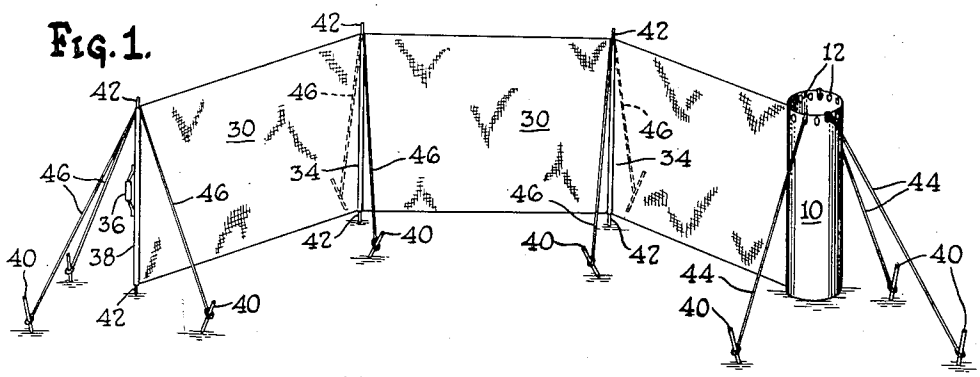
Nov. 20, 1956 L. E. SOLDAN 2,771,088

SHIELD

Filed Nov. 7, 1951

Fig. 1.



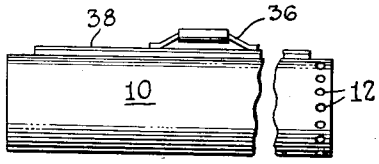


Fig. 2.

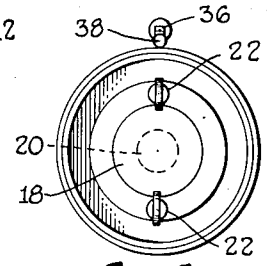


Fig. 3.

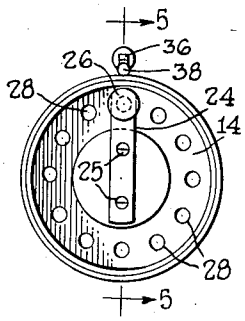
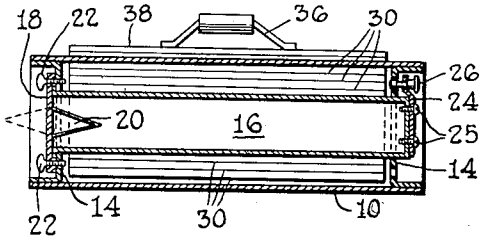


Fig. 4.

Fig. 5.



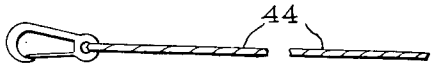


Fig. 7.

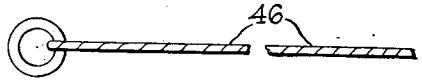
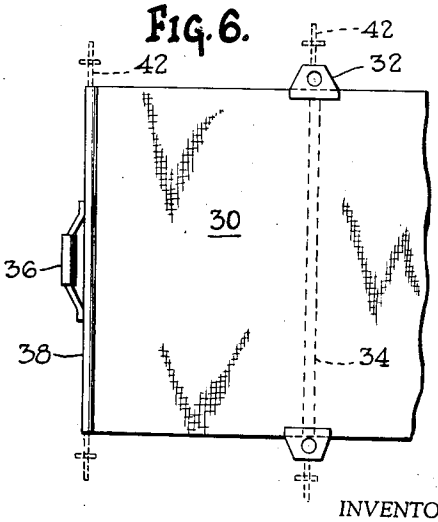


Fig. 8.

Fig. 6.



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SHIELD

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Application November 7, 1951, Serial No. 255,231

7 Claims. (Cl. 135—5)

This invention relates to improvements in shields. More particularly, this invention relates to improvements in shields which can be stored compactly, transported readily, and set up easily.

It is therefore an object of the present invention to provide an improved shield which can be stored compactly, transported readily and set up easily.

