Aug. 31, 1954 G. W. MATHIS 2,687,834

EQUIPMENT BOX

Filed July 3, 1950 2 Sheets-Sheet 1

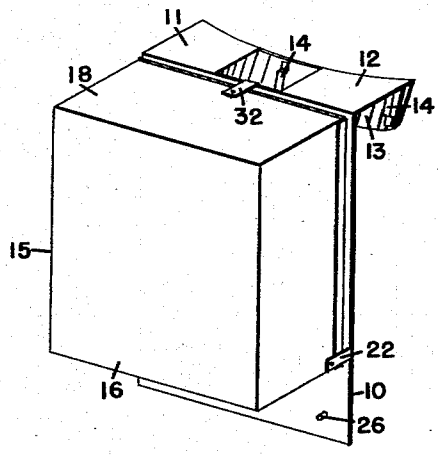


Fig. 1

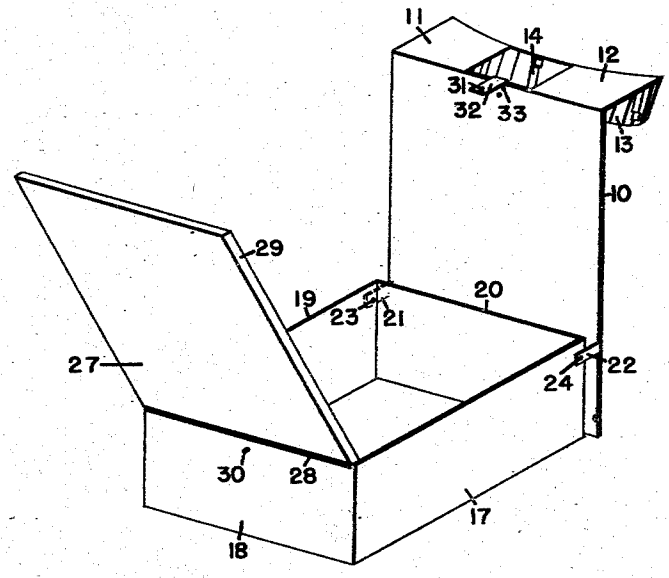


Fig. 2

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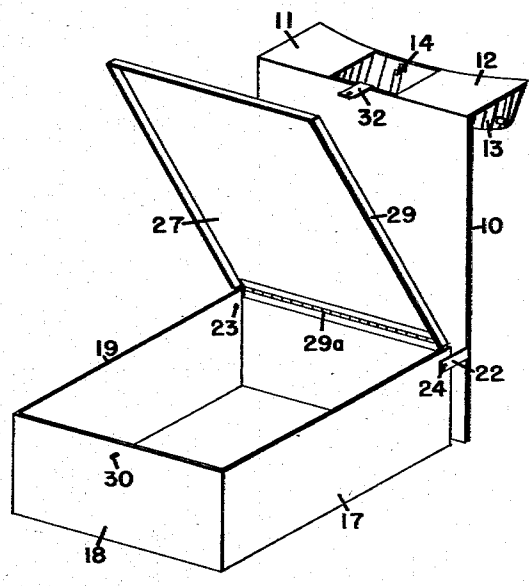


Fig. 3

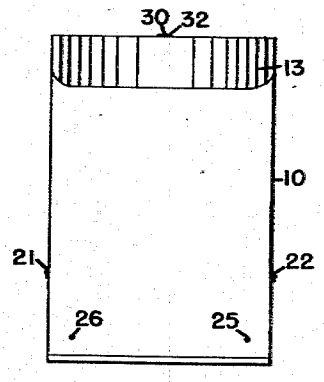


Fig. 4

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Patented Aug. 31, 1954

2,687,834

UNITED STATES PATENT OFFICE

2,687,834

EQUIPMENT BOX

Glenn Watkins Mathis, Waxahachie, Tex.

Application July 3, 1950, Serial No. 171,835

3 Claims. (Cl. 224—5)

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This invention relates to equipment boxes and more particularly to equipment boxes adapted to be supported on the body of the wearer.

An equipment box, such as the tool box of a mechanic or the tackle box of a fisherman, which is supported on the body of the wearer, usually by means of a waist belt, must be so constructed that its contents are easily accessible to the hands of the wearer when the box is opened and are prevented from falling out during the opening of the box. In addition, the box must at all times be so disposed that it will not interfere with the normal movements of the wearer.

