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TILTABLE SHELVES DRILL HOLDER CASE

Filed June 24, 1944

2 Sheets-Sheet 1

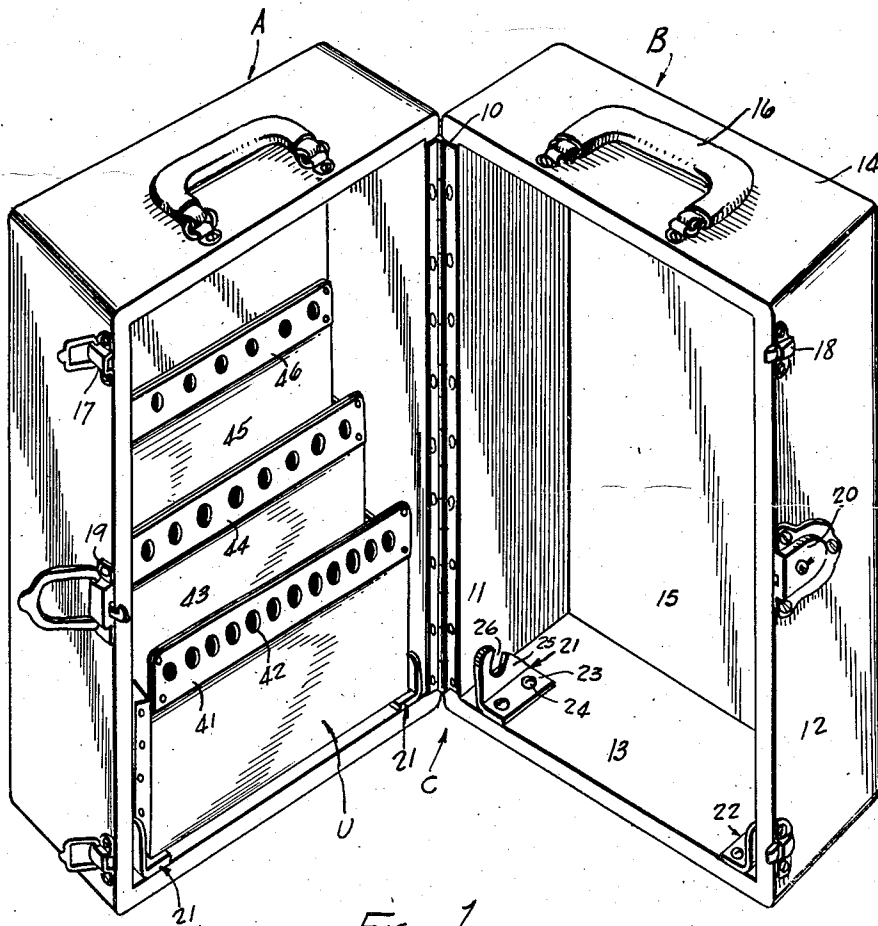


FIG. 1

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2 Sheets-Sheet 2

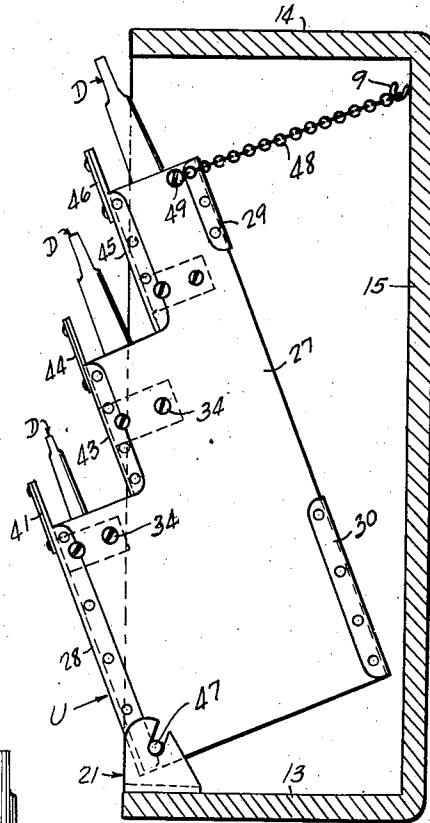


FIG. 2

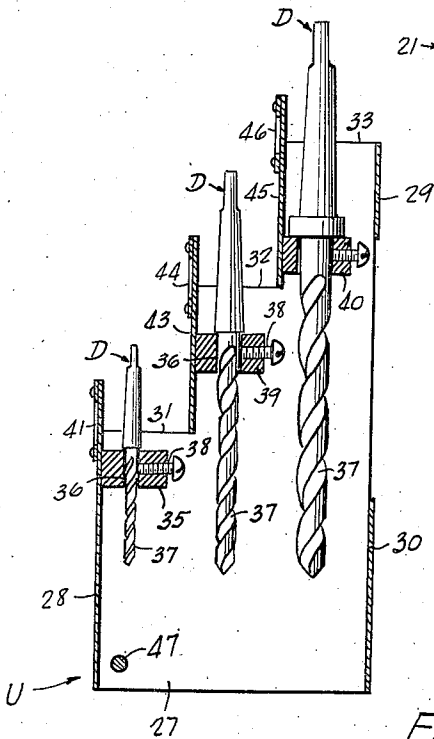


FIG. 3

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TILTABLE SHELVES DRILL HOLDER CASE

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1 Claim. (Cl. 206—17)

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This invention relates to drill holders and is concerned primarily with a holder designed to accommodate a complete set of drills in orderly arrangement.

Under present day working conditions it is necessary that a skilled mechanic, machinist, tool maker or other workers engaged in similar activities to have available a set of drills of different sizes. In some instances the number of drills in a set may be comparatively small while in other cases, a complete set extending over a wide range of sizes is required. In any event, the user of the drills must from time to time select a particular size drill necessary for any particular operation. When the drills are disposed in a haphazard or disorderly arrangement, considerable difficulty and inconvenience is experienced in selecting. An attempt has been made to provide holders which will accommodate a set of drills, but the results of these known efforts usually result in a set of drills occupying so much space in the shop as to render their use undesirable in many cases.

Moreover, mechanics are oftentimes called out on jobs and required to take their tools with them. The usual practice has been for the mechanic to place a bunch of drills in his bag or kit, and when any particular drill is needed, it is selected from this group. Obviously this is a highly inconvenient arrangement for the mechanic who is required to carry about the tools with him. It is these undesirable and unsatisfactory conditions which have prompted the present invention.

