

Aug. 18, 1953

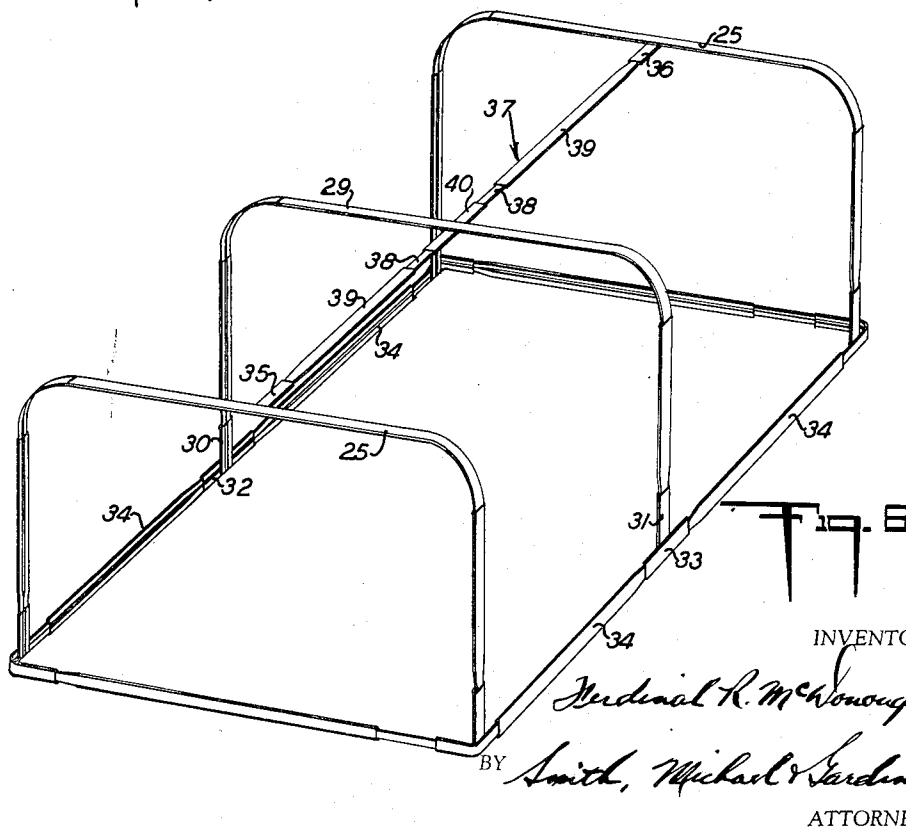
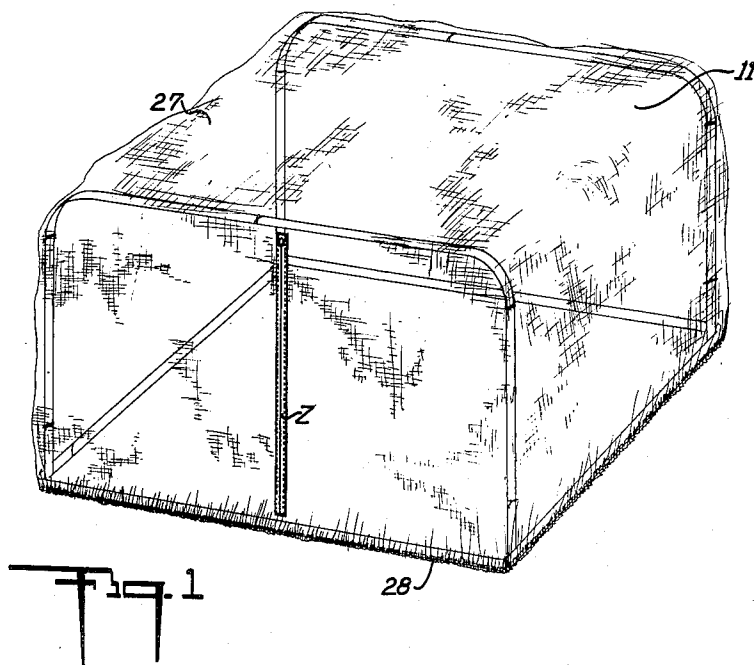
F. R. McDONOUGH

2,649,102

BABY HUT

Filed Oct. 24, 1952

2 Sheets-Sheet 1



INVENTOR

Ferdinand R. McDonough

BY

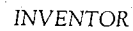
Smith, Michael & Sardinier,

ATTORNEY

Filed Oct. 24, 1952

F. R. McDONOUGH

2 Sheets-Sheet 2



Cardinal R. McDonough

BY *Smith, Michael & Gardiner,*
ATTORNEY

ATTORNEY

UNITED STATES PATENT OFFICE

2,649,102

BABY HUT

Ferdinal R. McDonough, Mansfield, Ohio

Application October 24, 1952, Serial No. 316,655

10 Claims. (Cl. 135—1)

1

This invention relates to a baby hut or more specifically to a light-weight, portable, knock-down, screened enclosure which is used to protect infants, small children, adults, and other objects from mosquitos, flies, insects or the like.

