Oct. 18, 1966 S. N. FEINBERG ETAL 3,279,549

INFANT CONTAINMENT SAFETY ATTACHMENT FOR SCALE WEIGH PAN

Filed Dec. 22, 1964

2 Sheets-Sheet 1

FIG. 1

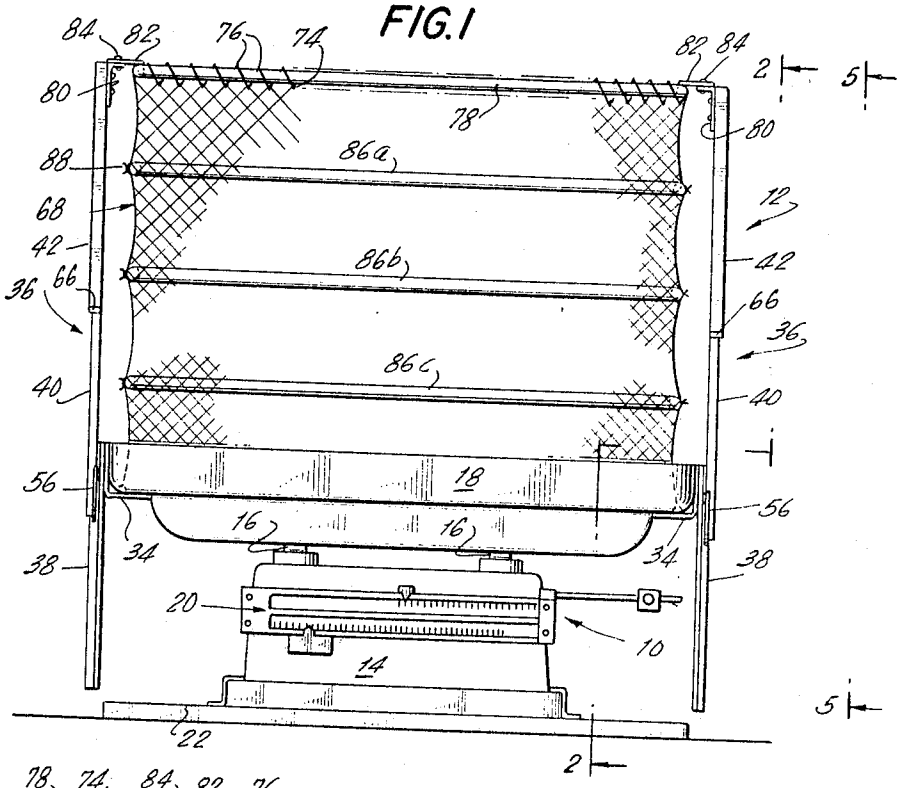



FIG. 2

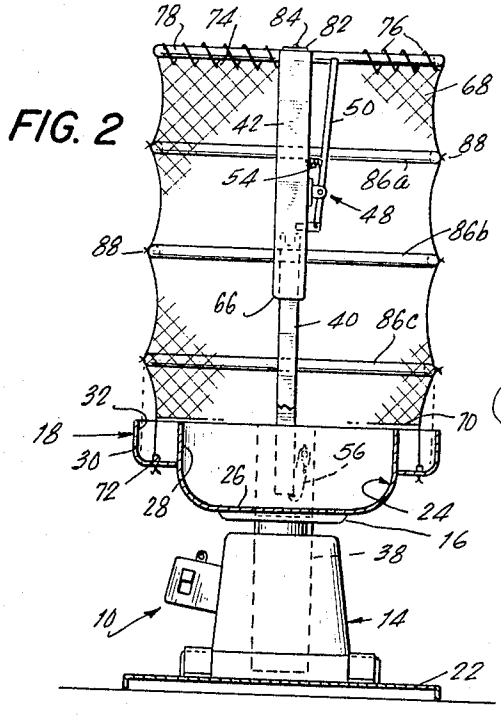



FIG. 4

