

April 7, 1959

W. J. PARSONS ET AL

2,880,857

TOOL CONTAINER

Filed Dec. 28, 1955

2 Sheets-Sheet 1

Fig. 1

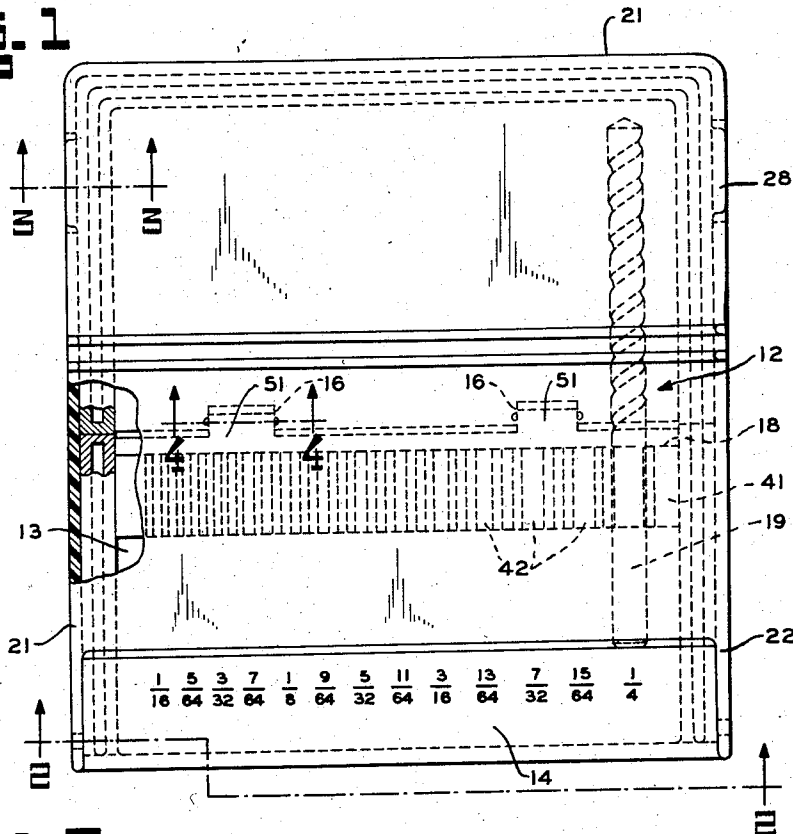


Fig. 2

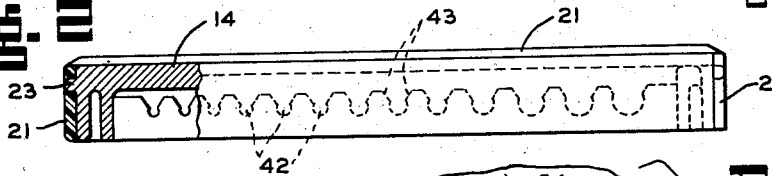


Fig. 3

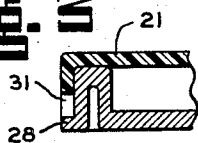


Fig. 4

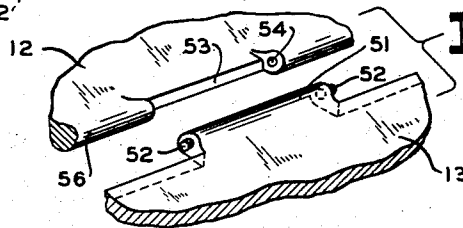
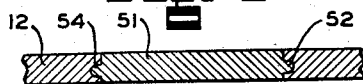
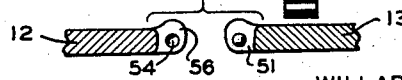