Accordingly, it is an object of my invention to provide a new and improved equipment box adapted to be supported on the body of the wearer.

It is another object of my invention to provide a new and improved body supported equipment box which does not interfere with the movements of the wearer.

It is another object of my invention to provide a new and improved body supported equipment box whose contents are easily accessible to the wearer when it is in its open position.

It is still another object of my invention to provide a new and improved body supported equipment box whose contents are prevented from falling out during the opening movements of the equipment box.

Briefly stated, the new and improved equipment box of my invention comprises a main plate provided with a curved portion extending from its upper end which is adapted to closely engage the body of the wearer. The curved portion may be attached to the waist belt of the wearer by means of metal loops secured to the curved portion. The main plate is maintained in a substantially vertical position since the curved portion engages the waist of the wearer and the back surface of the lower portion of the main plate lies against the thigh. A substantially rectangular box having an open side is hingedly secured to the main plate at an axis near the lower end of the main plate. The open side of the receptacle is adjacent and parallel to the main plate when the equipment box is in closed position and is perpendicular to the main plate when the equipment box is in open position. In order to prevent the contents of the box from falling out when the box is being moved from closed-to-open or open-to-closed positions, a lid is hingedly secured to the box adjacent the open side of the box and permits the box to be closed before the box is moved from one position to another. In

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one embodiment of my invention the lid is secured to the side of the box adjacent the axis at which the box is hingedly secured to the main plate. In another embodiment of my invention, the lid is hingedly secured to the side of the box which is remote from the axis at which the box is secured to the main plate.

For a better understanding of my invention, reference may be had to the following description taken in connection with the accompanying drawing and its scope will be pointed out in the appended claims.

In the drawing, Figure 1 is a perspective view of the equipment box showing it in closed position;

Figure 2 is a perspective view of the equipment box of Figure 1 showing it in open position;

Figure 3 is a perspective view of a modified form of the equipment box showing it in partly open position; and

Figure 4 is a back plan view of the equipment boxes shown in Figures 1 to 3.

Referring now especially to Figures 1, 2 and 4, I have illustrated a preferred embodiment of the body supported equipment box of my invention. The equipment box comprises a flat plate 10 of substantially rectangular shape having at one end a pair of spacing members 11 and 12 which extend substantially perpendicularly from plate 10. Secured to spacing members 11 and 12 is a curved plate 13 whose free end is inclined toward plate 10. Plate 10, spacing members 11 and 12, and curved plate 13 may be formed of a single piece of sheet metal which is cut and bent into the desired shape or may be separate pieces rigidly secured to one another by brazing, welding or any other suitable means. Curved plate 13 is provided with a suitable waist belt engaging means such as metal loops 14 which are secured to curved plate 13 by riveting, soldering, welding or any other suitable means. A waist belt, not shown, is passed through loops 14 and is then fastened about the waist. The equipment box is disposed at the side of the wearer. In this position the curved plate 13 engages the waist of the wearer and spacing members 11 and 12 maintaining the upper end of flat plate 10 in a position displaced from the waist of the wearer so that the upper end of flat plate 10 does not contact the body of the wearer. The lower end of flat plate 10, however, contacts the outer side of the thigh. Due to the contact of the lower end of flat plate 10 and the curved plate 13 with the body of the wearer, flat plate 10 is maintained in substantially vertical position on

the body of the wear whether the wearer is in upright, kneeling, or crouched position.

A rectangular receptacle 15 having a bottom 16 and sides 17, 18, 19 and 20 is pivotally secured to the flat plate 10. Flat plate 10 is provided with a pair of lugs 21 and 22 which extend perpendicularly from flat plate 10 and which are provided with holes to receive pins 23 and 24, respectively, which are rigidly secured to sides 19 and 17, respectively by soldering, welding, or any other suitable means. Lugs 21 and 22 and flat plate 10 may be made of a single piece of sheet metal or lugs 21 and 22 may be separate pieces secured to flat plate 10 by soldering, welding, or any other suitable means. It will be noted that pins 21 and 22 are spaced from flat plate 10 so that the edge of side 20 will clear flat plate 10 as receptacle 15 is moved pivotally about pins 21 and 22 from open to closed or closed to open positions. Flate plate 10 is also provided with a pair of stops 25 and 26 secured to the lower portion of flat plate 10 and adapted to contact side 20 of receptacle 15 when receptacle 15 is in its open position. Stops 25 and 26 are employed to maintain receptacle 15 in a position perpendicular to flat plate 10 when receptacle 15 is in open position.