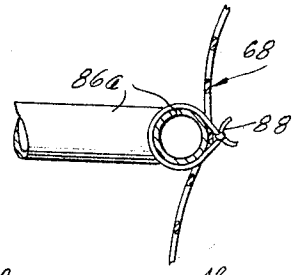
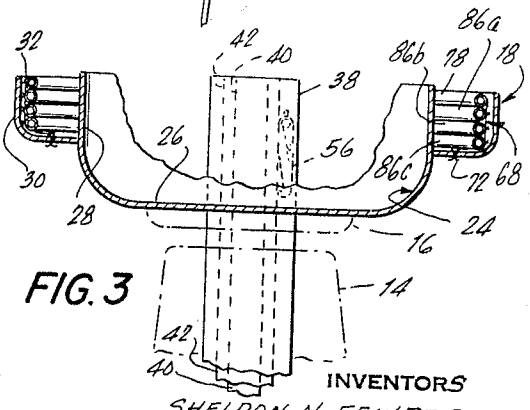



FIG. 3




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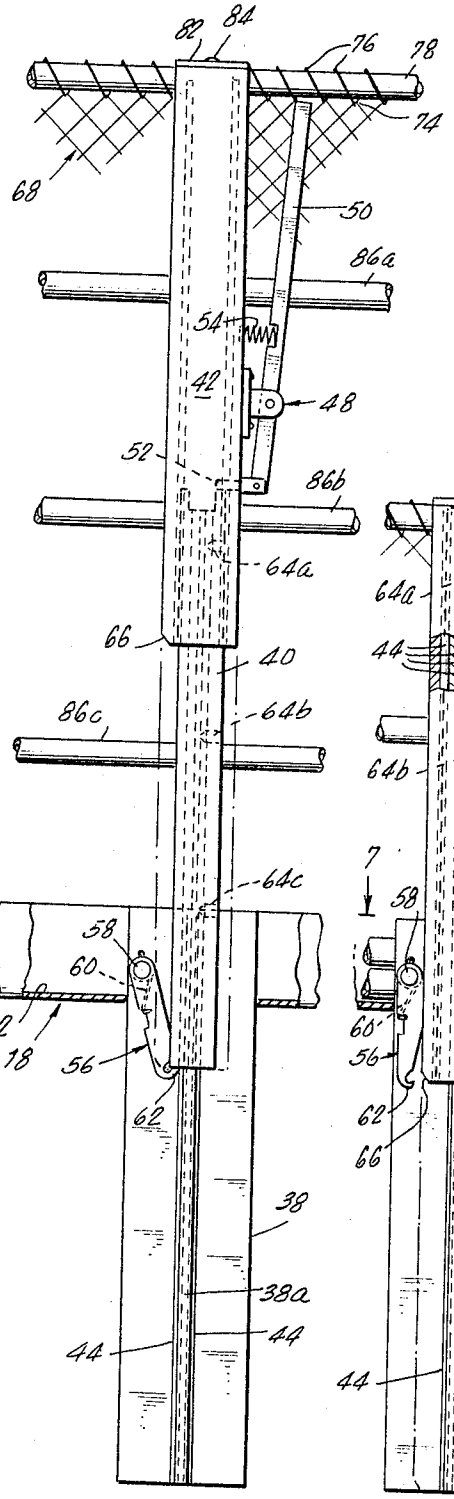
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FIG. 5



