Sept. 12, 1933. S. STRANSKY 1,926,796

COLLAPSIBLE INCLOSED SCREENED SEAT

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Fig. 1

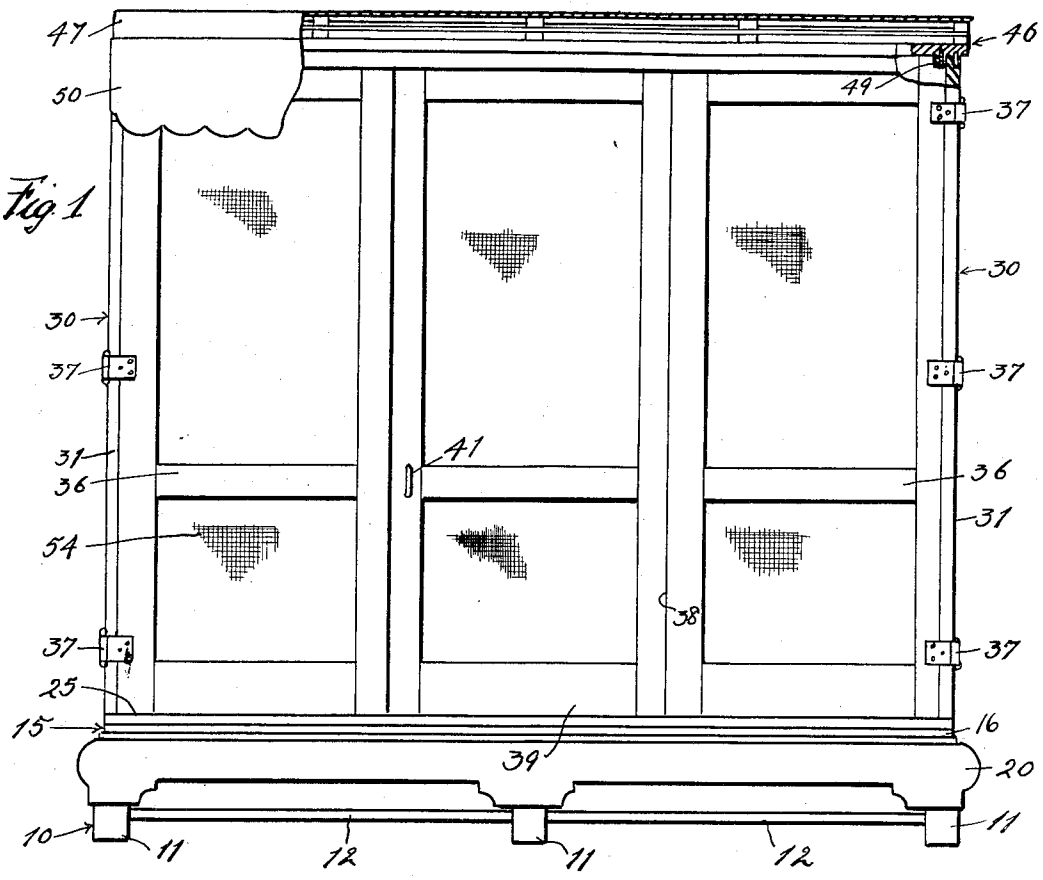
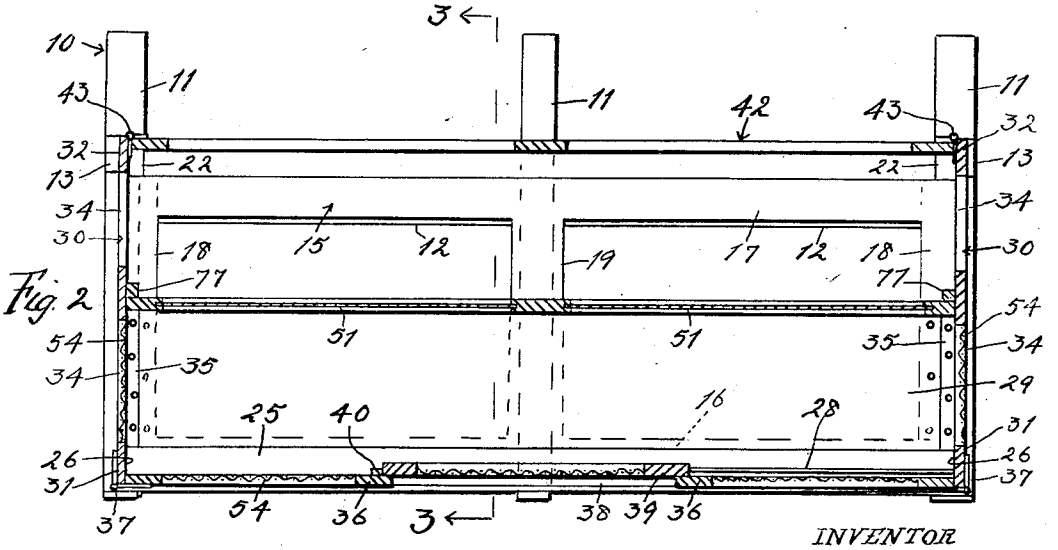