Receptacle 15 is provided with a lid 27 which is secured to side 18 by means of a hinge 28. Lid 27 is provided with a flange 29 which abuts sides 17, 19 and 20 when lid 27 is in closed position. Flange 29 is preferably made to have a tight fit about sides 17, 19 and 20 in order to obviate the use of latch means to maintain lid 27 in closed position. If desired, however, any conventional latch means may be employed to lock lid 27 to receptacle 15 when lid 27 is in closed position. Hinge 28 may be designed to permit lid 27 to open only to the position shown in Figure 2. If desired, hinge 28 may be so constructed as to allow lid 27 to open completely so that the outer surface of lid 27 lies parallel to and adjacent side 18. If desired, lid 27 may be hinged to side 20, as shown in Figure 3. In this embodiment of my invention, lid 27 may be biased toward closed position by using a spring hinge 29*a* of conventional design.

In order to maintain receptacle 15 in the closed position illustrated in Figure 1, I provide a pin 30 rigidly secured to side 18 of receptacle 15 which engages in a hole 31 provided in a strip 32. Strip 32 is of substantially angular form having one end attached to plate 10 by means of rivets 33, or any other suitable fastening means, and the other end projecting substantially perpendicularly from plate 10. As receptacle 10 is pivoted about pins 23 and 24 to closed position, pin 30 contacts the upturned end of strip 32 and bends strip 32 upwardly until pin 30 enters into hole 31. Receptacle 15 is unlatched by lifting upwardly on the free end of strip 32. Strip 32, being elastic to some extent, bends and allows pin 32 to swing clear of hole 31.

The manner in which the equipment box is used will be apparent from the above description. Briefly, if the box is carried on the left side, strip 32 is lifted allowing receptacle 15 to pivot about pins 23 and 24 until it reaches the position illustrated in Figures 2 and 3 where it lies substantially parallel to the ground. Lid 27 is then lifted pivoting about hinge 28 until it reaches the position shown in Figure 2. Lid 27 will stay in this position until closed. Both hands of the wearer are therefore free to handle the contents of receptacle 15. In the embodiment illustrated

in Figure 3, the spring hinge 29 will tend to close lid 27 but lid 27 can be held open by the left elbow or left forearm while the right hand is engaged in handling the contents of receptacle 15. To bring the equipment box to closed position, lid 27 is closed and receptacle 15 is pivoted until pin 30 engages in hole 31 of strip 32. It will be noted that receptacle 15 is covered by lid 27 prior to any pivotal movement of receptacle 15 about pins 23 and 24. The contents of receptacle 15, therefore, can not fall to the ground during opening or closing movements of the equipment box.

The ready accessibility of the contents of receptacle of 15, the protection of the contents of receptacle 15 during manipulation of the equipment box, and the relative freedom of movement afforded by the position of the equipment box on the wearer are among the advantages of the illustrated preferred embodiments of my invention.

While I have shown and described preferred embodiments of my invention, it will be apparent to those skilled in the art that various changes and modifications may be made without departing from my invention, and I, therefore, aim in the appended claims to cover all such changes and modifications as fall within the true spirit and scope of my invention.

What I claim as new and desire to secure by Letters Patent of the United States is:

1. In a box to be supported at the waist at the side of a wearer; a supporting plate having an upper and a lower end; an arcuate plate having the arcuate portion thereof adapted to fit the side of a wearer rigidly secured in spaced relation to the upper end of said supporting plate with an arcuate edge of said arcuate plate being in the same plane as the upper end of said supporting plate and the ends of said arcuate plate extending away from one side of said supporting plate; said supporting plate extending downwardly below said arcuate plate, and said upper and lower ends of said supporting plate being sufficiently spaced to span the normal distance between a wearer's belt line and a point on a wearer's thigh whereby said supporting plate is adapted to engage a wearer's thigh and be held in substantially vertical position when said arcuate plate engages a wearer's waist at his belt line; a substantially rectangular receptacle pivotally secured adjacent one of its ends to the other side of said supporting plate intermediate upper and lower ends of said supporting plate, said receptacle having an open side which lies adjacent and parallel to said supporting plate when said receptacle is pivoted to closed position and perpendicular to said supporting plate when said receptacle is pivoted to open position; a lid hingedly secured to said receptacle for closing said open side, said receptacle having a side adjacent said lower end of said supporting plate which lies perpendicular to said supporting plate when said receptacle is in closed position and parallel and overlying the portion of said supporting plate adjacent said lower end when the receptacle is in open position; said lid lying adjacent said supporting plate when said receptacle is in fully closed position; and means for maintaining said receptacle in fully closed position.