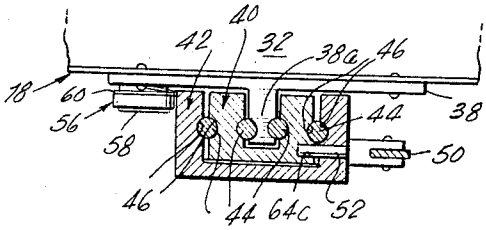




FIG. 7

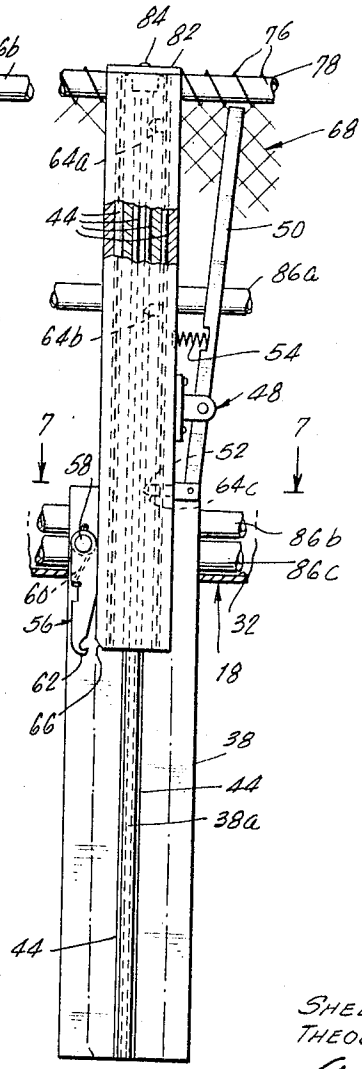



FIG. 6

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United States Patent Office

3,279,549

Patented Oct. 18, 1966



3,279,549

# INFANT CONTAINMENT SAFETY ATTACHMENT FOR SCALE WEIGH PAN

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Filed Dec. 22, 1964, Ser. No. 420,392
5 Claims. (Cl. 177—126)

The present invention generally relates to a safety device intended primarily as an attachment to an infant's scale, and more particularly relates to certain features of construction of such a safety device attachment which readily permits use thereof with said scale or with another similar piece of equipment used with infants, and which renders said device safe and effective for such a specialized use.

There is a recognized need for improvements in equipment used for infants, such as for example a safety barrier or similarly functioning device that can be attached to an infant's scale to protect an infant from falling from said scale. Ideally, the safety device attachment should have several operable positions, in one position of which it is completely out of view as well as out of the way, in another position of which it can adequately protect an infant in a standing position on said scale, and in still another position of which it can adequately protect an infant in a less precarious position such as when sitting on said scale. As well as having this degree of flexibility, the safety device should also essentially be non-rigid so that while functioning as a protective barrier there is no likelihood of the infant sustaining any injury due to accidental falling against the said device, and yet said device must have sufficient rigidity or body to properly function as a barrier.

Broadly it is an object of the present invention to provide a safety device which is adapted to be readily attached or otherwise operatively incorporated with an infant's scale or another similar piece of equipment used for infants such as an examining table or the like. Specifically, it is an object to provide such a safety device attachment having features of construction for adequately functioning as a barrier to protect the infant from falling from the scale or examining surface and which also is entirely safe in this specialized use and environment.

A further object is to provide a safety device attachment of essentially non-rigid construction which uses a net or the like as a protective barrier, and which has structure associated with said net or non-rigid barrier rendering the same easy to manage as for example during fold-up thereof preparatory to storage and also during unfolding thereof preparatory to use.

A safety device attachment demonstrating features of the present invention is preferably comprised of a generally tubular open-ended net or other such foldable and flexible guard. Assuming use with an infant's scale, said net is anchored at one end about the periphery of the weighing pan of said scale and at its other end is connected to a rectangular member mounted on expandable supports. Thus, expansion of said supports away from the scale is effective to open the net and cause the same to function as a protective barrier about the scale to effectively prevent an infant from falling from the scale. At regular spaced intervals along the body of the tubular net there are additional rectangular members attached to said net to maintain its tubular shape. These members are also effective to neatly carry the net into a storage compartment when said members are lowered into said storage compartment by contraction of said supports. During expansion of said supports said members are equally effective to neatly control the unfolding of the net from said storage compartment.