Fig. 2



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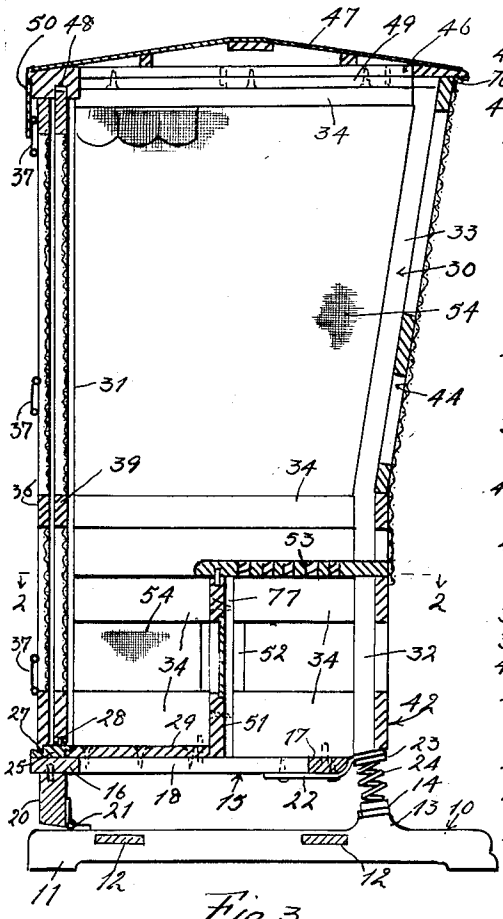


Fig. 3.

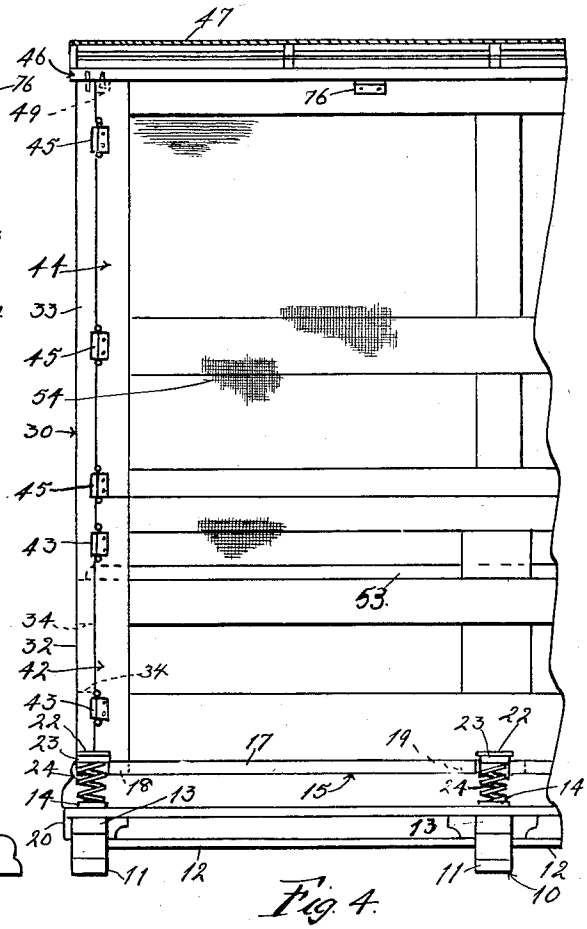


Fig. 4.

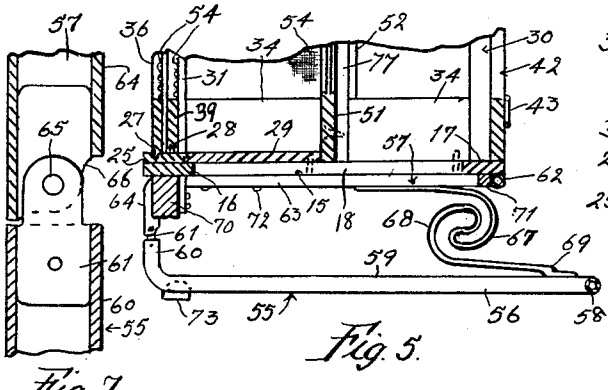


Fig. 5.

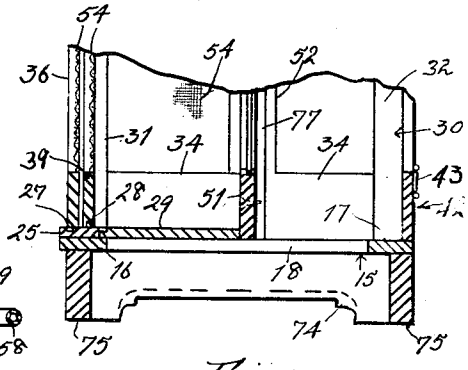


Fig. 6.

Fig. 7.