In picnicking, sun-bathing or other forms of outdoor activities, flies, mosquitos, or other insects are a constant source of irritation, and, in fact, are the source of many infectious diseases. Where infants or small children partake of the activities, it is highly desirable that they be protected, and to this end, many screened or netted enclosures have been developed. However, prior devices of this sort have not been acceptable because of their expense, bulk, weight and difficulty of assembly, to say nothing of being cumbersome and the requirement for considerable storage space to accommodate the same when being transported as by automobile.

Another reason why present constructions have not met with favor by the public is that in many known structures, it is necessary to employ nuts, bolts, screws and the like, thereby necessitating the use of tools in assembling and disassembling the same.

The baby hut of the present invention overcomes all of these shortcomings by being of extremely light weight, inexpensive, easy to assemble or disassemble without the use of tools of any kind, and which may be stored in a minimum of space.

To this end, the present enclosure comprises a frame made up of telescopic metallic members which are similar to the conventional C-shaped curtain rods now available on the market, together with an expansible screen or netting hood which surrounds the frame and prevents ingress of flies, mosquitos, insects or the like.

An object of the present invention is to provide a light weight metallic frame which may be quickly and easily assembled without the use of tools, and in which the frame members telescope one within the other, so that the frame may be expanded or contracted to different sizes within the limits of the frame members themselves.

Another object is to provide a screened enclosure of the type specified in which the telescopic members are prevented from telescoping beyond the desired limits.

A further object of the invention is to provide an enclosure of the type described in which the netting which surrounds and encloses the frame is provided with means for holding the telescopic members in their telescoped position, so as to prevent accidental separation thereof.

2

Other objects and advantages will be readily apparent from the following description, it being understood that changes in shape, size, finish or other details may be resorted to, so long as they fall within the spirit and scope of the appended claims.

Referring now to the drawings in which corresponding numerals are used throughout the various views:

Figure 1 is a perspective view of my invention in its fully assembled condition;

Figure 2 is a view similar to Figure 1, but with the screening or netting removed to show more clearly the manner of assembling the frame work;

Figure 3 is an exploded view showing more in detail the construction of the side members of the base of the frame work shown in Figure 1, together with one of the upper bow members for supporting the screening or netting;

Figure 4 is a detail view of one of the end members of Figure 1;

Figure 5 is a detail of one of the stop members for limiting the telescoping of the frame members and

Figure 6 is a perspective view of a modified form of my invention which incorporates the features of the structure shown in Figures 1 to 5, but which is provided with additional frame members in order that the size of the enclosure may be increased to accommodate larger persons or objects.

In the drawing, there is illustrated a preferred form of the invention in which there is provided a light weight, expansible, knock-down frame generally indicated by the numeral 10, having its top, side and end walls enclosed or enveloped by an expansible screen or netting 11 leaving the bottom of the frame open, so that it may be slipped over the person to be protected.

The frame 10 is composed of a base generally indicated at 12, vertically extending posts 13 at each corner of the frame, and upper bow members 14 each connecting two of the posts 13 and extending across the base parallel with the end members of the base.

As heretofore recited, all of the elements constituting the frame are of light weight metal, C-shaped in cross section and are actually made from the conventional C-shaped extensible curtain rods commonly in use today. In these curtain rods, there is provided a female C-shaped member which telescopically receives a correspondingly shaped smaller male member which is slidably held by friction fit in said female mem-

ber so that the rod may be extended or contracted to provide various lengths.

In the frame illustrated, the base 12 consists of end members 15 and side members 16", and since the end members and the side members are duplicated at opposite sides and ends of the frame, a description of one will suffice for both.

The end members 15 comprise a C-shaped female section 16' and a correspondingly shaped male section 17 telescoped within the female section and slidable therein.

The side members 16" likewise comprise the female sections 18 and telescoped male sections 19, but while the end members are straight throughout their lengths, the side members are bent at right angles as at 20 so as to form terminal sockets facing the ends of the end sections and into which the end members frictionally fit.