Many persons find it desirable, during their leisure time, to lie in the sun on the seashore, the banks of rivers, or even their own yards, and some of them have experienced chilling due to sharp wind. The winds often times are sharp enough to render the sunbathing less than pleasant and oftentimes denies the person the benefits of sunbathing. In addition, other persons enjoy eating their meals outside, either at their homes or at picnic areas. In some instances the weather is otherwise quite pleasant but for the presence of sharp winds. In some instances the winds are sharp enough to make outdoor eating unpleasant. Moreover, many persons who own house trailers have experienced discomfort due to sharp winds bearing upon them when they were seated under the awnings of their trailers. Many such persons have given up the pleasure of sitting outside because of the sharpness of winds. If the sunbathers, the picnickers, and the trailer users had a portable shield that is normally compact but which can be extended to provide protection against the winds, they could attain more complete enjoyment of their various avocations. The present invention provides such a shield and thus facilitates more complete enjoyment of leisure time.

The shield provided by the present invention is made with a housing in which the wall of the shield can be stored for transporting. This wall can be pulled from the housing and held in vertical position by suitable supports; the wall being capable of bending to provide a complete or partial enclosure for the user. The supports also can be stored within the housing and thus the entire shield is readily stored away for transporting. It is therefore an object of the present invention to provide a shield which has a housing with a wall that can be stored within the housing or extended from the housing and which has supports for the wall which can also be stored within the housing.

The wall of the shield provided by the present invention has a handle thereon, and that handle can be grasped to extend the wall from the housing. The shield is provided with a latch that prevents undesired extension of the wall from the housing, and when this latch is in place the handle of the wall can also serve as the handle for the shield. Thus the one handle serves the dual function of facilitating withdrawal of the wall from the housing and of serving as a handle for the shield itself. It is therefore an object of the present invention to provide a handle on the wall of a shield which can also serve as the handle for the shield itself.

The wall of the shield provided by the present invention is wound upon a rotatable support within the housing. This rotatable support has a handle which can be

rotated to rotate the support and wind the wall onto that support. In using the shield the free end of the wall will be secured to a support at a distance from the housing and thereafter the handle of the support within the housing will be rotated to make the wall taut. In this simple way the wall can be erected and made taut. It is therefore an object of the present invention to provide a shield with a housing which has a rotatable support therein, which has a handle for the support and which can be rotated to wind the wall onto the support and make the wall taut.

Other and further objects and advantages of the present invention should become apparent from an examination of the drawing and accompanying description.

In the drawing and accompanying description a preferred embodiment of the present invention is shown and described but it is to be understood that the drawing and accompanying description are for the purpose of illustration only and do not limit the invention and that the invention will be defined by the appended claims.

In the drawing Fig. 1 is a perspective view of a shield that is made in accordance with the principles and teachings of the present invention, and it shows that shield in extended position,

Fig. 2 is a broken side elevational view of the shield of Fig. 1, and it shows that shield in compact condition for storage or transporting,

Fig. 3 is an end elevational view of the shield of Figs. 1 and 2, and it shows the bottom of that shield,

Fig. 4 is another end elevational view of the shield of Figs. 1–3 and it shows the top of that shield,

Fig. 5 is a cross sectional view of the shield of Figs. 1–4, and it is taken along the plane indicated by the line 5—5 in Fig. 4,

Fig. 6 is a front elevational view of a portion of the wall of the shield of Figs. 1–5,

Fig. 7 is a broken view of a flexible connector usable with the shield of Figs. 1–5, and

Fig. 8 is a broken view of another flexible connector used with the shield of Figs. 1–5.

Referring to the drawing in detail, the numeral 10 generally denotes a hollow housing for the shield provided by the present invention. This housing has a narrow elongated slot in the side thereof; such slot terminating short of the top and the bottom of the housing. A plurality of openings 12 are provided in the end of the housing 10 and those openings are preferably spaced equally around the circumference of the housing. Two bearings 14 are supported within the housing 10 and those bearings rotatably confine a hollow support 16. The upper end of support 16 is fixedly closed by a cap that engages and is supported by the upper of the bearings 14. An anchor plate 18 is releasably secured to the bottom of the housing 10, as by being bolted to the bearing flange 14 at the bottom of said housing. Thumb screws 22 are provided to releasably secure the anchor plate 18 to that bearing flange. The anchor plate has a flat surface that normally is exposed but it also has a point 20 on the opposite face thereof which can be exposed as indicated by the dotted line in Fig. 5. The point 20 normally extends within the hollow support 16 and is thus out of the way. It is a simple matter to remove the thumb screws 22 from the anchor plate 18 and from the lower bearing flange 14, and set the anchor plate 18 in the desired position, either with its flat surface exposed or with point 20 exposed.