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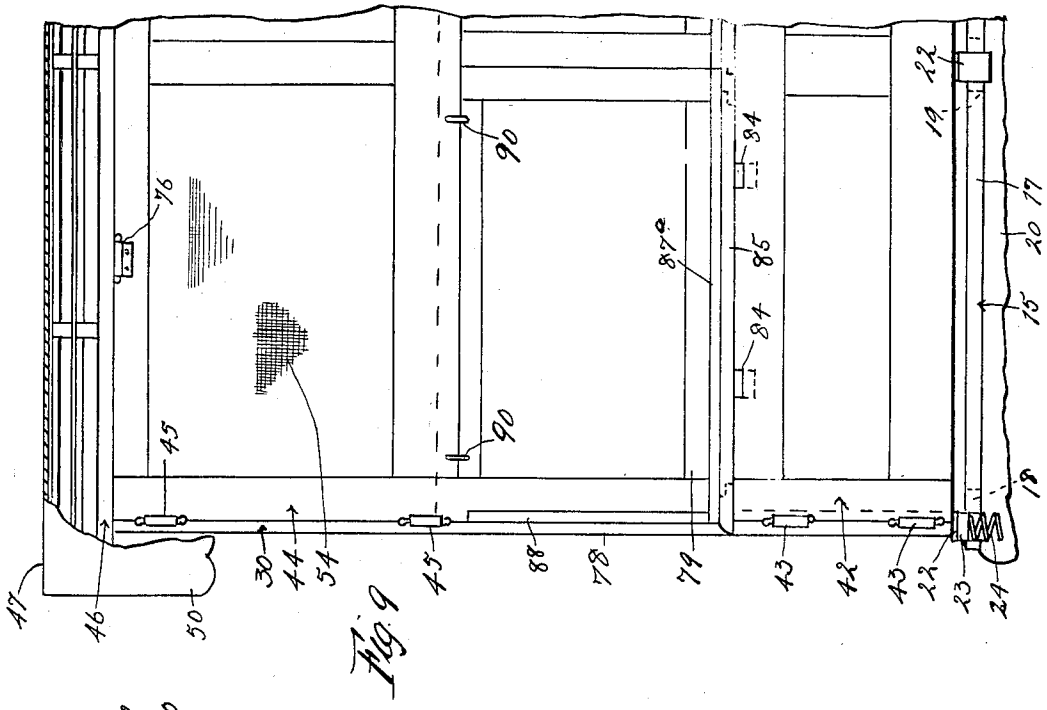


Fig. 9

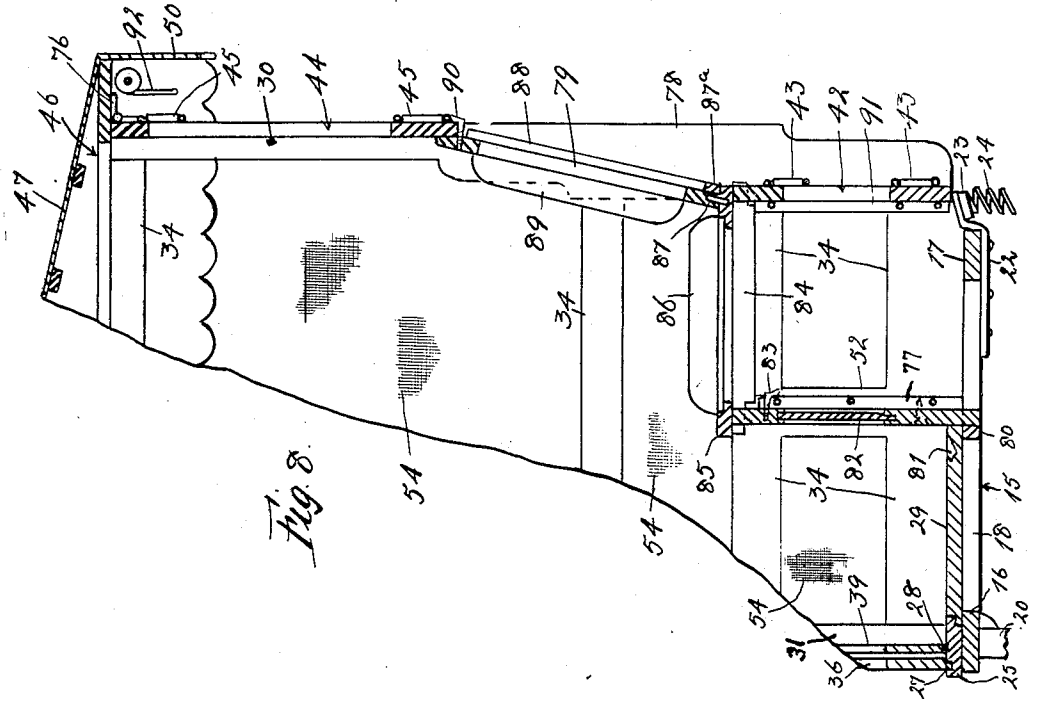


Fig. 8.