2. In a box to be supported at the waist at the side of a wearer; a supporting plate having an upper and a lower end; an arcuate plate having the arcuate portion thereof adapted to fit the side of a wearer rigidly secured in spaced relation to the upper end of said supporting plate

with an arcuate edge of said arcuate plate being in the same plane as the upper end of said supporting plate and the ends of said arcuate plate extending away from one side of said supporting plate; said supporting plate extending downwardly below said arcuate plate, and said upper and lower ends of said supporting plate being sufficiently spaced to span the normal distance between a wearer's belt line and a point on a wearer's thigh whereby said supporting plate is adapted to engage a wearer's thigh and be held in substantially vertical position when said arcuate plate engages a wearer's waist at his belt line; a substantially rectangular receptacle pivotally secured adjacent one of its ends to the other side of said supporting plate intermediate upper and lower ends of said supporting plate, said receptacle having an open side which lies adjacent and parallel to said supporting plate when said receptacle is pivoted to closed position and perpendicular to said supporting plate when said receptacle is pivoted to open position; a lid hingedly secured to said receptacle for closing said open side, said receptacle having a side adjacent said lower end of said supporting plate which lies perpendicular to said supporting plate when said receptacle is in closed position and parallel and overlying the portion of said supporting plate adjacent said lower end when the receptacle is in open position; said lid lying adjacent said supporting plate when said receptacle is in fully closed position; and means for maintaniing said receptacle in fully closed position; belt engaging means secured to said arcuate plate; said receptacle secured to said supporting plate by means of lugs rigidly secured to said supporting plate which engage pins on opposite sides of said receptacle; and stop means secured to said supporting plate on the surface portion thereof between said lugs and said lower end for engaging the side of said receptacle adjacent said lower end to position said receptacle in a horizontal plane when in open position.

3. In a box to be supported at the waist at the side of a wearer; a supporting plate having an upper and a lower end; an arcuate plate having the arcuate portion thereof adapted to fit the side of a wearer rigidly secured in spaced relation to the upper end of said supporting plate with an arcuate edge of said arcuate plate being in the same plane as the upper end of said supporting plate and the ends of said arcuate plate extending away from one side of said supporting plate; said supporting plate extending downwardly below said arcuate plate, and said upper and lower ends of said supporting plate being sufficiently

spaced to span the normal distance between a wearer's belt line and a point on a wearer's thigh whereby said supporting plate is adapted to engage a wearer's thigh and be held in substantially vertical position when said arcuate plate engages a wearer's waist at his belt line; a substantially rectangular receptacle pivotally secured adjacent one of its ends to the other side of said supporting plate intermediate upper and lower ends of said supporting plate, said receptacle having an open side which lies adjacent and parallel to said supporting plate when said receptacle is pivoted to closed position and perpendicular to said supporting plate when said receptacle is pivoted to open position; a lid hingedly secured to said receptacle for closing said open side, said receptacle having a side adjacent said lower end of said supporting plate which lies perpendicular to said supporting plate when said receptacle is in closed position and parallel and overlying the portion of said supporting plate adjacent said lower end when the receptacle is in open position; said lid lying adjacent said supporting plate when said receptacle is in fully closed position; and means for maintaining said receptacle in fully closed position; belt engaging means secured to said arcuate plate; said receptacle secured to said supporting plate by means of lugs rigidly secured to said supporting plate which engage pins on opposite sides of said receptacle; and stop means secured to said supporting plate on the surface portion thereof between said lugs and said lower end for engaging the side of said receptacle adjacent said lower end to position said receptacle in a horizontal plane when in open position; and said lid being hinged to the side of said receptacle opposite said side adjacent the lower end of said supporting plate.

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