A handle 24 is secured to the cap at the top of support 16 by rivets 25, and one end of that handle projects radially outwardly beyond the periphery of that end cap. The projecting end of the handle 24 carries a pin 26 which can be selectively inserted within or withdrawn from recesses 28 in the upper bearing flange 14. These

recesses 28 coact with the pin 26 of the handle 24 to constitute a latch which can hold the handle 24 in a number of selected, circumferentially spaced positions. With this construction it is possible to withdraw the pin 26 from the recesses 28 and rotate the support 16 to any of a given number of predetermined positions and then reinsert the pin 26 in one of the recesses 28 and positively latch the support 16 against further rotation relative to the housing 10.

The numeral 30 denotes a wall which is long and wide but is quite thin. This wall will preferably be made of light weight canvas, cloth sheeting, nylon, treated balloon silk or the like so it will be relatively impervious to air and the other elements, but will still be readily bendable. One end of this wall 30 will be suitably secured to the support 16, as by cement, fasteners, or ties, so it will not become separated from that support and so it will wind onto that support as the support is rotated relative to the housing 10. A number of loops 32 are provided at spaced points along the wall 30, and those loops are paired so there is a loop at the top and bottom of the wall at said points. The loops are flexible so they can be bent transversely of the wall 30 to define an axis parallel to that wall. Such axis will not only be parallel to the wall 30 but will be vertically directed. A number of supports 34 in the form of hollow rods are provided and those supports are as long as the wall 30 is wide. Consequently, those supports can be placed adjacent the wall 30 and have the loops 32 overlie and underlie the ends of those supports. Pins 42 are provided which can extend through the loops 32 and into the ends of the supports 34 to maintain the wall 30 in assembled relation with the supports 34. These pins are upset intermediate their lengths to provide flanges which limit the telescoping of the ends of the pins into the ends of the supports 34 and assures the provision of a projecting end of the pin that can extend above the upset. These projecting ends of the pins can receive the loops on the ends of flexible connectors 46, which may be ropes or cables. The other ends of the flexible connectors 46 will be secured to pegs 40 that are driven into the earth adjacent the base of the supports 34. The flexible connections 46 coact with the pegs 40 to constitute ground-engaging elements. Such elements act to hold the supports 34 in vertical position, and thus hold the wall 30 in vertical position.

The free end of the wall 30 has a support 38 at the end thereof; that support being a hollow tube which is fixedly secured to the wall as by cement, fasteners or ties. The support 38 is similar to the supports 34 but it is inseparable from the wall 30. Pins 42 can be inserted in the top and bottom of the support 38 just as they can be inserted in the top and bottom of the supports 34, and those pins can either be forced into the earth or they can receive loops on the ends of the flexible connectors 46. The lower ends of the flexible connectors 46 will be secured to the pegs 40. A handle 36 is fixedly secured to the support 38, and that handle serves to permit extension of the wall 30 from the housing 10. When the wall 30 is wound on the support 16, as shown in Fig. 5 and the pin 26 is in one of the recesses 28, as shown in Fig. 5, the wall is held against extension from the housing 10 and then the handle 36 can serve as a handle for the shield itself.

The numeral 44 denotes flexible connectors, such as ropes or cables, which are provided with spring clips on the ends thereof. These spring clips can be telescoped over the upper end of the housing 10 and snapped into the openings 12 at that end. The lower ends of the flexible connectors 44 can be suitably secured to pegs 40 driven in the ground.

The supports 34 and the flexible connectors 44 and 46, together with the pegs 40 are all readily disposable within the hollow support 16. To place those items in that support and maintain them there, it is only necessary to remove the thumb screws 22, separate the anchor plate 18 from the housing 10, insert the supports, the pegs, and the flexible connectors within the support 16 and thereafter use the thumb screws 22 to hold the anchor plate in assembled relation with the housing 10. When the shield is in compact position, as shown in Fig. 5, the overall size of the shield is no greater than the size of the housing 10. On the other hand, when the shield is in extended position, it protects a very considerable area against the elements.