The above brief description, as well as further objects, features and advantages of the present invention, will be more fully appreciated by reference to the following detailed description of a presently preferred, but nonetheless illustrative embodiment in accordance with the present invention, when taken in conjunction with the accompanying drawings, wherein:

FIG. 1 is a front elevational view of a safety device demonstrating features of the present invention attached to a typical infant's scale;

FIG. 2 is a side elevation, in section, taken on line 2—2 of FIG. 1;

FIG. 3 is a detailed elevational view, partly broken away and on an enlarged scale, of said safety device in a stored condition about said scale;

FIG. 4 is similarly an enlarged detailed view, in section, which best illustrates an acceptable way of connecting certain rods to the net of said safety device;

FIGS. 5 and 6 are detailed, enlarged elevational views of the support structure of said safety device in its different positions of movement, to wit:

FIG. 5 illustrates said support structure in a fully extended or open position;

FIG. 6 illustrates an intermediate extended or open position thereof; and

FIG. 7 is an enlarged plan view of said supporting structure, in section, taken on lines 7—7 of FIG. 6.

Having reference now particularly to FIGS. 1–4 of the drawings, there is shown therein an infant's scale **10** to which there is suitably attached a safety device demonstrating features of the present invention, and generally designated **12**. The safety device **12** is not limited to use solely with the typical portable infant's scale **10** which is illustrated, but may also be used, for example, in conjunction with an infant's examining table or the like. More particularly, the contemplated use herein is with any item presenting a surface on which an infant is normally placed and in connection with which said safety device **12** may be used to advantage to protect the infant by preventing said infant from falling off of said surface. By a comparison of FIGS. 1, 3, it can be more particularly seen that said safety device **12** may be stored in a closed position about the scale **10** as is more particularly illustrated in FIG. 3, or that said safety device may be placed in a fully extended or open position as is more particularly illustrated in FIG. 1. In said FIG. 1 position it is further readily seen that the safety device **12** functions as an extension of the scale **10** or as a protective barrier for the same, and is effective to thereby prevent an infant placed on said scale from accidentally falling therefrom.

As best shown in FIGS. 1 and 2, the scale **10** includes a housing **14** enclosing what will be understood to be usual weighing mechanisms provided with rod extensions **16** connected to a typical weighing pan **18**. The scale **10** functions in a manner which is well understood to register the weight of an infant placed in the pan **18** on a visual indicator including a movable pointer and herein collectively designated **20**. Stabilizing the scale **10** against tipping or the like is a wide base-plate **22** appropriately connected to the base of the housing **14**.

The weighing pan **18** includes a main, generally U-shaped body **24** comprised of a flat bottom **26** and having a surrounding cupped annular section providing a wall **28** entirely about said bottom **26**. Suitably connected, as by welding or the like, about the periphery of and along the outside of the wall **28** is a wall configuration **30** which provides a storage compartment **32** for the safety device **12** which is separate and apart from the usual weighing compartment or area on the main body **24** of the pan **18**. In a well understood manner, it is therefore a simple matter for the weight of said safety device **12** and said wall **30** to be balanced out by adjustment of the weighing mechanisms of the scale **10**, just as for example the

weight of the weighing pan **18** is balanced out so that the visual indicator **20** registers only the weight of the infant placed in the pan **18**.

Having reference now specifically to the construction of the safety device **12**, it will be seen that suitably mounted mounted on opposite ends of the wall **30** are L-shaped frame members **34** which in turn each mount an identical expandable supporting mechanism or slide **36**. The structural make-up of each slide **36** is secondary, it being necessary to the present invention only that as supports for the safety device **12** said slides **36** be expandable to provide a fully opened, fully closed, and intermediate position for said device, all as is subsequently explained in greater detail herein. For completeness of the description of the present invention, however, it will be understood that each slide **36** as best shown in FIGS. 5–7 is comprised of three telescoped slide members **38**, **40** and **42** which are moved relative to each other to provide the numerous operating positions for said slides **36**. The lowermost member **38** is preferably T-shaped in cross-section and is the member connected to each frame member **34**. Slidably disposed on the medial leg **38***a* of the member **38** is the intermediate slide member **40** which as clearly illustrated in FIG. 7 is essentially U-shaped in cross-section. The upper slide member **42** is similarly essentially U-shaped in cross-section and is slidably disposed about the intermediate member **40**. Parallel rods **44** are accommodated in bores **46** provided half in one slide member and half in an adjacent slide member to thereby maintain the operative positions of the members **38**, **40**, **42** relative to each other, all as is clearly illustrated in FIG. 7.

