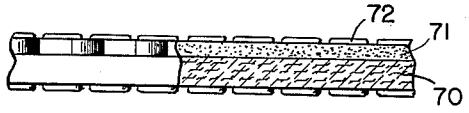


FIG. 3

INVENTOR.

IRVING E. PRUSAN

BY

ATTORNEY

Patented May 4, 1954

2,677,488

UNITED STATES PATENT OFFICE

2,677,488

SAFETY HARNESS

Irving E. Prusan, Brooklyn, N. Y.

Application May 21, 1953, Serial No. 356,386

3 Claims. (Cl. 227—49)

1

This invention relates to safety harnesses for children which will restrain the unlimited movement of the wearer.

It is an object of this invention to provide an improved harness which in normal use cannot be removed or shaken loose by the wearer.

It is another object of this invention to provide a readily adjustable harness of simplified construction which is economical to manufacture.

It is a further object of this invention to provide a comfortable safety harness which can be adjusted and thereafter taken on and off easily without altering the adjustment.

A preferred embodiment of the safety harness of this invention is illustrated in the accompanying drawings wherein,

Figure 1 is a perspective of the improved harness viewed from the front;

Figure 2 is a fragmentary cross-section on line 2—2 of Figure 1;

Figure 3 is an enlarged fragmentary cross-section along line 3—3 of Figure 1.

More specifically, the harness comprises an adjustable belt 50 which girdles the waist of the child. Slidably mounted thereon are loops 51 which carry buckles 52. The front ends of shoulder straps 53 and 54 are adapted to engage these buckles thereby adjusting the effective length of the straps. Shoulder strap 53 extends from its buckle up along the chest and down along the back of the wearer where it is bent under and around one end of the belt 50, and is secured thereto by rivets 55. Shoulder strap 54 extends from the other buckle up the chest and down the back of the child and is bent under and around clasp 56, being secured thereto by rivets 57.

The belt, secured at the back to one shoulder strap by rivets 55, passes around the front of the child and through the two vertical slits in clasp 58. It continues through a vertical slit in clasp 56 (which is secured to the other shoulder strap), passes around the center post of clasp 58 and is secured upon itself by rivet 59. The effective length of the belt can thereby be adjusted readily by threading the belt in either direction through the slots in clasp 58.

Shoulder straps 53 and 54 are attached to each other by means of slide fastener 60 and the entire harness may be put on and taken off without affecting the adjustment and without discomfort to the wearer since it does not pass over the head.

As an additional safeguard to prevent the shoulder straps from moving too far apart and

2

permitting the wearer to slip free of the harness, strap 61 passes horizontally across the chest and is mounted slidably on shoulder straps 53 and 54. Specifically, the ends of strap 61 are bent around the shoulder straps forming loops and these ends are secured to the cross-piece of the strap by rivets 62.

Semicircular loops 63 are slidably mounted on the belt 50, generally near the sides of the wearer. Spring hooks 64 hook onto loops 63 and are in turn engaged by circular loops 65. The perpendicular protrusion from loop 65 engages semicircular ring 66. Strap 67 passes through ring 66 and around the center post of buckle 68 and is secured upon itself by rivet 69. The other end of strap 67 is adapted to engage buckle 68 and form a loop.

Figure 2 illustrates an enlarged cross-sectional view of the means for securing shoulder strap 54 at the back, like numerals having reference to the same part.

Figure 3 illustrates the construction of the belt, which is similar to the construction of the other parts coming in contact with the body of the wearer, viz., the shoulder straps and the horizontal strap. Specifically, the body of the belt 50 is composed of a strip of leather 70. To this strip on its underside there is glued a protruding strip of soft, felt-like backing serrated along its edges 71. This backing serves the dual function of eliminating chafing while the notched edges tend to limit the movement of loops 51 and 63, clasp 58, and horizontal strap 61. To assure that this backing will not separate from the body 71, they are sewn together along each edge 72.

In operation, the slide fastener is opened and the child's arms inserted through the shoulder straps. The slide fastener is closed and the belt 50 and shoulder straps 53 and 54 are adjusted to the proper size. The adult may use either strap 67 or a leash or may secure both such straps to suitable holders on the sides of a crib, carriage or other device.

The belt and straps may be made of leather, plastic, cotton webbing, and other materials of like strength. To provide comfort these may be lined with wool, felt, fleeced cotton and the like. The buckles, clasps, rings, and hooks are preferably made from metals but other materials of like properties may be similarly employed. In place of rivets other securing means such as stitching can be utilized with similar effectiveness. A series of hooks and eyes or mutually engaging hooks can be substituted for the slide

fastener without affecting operation of the invention.

Safety harnesses are relatively inexpensive and even small savings represent substantial decreases percentagewise in the cost of manufacturing. Since fewer pieces are involved in this device than in prior art devices for similar purposes the costs of cutting and assembling are diminished. The belt being of one piece with but a single adjustment, less material is used with no decrease in adjustability or utility. The straps are of minimum length consonant with their general use on children of all sizes. These savings result in a less expensive device which is simpler to operate but which nonetheless has all the advantages of devices considerably more complex.

From the foregoing it will be apparent that the novel safety harness of this invention is one in which the structure comprises a pair of shoulder straps, a belt, secured at one end to the back of one of those shoulder straps, and forming a loop, which loop is engaged by an appropriate member associated with the back of the other of the shoulder straps, the belt having appropriate means that connects the free end of the loop of the belt thereby to provide for changing the length of the belt, the belt also carrying means for adjustably securing the front of the shoulder straps, and the backs of the shoulder straps having means for interengagement to fasten the harness about the body of the wearer.

It will be understood that the foregoing description of the invention and the embodiments set forth are merely illustrative of the principles thereof, and; accordingly, that the appended claims are to be construed as defining the invention within the full spirit and scope thereof.

I claim:

1. A safety harness comprising a pair of shoulder straps, a single piece belt secured at one end to the back of one of said shoulder straps and the other end forming a loop, a pierced projection having a closed slot extending from the back of the other of said shoulder straps, said loop being passed through the closed slot, means for adjustably connecting the free end of said loop to the belt in order to vary the effective length of the belt, said belt carrying means for adjustably securing the front of said shoulder straps, and said shoulder straps carrying fastener elements at the backs thereof for fastening the harness about the body of the wearer.

2. A safety harness comprising a pair of shoulder straps, a single piece belt secured at one end to the back of one of said shoulder straps, the other end of the belt forming a loop, a looped member secured to the back of the other of said shoulder straps, the said looped end of the belt being slidably extended through said looped member, means for adjustably connecting the free end of said loop to the belt in order to vary the effective length of the belt, said belt carrying a pair of buckle-bearing slidable loops adapted to engage the front ends of said shoulder straps, and a pair of slidable loops adapted to be hooked to range limiting elements, a horizontal strap slidably mounted at its ends on each shoulder strap, and fastener means a part thereof carried at the back of each shoulder strap.

3. A safety harness comprising a single piece belt of adjustable length, a pair of shoulder straps extending from the back of the harness to the front thereof, one end of the belt being fastened to the back of one of the shoulder straps and the other end of the belt forming a loop adjustable on the back of the harness, and a member secured to the back of the other of said shoulder straps and slidably engaging said belt loop.

References Cited in the file of this patent

UNITED STATES PATENTS

Number	Name	Date
1,288,170	Pick	Dec. 17, 1918
1,816,262	Ritter	July 28, 1931
2,132,556	Blackshaw	Oct. 11, 1938
2,233,397	Bloom	Mar. 4, 1941
2,563,766	Weinstein et al.	Aug. 7, 1951