Accordingly, the invention has in view as its foremost objective the provision of a drill holder which accommodates a complete set of drills in an orderly and compact arrangement, with each drill held in a position from which it is readily accessible. In carrying out this idea a plurality of shelves are arranged in tiers one above and behind the other. Each shelf is formed with a plurality of openings each of which is designed to receive a drill of a particular size. An important object of the invention lies in the provision of means for properly supporting each drill in its opening. In many instances the fluted shank of the drill is of greater diameter than the bit part which is clamped in the chuck. Thus, the drill might fall through a hole if the proper provision were not made for supporting it.

Accordingly, a further object, is the provision, in a drill holder of the character aforesaid, of a supporting pin which is associated with each drill opening and which is adapted to fit into the flute of a drill to support the latter in position.

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A further object of the invention is the provision, in a drill holder of the type noted, of an upright panel which is disposed in front of each shelf. This panel carries indicia for indicating the size of the drill in each opening.

A further object in view is the provision of a drill holder made following the above noted precepts and which is of a portable nature. In attaining this end, the invention makes use of a portable casing comprising complementary sections that are hinged together. Suitable means is provided for detachably holding these sections in closed position. Each section contains a drill holder unit of the type above described.

An important object is the provision, in a portable drill holder of the type above noted, of means for movably positioning each holding unit in its casing section. It is important that each of these units be movable into a position from which any drill may be readily removed. Each unit is, therefore, pivotably mounted on its lower front edge which permits of the unit being tilted forwardly. Means for limiting this forward movement is also provided.