Pivotally mounted, as at **48**, on the upper slide member **42** is a lever **50** having an end projection **52**. Lever **50**, under the urgency of a spring **54**, is normally biased towards the slide member **42** placing said projection **52** in the path of movement of said slide member **42** and also in the path of movement of the slide member **40**. A spring-biased latch **56** is mounted, as at **58**, on the lower stationary member **38** and the latch spring **60** thereon projects a hook **62** formed on the end of said latch into the path of movement of the slide members **40**, **42** so that the latch **56** is effective to engage the lower end of the intermediate slide member **40** to maintain the members **38** and **40** apart or in an open position relative to each other. During this time a position of the lever projection **52** can also be achieved placing said projection **52** across the top of the slide member **40** to similarly maintain the slide members **40**, **42** apart, with the over-all effect of thereby providing a fully extended position for each slide **36** as is clearly illustrated in FIG. 5. Provided along one side of the intermediate slide member **40** can be any number of stop holes **64***a–c*, only three of which, however, are illustrated, and which stop holes **64***a–c* provide the intermediate open positions of each of the slides **36**. Thus, while the latch **56** is still engaging the slide member **40**, the upper slide member **42** can be progressively telescoped upon said slide member **40** by selectively disposing the lever projection **52** first into the stop hole **64***a*, then into the stop hole **64***b*, and so forth. In the FIG. 6 position, the level projection **52** aligns with the stop hole **64***c* to lock the slide members **40**, **42** together and a cam surface **66** on the member **42** is effective to disengage the latch **56** from the bottom end of the slide member **40** permitting the locked-together members **40**, **42** to fall by gravity about the stationary member **38** to thereby provide a fully contracted position for each slide **36**.

Returning again to FIGS. 1–4, it will be better seen that the safety device **12** further includes a foldable and flexible guard, which may be an accordion wall or as is described herein preferably is a tubular open-ended net **68**, which moves with the slides **36** to function as an extension of the wall **28** of the scale **10**. The lower open end **70** of the net **68** is attached, as with a plurality of tie members **72**, to the bottom wall of the safety device storage compartment **32** while the upper or opposite net end **74** is looped, as at **76**, about a rectangular-shaped rod or tubular rail member **78**. An L-shaped frame member **80** mounted at the uppermost end of each of the slide members **42** has a mounting plate **82** bolted at **84** to its horizontal leg and said plate **82** will be understood to be clamped or otherwise suitably connected to one of the ends of the rail member **78**. Between the end of the net **68** anchored to the compartment **32** and the member **78** are three additional rectangular rods or tubular rail members **86***a–c* attached by tie members **88** (See FIG. 4) at spaced intervals along the body of the net **68**.

From the foregoing description, it should be readily appreciated that the rail members **78** and **86***a–c* are effective to maintain a necessary tubular shape in the net **68** while said net functions as an extension of the scale wall **28**, and that additionally said rail members neatly carry the net **68** into the compartment **32** for storage while being lowered therein during contraction of the slides **36**. Furthermore, in an intermediate open position of the net **68** to accommodate, for example, an infant that may be placed in a sitting position on the scale **10** to be weighed, and for which position the slides **36** are extended to raise only the rail members **78** and **86***a* above the scale **10**, the upper portion of the net **68** attached to the rail members **78**, **86***a* will be neatly unfolded from its FIG. 3 storage position during movement of said rail members **78**, **86***a* while the remaining net portion is held by the weight of the rail members **86***b*, **86***c* within the storage compartment **32**. It will also be readily appreciated from the foregoing description that the safety device **12** presents what may be characterized as a non-rigid barrier in the form of said net **68** to achieve its objective, and therefore is a relatively safe device for use with infants in that it is not likely to cause any injury to an infant accidentally falling against the net barrier. At the same time, however, said non-rigid net **68** is exceptionally easy to manage in that it is adapted to be neatly folded-up for storage and neatly unfolded for use, which is equally important for equipment used in the presence and reach of infants.