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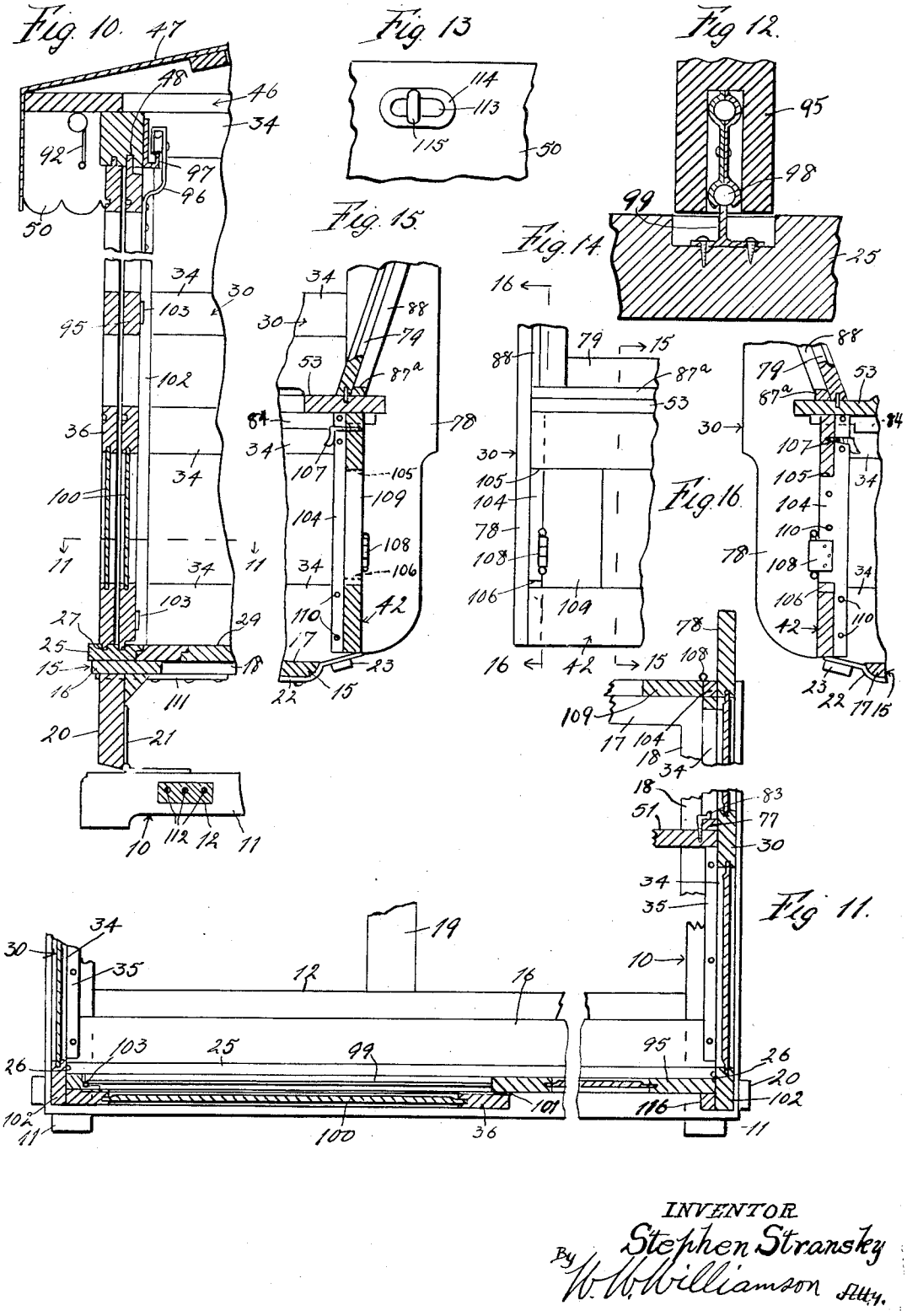
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COLLAPSIBLE INCLOSED SCREENED SEAT

Filed April 1, 1932 4 Sheets-Sheet 4



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Patented Sept. 12, 1933 1,926,796

UNITED STATES PATENT OFFICE

1,926,796

COLLAPSIBLE INCLOSED SCREENED SEAT

Stephen Stransky, Darby, Pa.

Application April 1, 1932. Serial No. 602,559

6 Claims. (Cl. 155—1)

My invention relates to new and useful improvements in a collapsible inclosed screened seat, and has for one of its objects to provide a simple and effective construction which may be readily taken apart or knocked down and stored in a very small space when not in use.

Another object of the invention is to provide a seat of the kind described of any suitable dimensions for the accommodation of one or more persons.

Another object of the invention is to provide a base member and a body structure separable from the base member, certain parts of said body being demountably connected together and other parts hinged to one another, whereby the entire device may be easily and quickly put together and dismembered.

Another object of the invention is to provide means whereby the body may be rigidly connected with the base or connected in a manner which will permit a swaying or rocking motion to the body relative to the base.

Another object of the invention is to provide a device of the kind above mentioned wherein the front, back and ends are inclosed partly by wire mesh or screening in order to protect the occupant or occupants against the intrusion of insects, animals or objects thrown by persons in the locality where the seat is situated and to provide the upper end with a water proof top with curtains or sunshades hanging from the top frame.

Another object of the invention is to provide a seat element and a back each in two sections and removably assembled in the complete structure, said back being inclined while the rear wall above the seat back is vertical.

Another object of the invention is to provide an upholstered seat element and back for an article of the kind described.

Another object of the invention is to construct the flooring with finger holds in the form of undercut recesses or apertures whereby said flooring may be easily removed.

Another object of the invention is to provide improved means for mounting a slidable door so that it will operate readily and easily with very little friction and practically no noise.

A further object of the invention is to provide for swinging a door hinged to a side frame inward rather than outward as embodied in a portion of the invention.

A still further object of the invention is to so construct the back frame that it will be strong and durable.

With these and other ends in view, this invention consists in the details of construction and combination of elements hereinafter set forth and then specifically designated by the claims.

In order that those skilled in the art to which this invention appertains may understand how to make and use the same, I will describe its construction in detail, referring by numerals to the accompanying drawings forming a part of this application, in which:—

Fig. 1 is a front elevation of my improved collapsible inclosed screened seat constructed in accordance with my invention and having a small part broken away and shown in section to illustrate certain details of construction.

Fig. 2 is a section on the line 2—2 of Fig. 3.

Fig. 3 is a section of the complete device on the line 3—3 of Fig. 2.

Fig. 4 is a fragmentary rear elevation of the device with the covering of the top removed.