Yet another object is the provision, in a portable drill holder of the character aforesaid, of a holding unit which is completely removable from its casing section. In attaining this end a detachable type of pivot is employed at the lower front edge of the unit. The means for limiting the tilting movement is also detachable.

Various other more detailed objects and advantages such as arise in connection with carrying out the above noted thoughts in a practical embodiment will in part become apparent and in part be hereinafter stated as the description of the invention proceeds.

The invention therefore comprises a portable drill holder consisting of a casing made of two complementary sections hinged together. Each of these sections houses a holder unit which is mounted therein by a detachable pivotal connection adjacent its lower front edge and detachable means is provided for limiting the tilting movement. Each unit comprises a series of shelves arranged in tiers and each shelf is formed with a plurality of openings each of which is designed to receive a drill of certain size. A holding pin is associated with the opening and extends therinto whereby it is adapted to cooperate with the flute of a drill to support the same in position. A panel is associated with each shelf and carries indicia designating the size of the drill in each opening.

For a full and more complete understanding of the invention, reference may be had to the fol-

lowing description and accompanying drawings wherein:

Figure 1 is a perspective of a drill holder made in accordance with this invention and shown in open position.

Figure 2 is a vertical section through one of the casing sections of Figure 1 showing the holding unit in a tilted position; and

Figure 3 is a vertical section through a holding unit showing the drill in position therein.

Referring now to the drawings wherein like reference characters denote corresponding parts and first more particularly to Figure 1, a portable casing is referred to in its entirety by the reference character C. This casing comprises the complementary sections A and B which are hinged together as designated at 10. The casing sections A and B are substantial duplicates in construction and it is, therefore, deemed necessary to describe only one section in detail for the purpose of this specification. Thus each of these casing sections comprises an inner side wall 11, an outer wall 12, a bottom end wall 13 and a top end wall 14. These walls 11, 12, 13 and 14 define a rectangular structure which is open on its inner face and closed on its outer face by a large flat wall 15. It will be noted that the hinge connection 10 runs along the free edges of the inner walls 11.

Each of the top end walls 14 has pivotally mounted thereon a hand grip 16. Thus, with the casing sections A and B closed both of the grips 16 may be readily grasped in one hand which facilitates the carrying about of the casing.

It is intended that the casing sections A and B be detachably held in closed position. Any suitable type of snap fastener may be employed for this purpose. In the illustrated embodiment two snap fasteners are employed. One is located adjacent to each end of the casing. Thus, an element 17 of each snap fastener is mounted on the outer wall 12 of the casing section A, while the complementary element 18 of the fastener is mounted in a similar position on the outer wall 12 of the casing section B. Provision may also be made for locking the casing in a closed position. Part of the locking mechanism is shown at 19 on the casing section A and the rest of the lock which cooperates therewith is indicated at 20 on the casing section B. Any suitable type of lock may be employed.

It might be well to note at this point that the casing C may be made from any suitable material such as wood, metal or plastic. As illustrated in the drawings, the casing C is shown as being made from wood, although this is especially noted as not being a limitation of the invention.

The inner face of each bottom end wall 13 carries a pair of brackets 21 and 22 which are spaced apart as illustrated. Each of these brackets includes a base flange 23 which may be affixed to the bottom end wall 13 in any preferred manner such as by the screw fastening elements shown at 24. Upstanding from each base flange 23 is an ear 25, and each ear 25 is formed with an inclined slot 26.

Referring now more particularly to Figure 2, it will be noted that a hook screw 9 is screwed into the large flat wall 15 adjacent to each upper corner. The purpose of the hooks 9 will later become apparent.