To set up the shield it is only necessary to remove the thumb screws 22, separate the anchor plate 18 from the housing 10, withdraw from the support 16 the supports 34, the flexible connectors 44 and 46, and the pegs 40. Thereafter, the anchor plate 18 is reversed so the point 20 projects outwardly from the housing 10 and the thumb screws are then seated in the lower bearing flange 14. The point 20 is forced into the ground, and this is accomplished readily because the point is sharp; and thereafter the flexible connectors 44 will have the spring clips thereof opened to extend over the upper end of the housing 10 and to extend into the openings 12. For the moment the housing 10 will stand by itself and while it is so standing the pegs 40 can be driven into the ground and the lower ends of the flexible connectors 44 secured to those pegs. Three pegs will preferably be used and those pegs will preferably be spaced apart ninety degrees. The pegs will be secured in the ground with sufficient permanence to enable the flexible connectors 44 to hold the housing 10 upright when the wall 30 is withdrawn through the slot, not shown, in the housing 10. Thereafter, the wall 30 is withdrawn from the housing 10; the pin 26 of handle 24 first having been withdrawn from the recesses 28 in the upper bearing flange 14. The pin will remain out of engagement with those recesses as the support 16 rotates during the unwinding of the wall 30. The wall can be drawn out of the housing 10 to its full extent or can be drawn out of that housing to any lesser extent. Once the desired length of wall 30 has been drawn from the housing 10, the pins 42 are inserted in the ends of the support 38; one of those pins then being forced down into the ground and the other of those pins projecting upwardly from the upper end of the support 38. The loops of three flexible connectors 46 will be telescoped over the pin 42 held by the upper ends of the support 38, and the lower ends of those connectors will be secured to pegs 40 suitably driven into the ground. Preferably those pegs will be three in number and will be spaced ninety degrees apart. The flexible connectors 46 and the pegs 40 will constitute ground-engaging elements which will solidly hold the support 38 and thus the free end of the wall 30 is vertical position. One or more supports 34 will be secured to the wall 30, as by folding the loops 32 over the upper and lower ends of those supports and then passing the pins 42 through the loops and into the ends of the supports 34. One of the pins in each instance will be forced into the ground and the other of the pins will project upwardly from the upper end of the support to act as a post over which the loops of the flexible connectors 46 can be telescoped. The lower ends of those flexible connectors will be suitably secured to pegs 40. The pegs will preferably be used and they will be disposed on opposite sides of the wall 30. The pegs 40 and the flexible connectors 46 will constitute ground-engaging elements which will hold the supports 34 and thus the wall 30 vertical. Those ground-engaging elements will also hold the supports 34 and the wall 30 with sufficient solidity to avoid the tilting or flattening of the wall 30 even in high winds. Once the supports 34 are set in position, the handle 24 is rotated to tighten the portion of the wall between the housing 10 and the nearest support 34. Once that portion of the wall is taut, the pin 26 will be inserted in the closest recess 28. Thus the wall can easily be held taut.

To retract the wall, it is only necessary to remove the

flexible connectors **46**, remove the pins **42**, remove the supports **34** and then rotate the handle **26** so it will wind the wall **30** onto the support **16**. It will be found preferable to leave the support **38** held by flexible connectors **46** and pegs **40** until after the portion of the wall **30** between it and the housing **10** has been tightened. Thereafter, the flexible connectors **46** can be freed from the pin at the top of the support **38** and the support then lifted and carried back to the housing **10**. Thereafter, the handle **24** can be further rotated to wind the full length of the wall **30** onto the support **16**. At such time the flexible connectors **44** can be separated from the housing **10** and that housing laid on its side. At such time the support **38** will abut the slot, not shown, in the wall of the housing **10** and the handle **36** will project from that support. Thereupon, the handle **24** can be held against further rotation relative to the housing **10** by setting the pin **26** in the closest recess **28**. The supports **34** will then be telescoped into the supports **16**, the anchor plate **18** first having been removed. In addition, the pegs **40** and the flexible connectors **44** and **46** will be disposed within the support **16**. Thereupon the pins **42** can be inserted in that support and then the anchor plate again secured to the lower bearing flange **14** by the thumb screws **22**. At such time the point **20** on the anchor plate **18** will extend within the support **16**, as shown in Fig. 5.

Whereas the drawing and accompanying have shown one form of the present invention it should be apparent to those skilled in the art that various changes may be made in the form of the invention without affecting the scope thereof.

What I claim is:

1. An extensible and retractible shield that can provide shelter against the elements and that comprise a hollow housing, a relatively impervious wall, said wall being long and wide but being thin and being readily bendable, said housing having a support therein, said wall being bendable to wind around and be held by said support in retracted position within said housing, one end of said wall being secured to said support to be inseparable from said housing, the other end of said wall being extendable from said housing to intercept the elements, a second support for said wall when said wall is in extended position, said second support being securable to and readily separable from said wall, and a plurality of support-engaging elements on said wall to selectively hold or free said second support, the first said support being hollow and having a removable closure for one end thereof, said second support being dimensioned to fit within the first said support.