Fig. 6



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Fig. 7

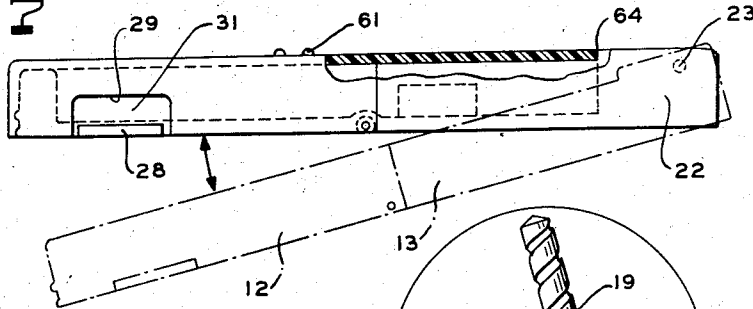


Fig. 8

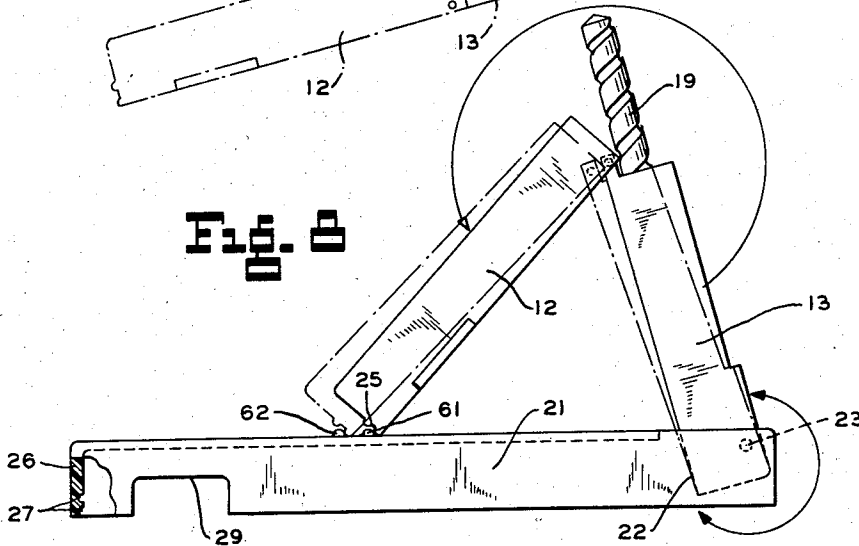


Fig. 9

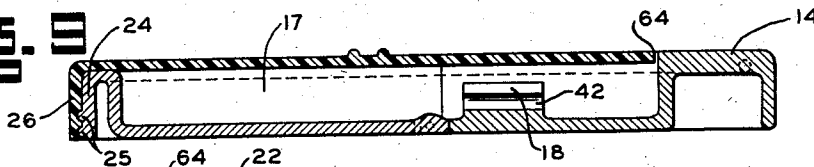
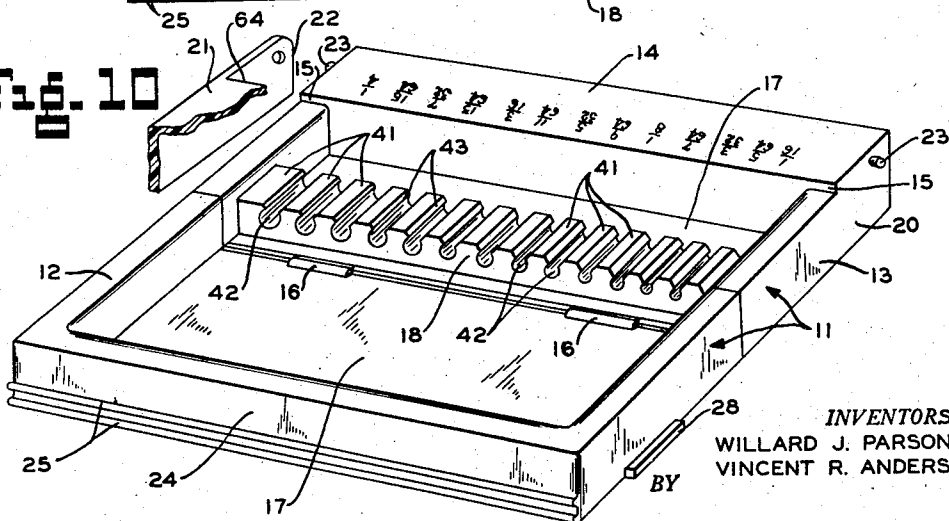


Fig. 10



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TOOL CONTAINER

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Application December 28, 1955, Serial No. 555,881

1 Claim. (Cl. 206—17)

This invention relates to improvements in tool containers and more particularly to a container or case for supporting a plurality of shanked tools, such as drill bits, reamers, punches and the like, in aligned spaced relationship.

The novel compact shanked tool case of the present invention embodies a hinged base which assumes an inverted V aspect presenting the tools in upstanding position with their working ends unobstructed when the case is open, together with means within the base for retaining the tools, and a cover for the case cooperating with the base in such a manner that it serves as a supporting stand therefore when the case is open. While the novel case is suitable for containing a wide variety of shanked tools, it is particularly well adapted as a drill bit case. For reasons of simplicity, the container will be referred to as a drill case in the following description.

In the drawings:

Fig. 1 is a plan view of the case of the present invention with a section thereof cut away to illustrate a preferred side construction;

Fig. 2 is an elevation partly in section, taken on the line 2—2 of Fig. 2;

Fig. 3 is a section taken on the line 3—3 of Fig. 1;

Fig. 4 is a section taken on the line 4—4 of Fig. 1, illustrating a hinge construction for the base;

Fig. 5 is a fragmentary perspective view further illustrating the hinge construction;

Fig. 6 is a fragmentary section taken normal to the axis of the hinge of Fig. 5, further illustrating the conformation of the base at the hinge;

Fig. 7 is a side elevation of the closed case with a section thereof cut away to illustrate the cover construction. Fig. 7 also illustrates by interrupted lines the relative movement of the base and cover during opening or closing;

Fig. 8 is a side elevation of the case in open position, illustrating by interrupted lines the manner in which the inclination of the base may be adjusted in open position. Arrows in this figure indicate the direction of rotation of the members of the hinged base, and relative rotation of cover and base during opening;

Fig. 9 is a vertical section of the case in closed position; and

Fig. 10 is a perspective view of the base together with a portion of the cover.