A latitude of modification, change and substitution is intended in the foregoing disclosure and in some instances some features of the invention will be employed without a corresponding use of other features. Accordingly, it is appropriate that the appended claims be construed broadly and in a manner consistent with the spirit and scope of the invention herein.

What is claimed is:

**1.** A safety device attachment for an infant's scale comprising expandable support means, means operatively connected to and mounting said expandable support means on said scale for movement away from and toward said scale, a tubular open-ended foldable and flexible guard normally disposed in a stored position surrounding said scale, means including a rail member secured about one open end of said guard and operatively connecting said guard to said expandable support means for movement of said end of said guard away from said scale and placing said guard into an extended position to provide a tubular extension for said scale to prevent an infant from falling from said scale, means securing the other open end of said guard to said scale, and a plurality of rail members secured at spaced intervals along said guard to maintain a tubular shape in said guard.

**2.** A safety device attachment for an infant's scale comprising a pair of expandable support means, means operatively connected to and mounting said expandable support means in opposed relation to each other on said scale for movement away from and toward said scale, a tubular open-ended foldable and flexible guard normally disposed in a stored position surrounding said scale, means including a rail member secured about one open end of said guard and operatively connecting said guard to said expandable support means for movement of said end of

said guard away from said scale and placing said guard into an extended position to provide a tubular extension for said scale to prevent an infant from falling from said scale, means securing the other open end of said guard to said scale, and a plurality of rail members secured at spaced intervals along said guard to maintain a tubular shape in said guard.

3. A safety device attachment for an infant's scale comprising a pair of expandable support means, means operatively connected to and mounting said expandable support means in opposed relation to each other on said scale for movement away from and toward said scale, a tubular open-ended foldable and flexible guard normally disposed in a stored position surrounding said scale, means including a generally rectangular rail member secured about one open end of said guard and operatively connecting said guard to said expandable support means for movement of said end of said guard away from said scale and placing said guard into an extended position to provide a tubular extension for said scale to prevent an infant from falling from said scale, means securing the other open end of said guard to said scale, and a plurality of generally rectangular rail members secured at spaced intervals along said guard to maintain a tubular shape in said guard.

4. A safety device attachment for an infant's scale comprising a pair of expandable support means, means operatively connected to and mounting said expandable support means in opposed relation to each other on said scale for movement away from and toward said scale, means connected to and defining a storage compartment surrounding said scale, a tubular open-ended foldable and flexible guard normally disposed in a stored position in said storage compartment, means including a generally rectangular rail member secured about one open end of said guard and operatively connecting said guard to said expandable support means for movement of said end of



said guard away from said scale and placing said guard into an extended position to provide a tubular extension for said scale to prevent an infant from falling from said scale, means securing the other open end of said guard to said scale, and a plurality of generally rectangular rail members secured at spaced intervals along said guard to maintain a tubular shape in said guard.

5. A safety device attachment for an infant's scale comprising a pair of expandable support means, means operatively connected to and mounting said expandable support means in opposed relation to each other on said scale for movement away from and toward said scale, means connected to and defining a storage compartment surrounding said scale, a tubular open-ended net normally disposed in a stored position in said storage compartment, means including a generally rectangular rail member secured about one open end of said net and operatively connecting said net to said expandable support means for movement of said end of said net away from said scale and placing said net into an extended position to provide a tubular extension for said scale to prevent an infant from falling from said scale, means securing the other open end of said net to said scale, and a plurality of generally rectangular rail members secured at spaced intervals along the body of said net to maintain a tubular shape in said net.

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