Fig. 5 is a fragmentary sectional view similar to Fig. 3, of a modified form of the invention.

Fig. 6 is a similar view of a further modified form of the invention.

Fig. 7 is an enlarged fragmentary detail sectional view of the hinge connection for that form of the device illustrated in Fig. 5.

Fig. 8 is a fragmentary sectional view similar to that in Fig. 3, of a further modification.

Fig. 9 is a fragmentary rear view of Fig. 8.

Fig. 10 is a fragmentary vertical sectional view similar to Fig. 3, of a modification.

Fig. 11 is a transverse or horizontal sectional view of the modification shown in Fig. 10, on about the line 11—11 thereof.

Fig. 12 is an enlarged fragmentary sectional view illustrating a desirable way of mounting a sliding door.

Fig. 13 is an enlarged fragmentary face view of a curtain, shade or awning fringe illustrating one manner of detachably hanging the same.

Fig. 14 is an enlarged fragmentary rear face view of the back frame showing how the meeting corners of the back frames and side frames are constructed.

Fig. 15 is a section on the line 15—15 of Fig. 14.

Fig. 16 is a section on the line 16—16 of Fig. 14.

In carrying out my invention as embodied, particularly in Figs. 1 to 4 inclusive, 10 represents the base upon which the body of the device is mounted, and said base comprises any suitable number of trestles 11 connected by any suitable number of cross bars 12. Each trestle is provided with an upwardly projecting extension 13 adja-

cent its rear end on the upper end on which is fixed a metal socket 14, as by screws, for a purpose to be presently described.

The bottom frame 15 of the body includes a front rail 16, a rear rail 17, side rails 18 and an intermediate cross rail 19, and the upper and lower surfaces of the several rails are flush with one another.

To the front rail, so as to extend downwardly therefrom, is secured a leg element 20, preferably one piece, although it will be readily understood that it may be made from several separate independent sections, each one properly positioned to coact with one of the trestles 11. The leg piece is connected with the base 10 and more particularly to the trestles thereof by hinges 21.

At the rear of the bottom frame 15 of the body and particularly to the side and intermediate rails 18 and 19 are secured strap irons 22, the outer ends of which are bent to pass around the rear rail 17 and then inclined upwardly and rearwardly, as in Fig. 3, to provide seats for metallic sockets 23 welded or otherwise suitably secured thereto. The sockets 23 are similar to the sockets 14 and are in line therewith, and the ends of coiled springs 24 are secured in said sockets, preferably by cotter pins, and said springs with their component parts function as the rear legs of the seat.

On the upper surface of the front rail 16 of the bottom frame of the body is mounted a sill plate 25 having a portion at each end adjacent the rear edge cut out as at 26 to receive the side frames to be presently described, and in its upper face near each end adjacent the front edge and running longitudinally of the plate is formed a plowed groove 27 and on the top face of said plate running about two-thirds the length thereof at one end is a track 28.

The sill plate 25 is narrower than the front rail on which it is mounted leaving the rear portion of said front rail exposed for the reception of the flooring 29 which rests upon the front rail, the side rails 18 and the intermediate rail 19, and has a tongue and groove connection with the rear edge of the sill plate, and the ends of the flooring terminate short of the outer edges of the side rails 18.

The side frames 30 of the body each includes a front vertical upright 31, a rear lower vertical upright 32, a rear upper inclined section 33 and cross pieces 34. To the inner surface of each of the lowermost cross pieces 34 is secured a fastening strip 35 which, when the side frame is connected with the bottom frame of the body by dowels, will occupy the space at an end of the flooring and said fastening strip may be secured by screws to the side rail 18 of the bottom frame of the body to prevent accidental displacement of the side frame.

Each side frame has a swinging front frame section 36 permanently hinged to the forward upright 31 by hinges 37 secured to the front face of a front section and to the outside face of the vertical upright of a side frame, so that when the parts of the seat are dismembered each front frame section may be swung back against its respective side frame, but when the device is in use each front frame section assumes a position at right angles to its respective side frame just inside of the forward edge thereof. Each front frame section 36 is provided with a tongue at its lower edge for registration with the plowed groove 27 in order to hold the front frame section in proper position.

The front frame sections occupy approximately one-third of the space between the side frames, therefore, their adjacent ends are spaced apart to produce a door way 38 which is normally closed by a sliding door 39 of sufficient width to overlap the adjacent edges of both front frame sections and its closing movement is limited by a stop strip 40 secured on the inside of one of the front frame sections, and said sliding door is provided with a hand hold 41 by which it may be slid backward and forward from the outside. Suitable locking mechanism can be provided for the sliding door.

A rear lower body section 42 is removably secured to the rear edges of the side frames by means of hinges 43 having removable pintles and said lower rear section is further supported by resting upon the strap irons 22. An upper rear body section 44 is likewise removably secured to the side frames by means of hinges 45 also having removable pintles and said upper rear body section is further supported by resting upon the upper edge of the lower rear body section.

A top frame 46 is provided and is composed of suitable front, rear, and side rails as well as rafters assembled to provide a suitable pitch to the top covering 47, preferably of water proof canvas, although any other suitable material may be used which will shed rain and act as a barrier to the sun's rays.

The front rail of the top frame is connected with the front frame sections by a tongue and groove construction as shown in Fig. 3, and said front rail is further provided with a guide groove 48 in which the sliding door 39 is loosely fitted to guide the upper end of said door as it slides along the track 28.