Referring now in further detail to the drawings and more particularly Fig. 10 showing a preferred embodiment of the invention, a base 11 comprises an upper base member 12 with raised sides and end, a lower base member 13 with similar raised sides but with one end or block 14 further raised to provide steps 15 at the intersection of said sides and block, hinge means 16 at the open ends of said members 12 and 13 joining them to form the integrated base having a recessed central portion 17 therein. A tray 18, adapted to receive the shanks of drill bits 19, is positioned in lower base member 13 intermediate hinges 16 and block 14. As best shown in Figs. 7, 8 and 9, a cover 21 with downwardly projecting sides and end

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adapted to at least enclose the recessed portion of the base is pivotally associated at its open end as at 22 with oppositely extending cylindrical side projections 23 on block 14, said projections serving as pivot points about which the cover or base may rotate during opening and closing.

As further illustrated in Figs. 7—10, end 24 of upper base member 12 bears one or more transverse bead-like external projections 25, and corresponding end portion 26 of the cover is suitably recessed as at 27 to receive projections 25, thereby forming a snap closure for the case. A lug 28 projects from each side of the upper base 12, and the corresponding portion of the cover side is interrupted or cut away as at 29 to receive projecting lug 28 when the case is closed. The cut away portion 29 is sufficiently deeper than the height of projecting lugs 28 to provide a space 31 for insertion of the end of the thumb or finger to facilitate opening of the aforementioned snap closure.

The upper surface 41 of tray 18 is interrupted by a series of side-by-side, undercut, substantially cylindrical grooves 42, with the surface portions 41 preferably beveled as at 43 at their sides, adapted to receive and retain drill bit shanks by snap-in fit. In the case as illustrated in Figs. 1, 2 and 10, grooves 42 are of graduated diameter to receive various sizes of bits. For proper identification of each of the bits, the upper surface of the block 14 along the projected axis of each of the grooves may be moulded, etched, printed or otherwise marked with the proper bit diameter.

Referring now to Figs. 1 and 4—6 and the preferred hinges 16 illustrated therein, it will be seen that the lower base member 13 bears a pair of projecting shanks 51 with each of said shanks having a pair of oppositely extending pintles 52. Upper base member 12 is recessed as at 53 to receive shanks 51 and tapped or recessed to provide sockets 54 to receive and retain the pintles 52 by snap-in fit, thereby forming a hinged joint. The upper base member 12 is desirably beaded as at 56 to provide the requisite wall thickness for sockets 54. It should be noted that either of the base members 12 and 13 may bear the projecting hinge shanks, and either member may be recessed to receive the shanks.

Referring to Figs. 7—9, the upper surface of cover 21 is provided with means such as transverse rib-like projections 61 against which the bead-like projections 25 of the upper base member 12 rest when the case is open. As seen in Fig. 8, a second similar projection 62 in spaced relationship to the first provides means for adjusting the inclination of tray-carrying base member 13. It should also be noted that cover 21 is so constructed at its pivotal end, and the projections 23 so located on the block 14 that cover and base are free to rotate relative to one another a distance greater than 270°, i.e., a distance at least sufficient to permit the base to assume the inverted V aspect illustrated in Fig. 8 with the bits in upstanding position and their ends unobstructed. Termination of the upper surface of the cover as at 64 opposite step 15 permits such relative movement.

In its preferred form, the container of the present invention consists of only three severable members, namely, upper base member 12, lower base member 13, and cover 21, with tray 18 an integral part of lower base member 13. Accordingly, each member embodying the projections, recesses, etc., above described may be formed by moulding a suitable plastic material. Opaque polyethylene is a preferred plastic for the base members, and one which is sufficiently elastic to permit easy insertion of hinge pintles 52 into their sockets 54. The cover is desirably transparent to afford full visibility of the contents, yet sufficiently rugged to provide ample protection for the tools. It may be formed of clear polystyrene or a

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clear acrylic polymer. When provided with a transparent cover, the case becomes an excellent device for displaying the merchandise therein contained. In Figs. 1-3 and 9, there is illustrated a preferred channel construction for the sides of both base members and the end of the upper member and the block 14 of the lower base member. Channeled sides and ends, of course, provide strength and rigidity while affording a substantial saving in material. However, the present invention is not limited to this particular channeled side and end construction for the base members, nor to the above mentioned materials of construction.

What is claimed and desired to be secured by Letters Patent is:

A container for supporting a plurality of tools in substantially parallel spaced relationship comprising a recessed base member hinged intermediate its ends to permit folding in inverted V position when said container is open, a tray within the recess of said base extending transversely of the sides thereof at a point intermediate said hinge and one end of said base, said tray being adapted to receive and retain the shanks of tools by snap-in fit, with the working ends of said tools projecting beyond said tray in the direction of said hinge, a cover

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member of unitary construction with three sides, adapted to enclose the side portions of said base and one end thereof, means pivotally associating said cover at its sides and adjacent its open end directly with the respective sides of said base adjacent its tray end, whereby said base may rotate about said pivotal means during opening, and means in the external surface of said cover for supporting the opposed end of said base when the container is open, thereby maintaining said base in inverted V aspect with said tools in upstanding position and their working ends unobstructed.

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