2. An extensible and retractible shield that can provide shelter against the elements and that comprises a hollow housing, a relatively impervious wall, said wall being long and wide but being thin and being readily bendable, said housing having a support therein, bearings that hold said support for rotation relative to said support, a handle to rotate said support, a latch that selectively holds said handle in any of a number of rotated positions, said wall being bendable to wind onto and be held by said support as said handle rotates said support relative to said housing, one end of said wall being secured to said support to be inseparable from said housing, the other end of said wall being extendable from said housing to intercept the elements, a second support for the said other end of said wall, and ground-engaging elements to anchor said second support, said handle being rotatable to rotate the first said support and make said wall taut.

3. An extensible and retractible shield that can provide shelter against the elements and that comprises a hollow housing, a relatively impervious wall, said wall being long and wide but being thin and being readily bendable, said housing having a hollow support therein, bearings that hold said support for rotation relative to said housing, a handle to rotate said support, a latch to lock said support in rotated position, said wall being bendable to wind onto and be held by said support as said support rotates relative to said housing, one end of said wall being secured to said support to be inseparable from said housing, the other end of said wall being extendable from said housing to intercept the elements, a second support for the said other end of said wall, and a ground-engaging pin that is securable to and readily separable from said second support and selectively secures said second support to the ground, said pin being dimensioned to fit within said hollow support in said housing.

4. An extensible and retractible shield that can provide shelter against the elements and that comprises a hollow housing, a relatively impervious wall, said wall being long and wide but being thin and being readily bendable, said wall being bendable for storage within said housing, one end of said wall being inseparable from said housing, the other end of said wall being extendable from said housing to intercept the elements, a support that is securable to and readily separable from said wall adjacent the said other end thereof to hold said wall in extended position, said support having a hole in the top thereof and a hole in the bottom thereof, a loop at the top of said wall adjacent said other end of said wall and a loop at the bottom of said wall adjacent said other end of said wall, a pin that is extendable through the loop at the top of said wall and into said hole in the top of said support, and a pin that is extendable through the loop at the bottom of said wall and into said hole in the bottom of said support.

5. An extensible and retractible shield that can provide shelter against the elements and that comprises a hollow housing, a relatively impervious wall, said wall being long and wide but being thin and being readily bendable, said wall being bendable for storage within said housing, one end of said wall being inseparable from said housing, the other end of said wall being extendable from said housing to intercept the elements, a ground-engaging anchor on the bottom of said housing to hold the bottom of said housing fixed relative to the ground, and a support that is securable to said wall adjacent the said other end thereof to hold said wall in extended position, said anchor having a projecting point on one side thereof and being relatively flat on the other side thereof, said anchor being selectively securable to said housing with its flat side or its pointed side exposed.

6. An extensible and retractible shield that can provide shelter against the elements and that comprises a hollow housing, a relatively impervious wall, said wall being long and wide but being thin and being readily bendable, said wall being bendable for storage within said housing, one end of said wall being inseparable from said housing, the other end of said wall being extendible from said housing to intercept the elements, a ground-engaging anchor with a point thereon that can penetrate the ground, a recess in said housing that can accommodate said point on said anchor, said anchor being selectively securable to said housing with said point thereon projecting from said housing or being engageable with said housing with said point in said recess, said anchor being adapted to hold the bottom of said housing fixed relative to the ground, and a support that is securable to said wall adjacent the said other end thereof to hold said wall in extended position.

7. An extensible and retractible shield that can provide shelter against the elements and that comprises a hollow housing, a relatively impervious wall, said wall being long and wide but being thin and being readily bendable, said housing having a support therein, bearings that hold said support for rotation relative to said housing, a handle to rotate said support, a latch that selectively holds said handle in any of a number of rotated positions, one end of said wall being secured to said support, said wall being bendable to wind onto and be held by said support as said handle rotates said support relative to said housing, a slot in said housing that receives said wall

and permits movement of said wall therethrough, a second handle that is secured to the other end of said wall, said second handle being wider than said slot in said housing so it always projects from said housing, one end of said wall being secured to the first said support to be inseparable from said housing, the other end of said wall being extendable from said housing to intercept the elements, a second support for the said other end of said wall, and ground-engaging elements to anchor said second support, the first said handle being rotatable to rotate the first said support and make said wall taut, said second handle serving as a carrier for the housing whenever said wall is wound onto the first said support and the first said handle is latched in one of said rotated positions.

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