The top frame is connected by dowels with the body side frames, each of said side frames having a fastening strip 49 permanently secured to its upper end which may be fastened to the side rails of the top frame by screws to prevent accidental displacement of said top frame while permitting its removal when desired. Disconnectable hinges 76 may attach the top to the upper rear frame section.

Side, rear and even front curtains or shades 50 may be provided to depend from the top downward any suitable distance in order to protect the occupants of the seat from the sun, rain, wind, etc.

Extending upwardly from the rear end of the flooring 35 is a riser 51 temporarily secured to an attachment strip 77 fixed to a filler 52 and the two lowermost cross pieces 34 and the upper edge of said riser terminates at the upper edges of a pair of said cross pieces 34 of the side frames. A cross piece of the frame work of the lower rear section 42 is at the same elevation so that a seat element 53 can rest upon the riser and the cross pieces for proper support, and said seat element is connected to the riser, and if desirable, to the cross pieces by dowels, so as to permit its ready removal when desired.

The side frames, the upper and lower rear frame sections, and the front frame sections and the sliding door, are all covered with suitable wire mesh or screening 54 in order to completely inclose the body and prevent intrusion of animals, insects and the like.

In that form of the invention illustrated in Figs. 5 and 7, the base 55 is constructed from sections of metal, preferably pieces of pipe, and includes a trestle element 56 and a supporting element 57. The trestle element is bent or fashioned to provide a rear connecting bar 58 with the ends

bent forwardly at right angles to produce the side arms 59 and the ends of said arms then bent upward at right angles to produce extensions 60 and in each of these extensions is fixed a hinge element 61, Fig. 7.

The supporting element 57 is fashioned to produce a rear rail 62 with forwardly projecting arms 63 at each end and the forward ends of said arms are bent downwardly at right angles to produce extensions 64, each of which inclose an end of a hinge member 61 projecting from an extension 60 with a pin 65 passing through the walls of the extension 64 and said hinge member 61. The trestle and supporting elements of the base are thus hinged together at their forward ends and in order that the supporting element may swing or rock relative to the trestle element, portions of the downwardly projecting extensions 64 are cut away at the back as indicated at 66.

The hinged extensions form the forward legs of the device and in order to resiliently support the rear, flat springs 67 having reversely curved coils 68 intermediate their ends are used. One end of each of said springs is suitably fastened to an arm 63 of the supporting element and to an arm 59 of the trestle element and the end of the spring connected to the trestle element has an off-set 69 adjacent the end or point of securement to provide a greater amount of resiliency.

The body of the seat is constructed in the same manner as described with relation to the first mentioned form with the exception that a beam 70 is secured to the underside of the bottom frame of the body and a position strip 71 is secured to the underside of the bottom of the body at the rear thereof and lies just inside of the rear rail 62. The base, and more particularly, the supporting element 57 thereof is secured to the body in any suitable manner as by staples, U-clamps or screws 72 and where the latter are used, they may be projected through holes in the supporting element. In order that the base may have restricted contact with the surface on which it rests, leveling blocks 73 are preferably secured underneath the arms 59 at their forward ends in order to elevate the major portions of said arms off the surface on which the device rests.

A further modification is illustrated in Fig. 6, wherein stationary trestles or legs 74 are removably but rigidly secured to the bottom frame of the body and these may be connected by cross pieces 75 located at any suitable places, for instance, only at the front and rear. The body of the seat in this form is identical with that in the first described formation.

In order to take the seat herein described apart, it is only necessary to lift the sliding door 39 so that its upper end will project farther into the guide groove 48 than usual to disengage the lower end of said sliding door from its track 28 after which said lower end may be swung back toward the riser 51 and said door then manipulated so that it can be taken out through the doorway 38.

Next the screws which pass through the fastening strips 49 into the top frame are removed and said top frame disassembled. After that has been done, the pintles of the hinges 43 and 45 can be removed and the upper and lower rear frame sections taken off, then the seat element 53 can be removed by disengaging its dowels and next the screws can be removed from the riser which fastens it to the fillers 52 and said riser disassembled. The screws passing through the fastening strips 35 into the bottom frame of the body are removed which will permit the side frames and the front sections 36 to be lifted off the bottom frame of the body and said front frame sections swung back against the outside surfaces of the side frames. If desirable, the flooring 35 can now be removed from the bottom frame of the body by withdrawing the screws which fasten it in place and the bottom frame of the body can be removed from the base by withdrawing the cotter pins from one set of the sockets which hold the end of the springs and said bottom frame of the body removed from the leg element 20 or said leg element can be disconnected from the base by withdrawing the screws from one of the leaves of each of the hinges 21. By reversing the above operations, the device may be reassembled.

The modification shown in Figs. 8 and 9 is similar in most respects to other body structures but the rear uprights or stiles 78 of the side frames 30 are wider at the bottom than at the top to accommodate the inclined seat backs 79, there being two of these, in endwise alignment.

The lower rear body or frame section 42 is connected with the inner edges of the wide parts of the rear side uprights or stiles 78 by means of the removable pintle hinges 43 and the upper edge of said lower rear body section 42 is preferably at the same elevation as a pair of the cross pieces 34.

A longitudinal supporting strip 80 is provided between the intermediate cross rail 19 and the side rails 18 to support the rear edge of the flooring 29 which is provided with undercut apertures 81 to act as finger holds for easy removal of the flooring.