There is thus provided a base for the frame which, due to the telescopic sliding joint between the various members constituting the base, may be expanded or contracted to any desirable size within the limits of the length of the members merely by pushing the male members into or pulling the same out of the female members.

It is highly desirable and, in fact, necessary to provide means for limiting the extent of telescoping of the various members if various sizes of enclosures are to be maintained, and to accomplish this, stops are provided in the female sections against which the ends of the male members abut.

As seen in Figures 3 and 5, these stop members comprise a rectangular or non-circular nut 21 having a threaded bore extending there-through to receive a finger operated bolt 22 threaded therethrough. The nut 21 is snugly confined within the channel of the female member, but may slide lengthwise thereof. Due to its rectangular or non-circular shape, it is prevented from turning relative to the female member when the bolt 22 is threaded into or out of the bore of the nut 21.

The bolt 22 extends inwardly of the base frame between the edges of the C-shaped female member, so that it is accessible for turning, being provided with a head 23 for that purpose. By turning the bolt 22, its threaded end will engage the web of the female member, and further turning will force the nut against the inner surfaces of the flanges of the C-shaped section where it will be locked against sliding within the C-shaped channel.

At each corner of the base frame, a short section of vertically-extending C-shaped channel is secured to the base as by welding or the like, so as to form an integral part of the base. These sections form sockets 24 for the reception of the lower ends of the corner posts 13 which telescope into the same, the lower ends of the posts 13 and the sockets 24 being so shaped that a tight friction joint is provided to impart rigidity to the structure.

As seen in Figure 2, the pair of sockets 24 at the forward portion of the structure are secured to the male base members 19, and the rear pair of sockets 24 are secured to the female base members 18, although any suitable mounting of the sockets may be resorted to, so long as the sockets are rigidly secured to the base frame.

The frame structure is completed by means of upper C-shaped bow members 25, each of which consists of a telescoped male and female member having a sliding fit, and having downwardly curved ends 26, which frictionally fit

within the upper ends of the corner post 13. By this construction, it will be seen that as the base frame is expanded or contracted lengthwise of the bows to the desired dimension, the bows are likewise adjusted due to the sliding joint between the male and female sections.

As previously described, nuts 21 and bolts 22 provide abutments engaging the ends of the inner telescoped member to limit the telescoping action, but means must also be provided to prevent accidental separating of these telescoped sections with resulting collapse of the hut.

As seen in Figure 1, the hood 27 of suitable screen or net material completely surrounds and encloses the top, ends and sides of the frame structure, leaving the bottom open. This screen must be flexible, and must have sufficient fullness to permit expansion and contraction of the frame, although, if desirable, different size hoods may be employed.

The hood 27 is provided at its lower free edge with a hem 28 for the reception of an elastic element such as a spring, rubber band or the like, which is of such size that the open mouth of the hood will be contracted to a size smaller than the minimum dimension of the frames. By this construction, the resilient element is placed under tension as the open mouth is expanded for application to the frame and when in position as shown in Figure 1, the contractile force of the resilient member forces the telescoped base members against the stops and prevents their separation. In this manner, the hood serves the dual function of screening in the frame and also maintaining the frame in properly adjusted position.

Referring now to the modified form shown in Figure 6, it will be seen that a frame structure is provided which incorporates all of the features shown in Figures 1 to 5, but with additional telescoping members added thereto to provide an enclosure of larger size suitable for use by adults.

In this construction, an intermediate bow 29 is provided which is of the same construction as the bows of the previously described forms of the invention, this bow 29 being received in sockets 30 and 31 intermediate the length of the frame.

Sockets 30 and 31 are welded or secured to short section C-shaped channel members 32 and 33, which in turn receive the ends of the side frame members 34 with a friction fit.

In this form of the invention, the bow members 25 have secured thereto along the median line of the base, frame sockets 35 and 36 for the reception of the opposite ends of a longitudinally extending brace bar generally indicated at 37. The bar 37 consists of male and female sections 38 and 39 telescoped with a sliding fit, and a female section 40 secured to the intermediate bow 29 and frictionally receiving the ends of the male members 38.

By this construction, a much larger enclosure is provided, and the lengthwise adjustment of the hut is multiplied to provide additional room therein.