A drill holder unit is intended to be tiltably and removably positioned in each of the casing sections A and B. One of these units is referred to in its entirety by the reference character U

and is shown per se in Figure 3. Each unit U comprises a pair of end walls 27, a short front wall 28 and at the back end the walls 27 are joined by top strip 29 and a bottom strip 30. Each of the end walls 27 is cut away to provide a stepped formation. The steps in each of these end walls are designated by the horizontal edges 31, 32 and 33. Positioned below the step edge 31 and preferably anchored to both end walls 27 as by screw elements 34 (Figure 2) is a shelf number 35. This shelf number 35 is formed with a plurality of openings 36, each of which is designed to receive the shank of a drill. Such a drill is indicated at D in Figure 3. The drill D will include a shank formed with a flute 37. A pin which may take the form of a screw 38 has an end projecting into the opening 36 where it is adapted to be received in the flute 37 to support the drill D in position.

Another shelf 39 is positioned in a similar manner beneath the step edge 32 and is also provided with a series of openings 36 with each of which cooperates a screw 38. Another shelf 40 is arranged beneath the step edge 33.

It is evident that a series of drills D is supported by the shelf 35, another series by the shelf 39 and still another by the shelf 40. Moreover definite provision is made for holding each drill in a position in which the bit portion extends up into a position in which it is seen and is accessible.

The front wall 28 is continued up above the step edge 31 as is clearly brought out in Figures 2 and 3 and this portion of the front wall 28 constitutes a panel that carries indicia for designating the sizes of drills in the openings 36. The indicia may be held in place by a strip 41 (Figure 1) which may be affixed upon the outer face of the upper portion of the front wall 28. This strip 41 is preferably formed with a series of openings 42 which correspond in number and arrangement to the openings 36 in the shelf 35.

A panel 43 extends between the end walls 27 above the step edge 31 and projects above the step edge 32. The upper portion of this panel also carries indicia for the drills which are held in the openings 36 in the shelf 39. A strip 44 (Figure 1) that corresponds to the strip 41 is carried by the panel 43.

Still another panel 45 extends between the end walls 27 above the step edge 32 and projects above the top edge 33. This panel 45 carries indicia for the drill held in the shelf 40 as indicated by the strip 46.

Extending outwardly from each of the end walls 27 is a pivot pin 47. Each of the pivot pins 47 is received in one of the slots 25 of the brackets 21 and 22.

Adjacent the top edges 33 each of the end walls 27 has anchored one end of a chain 48, the anchoring being indicated at 49. The other ends of the chains 48 are detachably secured to the hooks 9.

Under ordinary conditions a complete set of drills may be held by the units U which are positioned in the casing section A and B.

When the drills are not in use the casing C may be closed and carried about from place to place. When the use of the drills is required, the casing C is opened and the upper portion of the unit U is tilted forwardly on the pivot pins 47. This forward movement will be limited by the chains 48 and the unit U will assume substantially the position shown in Figure 2. In this position any of the drills in any of the tiers is accessible and may readily be withdrawn.

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If desired, either of the units U may be completely removed from its casing section by detaching the chain 48 from the hooks 9 and removing the pivot pins 47 from the slots 26. Such a unit may then be set down on any appropriate supporting surface or it might be suspended from a suitable location. In any event the various drills are at all times maintained in an orderly arrangement and in a position in which they may be readily located and withdrawn with a minimum of effort.

While a preferred specific embodiment of the invention is hereinbefore set forth, it is to be clearly understood that the invention is not to be limited to the exact constructions illustrated and described because various modifications of these details may be provided in putting the invention into practice within the purview of the appended claim.

What is claimed is:

A drill holder of the character described, com-

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prising a casing consisting of a pair of complementary casing sections, a drill holder unit tiltably and removably mounted in each casing section, each drill holder unit comprising stepped end walls joined by a front end wall and rear strips, a plurality of shelves extending between said end walls and corresponding in position to said stepped construction, each of said shelves having a series of openings; a drill supporting pin associated with each opening and having an end projecting thereinto, a panel projecting above each of the upper shelves, the upper edge of the said front end wall extending upward above the bottom shelf to form an extending panel and an indicating strip carried by each panel, each of said indicating strips having a series of openings corresponding in number and arrangement to the series of openings in the shelf with which it is associated.

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