Just back of the supporting strip 80 and the rear edge of the flooring is placed the riser 82 which has its lower edges notched to register with the rails 18 and 19. Said riser carries screw locking hooks 83 which may be turned to cause their heads to engage the strips 84, which are mounted on the two lowermost cross pieces 34 and the filler 52 between them, thereby removably mounting the riser in place.

The upper edges of both the riser 82 and the lower rear body or frame section 42 are notched to receive the tenon ends of the bars 84 secured to the undersides of the seat elements 85 which include wooden frames and upholstery or cushions 86. There are two seat elements side by side or in endwise alignment and being temporarily mounted they may be readily removed when the device is to be disassembled.

The seat backs 79 are connected at their lower edges by dowels 87 to the rear parts of the seat element frames and engage strips 87a on the seat elements 85 and other strips 88 extending diagonally across the faces of the uprights or stiles 78 between the upper edge of the lower rear body section 42 and the lower edge of the upper rear body section 44 which is removably connected to the rear or outer edges of the stiles 78 at the upper ends by the removable pintle hinges 45.

Each seat back 79 includes a wooden frame and upholstery or cushion 89. Locking screw hooks 90 are mounted in the wooden frames and may be rotated to cause their heads to engage the lower edge of the upper rear body section 44 for removably holding the backs in place.

If found desirable, strips 91 can be added to the side frames 30 to function as abutments for the lower rear body section 42 and roller shades 92 can be placed under projecting edges of the

top so as to be adjusted for protection against the sun rays and rain.

As shown in Fig. 10, the sliding door 95 may have both its top and bottom ends slidably mounted in grooves in the front rail of the top frame and in the sill of the bottom frame as heretofore described but said door may be supported by wheeled hangers 96 running upon a track 97 secured to the inside of the front rail of the top frame, or the sliding door may be provided with ball bearings 98 in its lower edge for engagement with and running upon a suitable track 99 mounted in the groove in the sill as shown in Fig. 12, or if preferred, both the wheeled hangers and ball bearing may be used in conjunction with each other.

While I have above described the front frame as including two stationary frame sections 36, it will be obvious that if made sufficiently wide or the device as a whole is made shorter, a single stationary front frame section may be utilized as shown in Figs. 10 and 11, and if found desirable, the lower parts of the door and stationary frame section or sections may have paneling 100 therein in which case only the upper parts will be covered with wire netting.

A strip 101 of suitable material, such as flannel, may be secured to an edge of the sliding door or the front frame section in order to tightly close the crack between them to exclude insects.

On the inside of a side frame near its front edge is a post 102 which is spaced from the front edge of said side frame a distance equal to the thickness of the removable front section, and said front section is secured to the post by hinges 103 which will permit said front section to swing inward against the side frame or to be removed entirely by withdrawing the pintles from the hinges.

To the cross pieces 34 of the side frames or any other suitable part of the latter at the rear end are secured vertical straps 104 having rearwardly projecting offset portions intermediate their top and bottom ends so as to form shoulders 105 and 106 and provide recesses for the reception of the upper and lower longitudinal cross pieces or runners of the back frame and the lower edge of the upper longitudinal cross piece or runner of said back frame rests upon and is supported by the shoulders 105. The back frame may be held in place by locking screw hooks 107 carried by said back frame and engaging the forward edges of the vertical straps 104 and either separately from said locking hooks or in conjunction therewith hinges 108 may be secured to the fillers 109 at the ends of the back frame and to said vertical straps 104 which latter are secured to the side frames by fastening devices 110. In addition to the fastening devices 110 the vertical straps may be further supported by positioning them so that their lower ends may rest upon the strap irons 22.

The bottom frame may be suitably braced by iron straps 111 secured to the parts 18, 19 and 16.

In addition to the usual dowels for holding the stretchers or cross bars 12 to the trestles, bolts 112 may be utilized in which case they are positioned through from the outer faces of the end trestles endwise into the said cross bars or stretchers.

It is often the case that the flooring in devices of this kind warp due to the varying weather conditions, for which reason I prefer that the flooring be of the overlapping tongue and groove type as illustrated in Fig. 10, and in which the boards are relatively narrow.

The non-adjustable shades, curtains or awning fringe 50 is preferably provided with reinforced elongated openings 113 and the reinforcements may be grommets 114 in order to readily pass over the head of a screw eye 115 or equivalent device, and when the latter is turned crosswise of the opening 113, the shade, curtain or awning fringe will be detachably held in place.

Where a single front frame section 36 and a single sliding door 95 are used, a strap or bead 116 is placed on the inner face of the side frame opposite the one to which the front frame section is hinged. This bead or strap 116 strengthens the side frame, adds a finish thereto and acts as a closure for the crack between the meeting edges of the sliding door and side frame.

Of course I do not wish to be limited to the exact details of construction herein shown and described as these may be varied within the limits of the appended claims without departing from the spirit of my invention.

Having thus fully described my invention, what I claim as new and useful is:—

1. A collapsible inclosed screened seat including a base, a bottom frame having its front portion hinged to the front of the base, springs interposed between the rear of the bottom frame and the base, side frames having front frame sections hinged thereto and removably connected to the bottom frame, a lower rear frame section detachably connected to the side frames, an upper rear frame section also detachably secured to the side frames, a top detachably secured to the side frames and the upper rear and front frame sections, a door slidably mounted between the bottom frame and top, flooring on the forward part of the bottom frame, a riser projecting upwardly from the rear end of the flooring and detachably connected with the side frames, a seat detachably mounted on the riser, the side frames and the lower rear frame section, and screening secured to the side frames, the front and rear frame sections and the sliding door.