In the form shown in Figure 6, the frame, like that of Figures 1 to 5, is constructed entirely of light-weight C-shaped channel sections similar to the well-known curtain rods in use today, so that a very light, inexpensive, and easily assembled structure is provided, which, in its knocked-down condition, may be readily transported and stored in a minimum of space and which may be easily and quickly assembled by unskilled persons without the use of removable fittings,

5

screws, bolts or the like which may be lost, and without the use of tools of any kind.

While in describing the frame members in both forms of the invention, reference has been made to metallic C-shaped members, it is to be understood that the same may be made of plastic or other similar materials, in which event the socket members such as the members 24 of Figure 2, may be attached to the base frame by means of acetone or other solvent, which will effect adhesion between the socket members and the base frame.

It may also be found desirable in some instances to incorporate a zipper Z as shown in Figure 1, so as to eliminate the necessity of removing the screen 11 to permit access to the interior thereof.

I claim:

1. A portable, light-weight, knock-down screened enclosure comprising a frame including base frame formed of slidably telescoped frame sections, vertically extending corner posts secured to said base frame, and screen supporting upper bow members connected to said corner posts, stop means carried by said base frame and against which the telescoped members abut to limit the movement thereof in one direction, and an elastic member surrounding said base frame and maintaining said telescoped members against said stops.

2. A portable, light-weight, knock-down, screened enclosure comprising a frame including base frame formed of slidably telescoped frame sections, vertically extending corner posts secured to said base frame and screen supporting upper bow members connected to said corner posts, stop means to limit the telescoping of said telescoped members in one direction, and a flexible screened hood surrounding and enclosing said frame and terminating at the base frame, said hood carrying at its lower edge an elastic band engaging the base frame and maintaining the telescoped members in engagement with said stops.

3. A portable, light-weight, knock-down, screened enclosure comprising a frame including a base frame formed of slidably telescoped frame sections, vertically extending corner posts removably attached to said base frame and screen supporting upper bow members removably connected to said corner posts, the base frame, corner posts and bow members being formed of light-weight channel members which are C-shaped in cross section and comprise male and female members slidable relative to each other.

4. A portable, light-weight, knock-down, screened enclosure comprising a frame including rectangular base frame formed of male and female channel members which are C-shaped in cross section and which slidably fit one within the other, vertically extending sockets of the same cross sectional shape secured to the base frame adjacent each corner thereof, corner posts of similar cross section telescoped into said sockets, and upper screen supporting bows of similar cross sectional shape having downturned ends telescoped into the upper ends of the corner

6

posts, said bows comprising telescoped male and female members slidable relative to each other.

5. A device as claimed in claim 4, in which a flexible hood surrounds and encloses said frame, and carries an elastic member at its lower edge contractible into engagement with the base frame.

6. A device as claimed in claim 4, in which the end members of the base frame consist of straight male and female sections slidably telescoping each other and in which the side members consist of male and female members slidably telescoping each other, the ends of the side members being bent at right angles and receiving therein the ends of said end members.

7. A portable, light-weight, knock-down screen enclosure comprising a frame having a top, sides and an open base, said base comprising frame members slidably connected to each other, and adjustable to increase or decrease the size of the enclosure, stop members for limiting the relative sliding movement between said members in one direction, and resilient means urging said members against the stops.

8. A structure as claimed in claim 7, in which the resilient member is carried by the lower end of a screen hood which envelopes the top, sides and ends of said frame.

9. A structure as claimed in claim 7 in which the frame members consist of channel members which are C-shaped in cross section and consist of telescoped male and female members and in which the stops consist of non-circular nuts snugly fitted against turning within the channel of the female member and having a threaded bore receiving a threaded bolt adapted to bear against the web of the female member and force the nuts against the inner walls of the channel to prevent sliding of the nuts within the channel.

10. A portable, light-weight, knock-down, screened enclosure comprising a frame including rectangular base frame formed of male and female channel members which are C-shaped in cross section and which slidably fit one within the other, vertically extending sockets of the same cross sectional shape secured to the base frame adjacent each corner thereof, corner posts of similar cross section telescoped into said sockets, upper screen supporting bows of similar cross sectional shape having downturned ends telescoped into the upper ends of the corner posts, said bows comprising telescoped male and female members slidable relative to each other, and a brace bar attached to said bows intermediate their ends and extending longitudinally of the base frame, said brace bar comprising telescoping male and female members of the same cross section as the sections of the base frame.

FERDINAL R. McDONOUGH.

References Cited in the file of this patent

UNITED STATES PATENTS

Number	Name	Date
356,015	Steinberg	Jan. 11, 1887
1,820,002	Forrester	Aug. 18, 1931