2. In a device of the character described, a base including trestles connected by cross bars, each of said trestles having an upwardly projecting extension near its rear end, a socket mounted on the upper end of each extension, a leg element hinged to the forward end of the trestles, a bottom frame secured to said leg element, strap irons secured to the rear of said bottom frame in alignment with the extensions on the trestles, sockets carried by said strap irons, coil springs mounted between pairs of sockets and held in place by cotter pins, a sill plate mounted on the upper surface of the front of the bottom frame, a flooring mounted on the bottom frame with the ends thereof terminating short of the outside edges of the sides of the bottom frame with the upper surface of said flooring flush with the upper surface of the sill plate, side frames connected by dowels with the sides of the bottom frame and having front frame sections hinged thereto which have a tongue and groove connection with the sill plate and the adjacent edges of said front frame sections being spaced apart to provide a doorway, fastening strips permanently secured to the lower inside faces of the side frames to occupy the spaces between said side frames and the ends of the flooring and to be fastened to the bottom frame, rear frame sections mounted one above the other and detachably connected to the side frames, a

top frame connected by dowels with the side frames and by tongues and grooves with the upper ends of the front frame sections, fastening strips permanently secured on the inside of the side frames at their upper ends whereby said side frames may be detachably connected to the top frame, said top frame having a guide groove at its forward end, a track on the sill plate, a sliding door having its lower end mounted on said track and its upper end fitted in the guide groove, a riser located to the rear of the flooring and detachably connected to the side frame and a seat element mounted upon the upper end of said riser and portions of the side and rear frames.

3. In a device of the character described, a base, a bottom frame mounted thereon, a sill plate secured to the upper surface of the bottom frame, flooring detachably secured to the bottom frame having its upper surface flush with the sill plate, side frames detachably connected with the base, front frame sections hingedly connected with the side frames and detachably connected with the bottom frame, rear frame sections detachably connected to the side frames, a riser detachably connected to the side frames at the rear of the flooring, a seat element detachably mounted on the upper edge of the riser and portions of the side frames and one of the rear frame sections, a top detachably mounted on the side frames and having a tongue and groove connection with the front frame sections and a door removably and slidably mounted between the sill plate and the top for normally closing the space between adjacent sides of the front frame section.

4. A collapsible inclosed screened seat including a base, a bottom frame having its front portion hinged to the front of the base, springs interposed between the rear of the bottom frame and the base, side frames including rear stiles, the lower portions of which are considerably wider than the upper ends, front frame sections hinged to the forward edges of the side frames and removably connected to the bottom frame, a lower rear frame section detachably connected to the inner edges of the stiles of the side frames, an upper rear frame section also detachably connected to the side frame stiles at the outer or rear edges thereof, said rear frame sections being spaced apart, diagonal strips secured to the inner faces of the side frame stiles between the upper edge of the lower rear frame section and the lower edge of the upper rear frame section, a longitudinal supporting strip forming a part of the bottom frame and located approximate the midway between the front and rear edges of said bottom frame, a flooring having undercut recesses to function as finger holds, said flooring engaging parts of the bottom frame including the supporting strip, upright strips carried by the side frames slightly to the rear of the supporting strip, a riser contacting with the rear edges of the flooring and supporting strip and resting upon parts of the bottom frame, locking screw hooks carried by the riser for engagement with the upright strips to removably hold the riser in place, the upper edge of said riser and the upper edge of the lower rear frame section having aligned notches formed therein, two seat elements each including a wooden frame, a cushion and bars, the latter being mounted on under faces of the wooden frames and having tenon ends for registration with the notches in the riser and lower rear frame section, seat backs including wooden frames and cushions, said backs being connected with the frames of the seat elements by dowels and resting against the diagonal strips and engaging the lower part of the upper rear frame sections, locking screw hooks carried by the backs for engagement with the upper rear frame section to removably mount said backs in place, a top detachably secured to the side frames and the upper rear and front frame sections, a door slidably mounted between the bottom frame and top, and screening secured to the side frames, the front and rear frame sections and the sliding door.

5. In a device of the character described, a base, a bottom frame hingedly connected at its front with the base, means to resiliently support the rear end of the bottom frame above the base, side frames detachably mounted on the bottom frame, said side frames including a vertical strap positioned in the lower part of their rear ends and mounted on the insides of said side frames, said straps each having opposed shoulders, a lower back frame section including longitudinal cross pieces one of which lies below the lower shoulder of each vertical strap, while the other rests on the uppermost shoulder of each of said vertical straps, fillers also included as parts of the lower back frame section, hinges connected to said fillers and the vertical straps, locking hooks carried by the said lower back section for engagement with the vertical straps, a post parallel with and adjacent to the forward edge of one of the side frames and mounted on the inner face thereof, a front section hingedly connected to the post for detachably connecting said front frame section to the side frame as well as permitting said front frame section to be folded against the inner face of the side frame, a top frame removably mounted on top of the front, back and side frames, a door, a track carried by the top frame and wheeled hangers carried by the door and mounted upon the track.

6. The structure set forth in claim 5, in combination with a track mounted in a groove in the bottom frame and ball bearings mounted in the bottom of the door and engaging the last mentioned track.

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