April 19, 1955 J. P. THON 2,706,576

KIT FOR PIPE NIPPLES AND THE LIKE

Filed Aug. 24, 1951

FIG 1

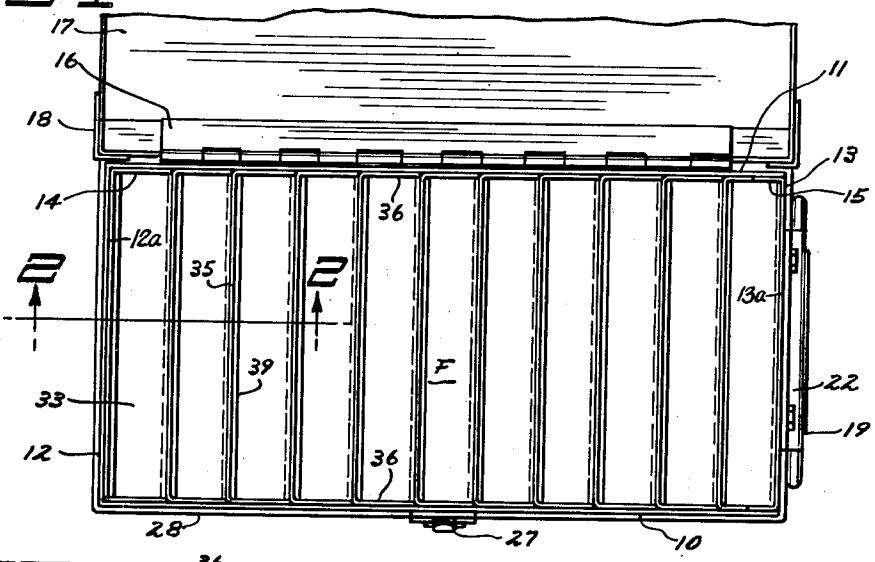


FIG 2

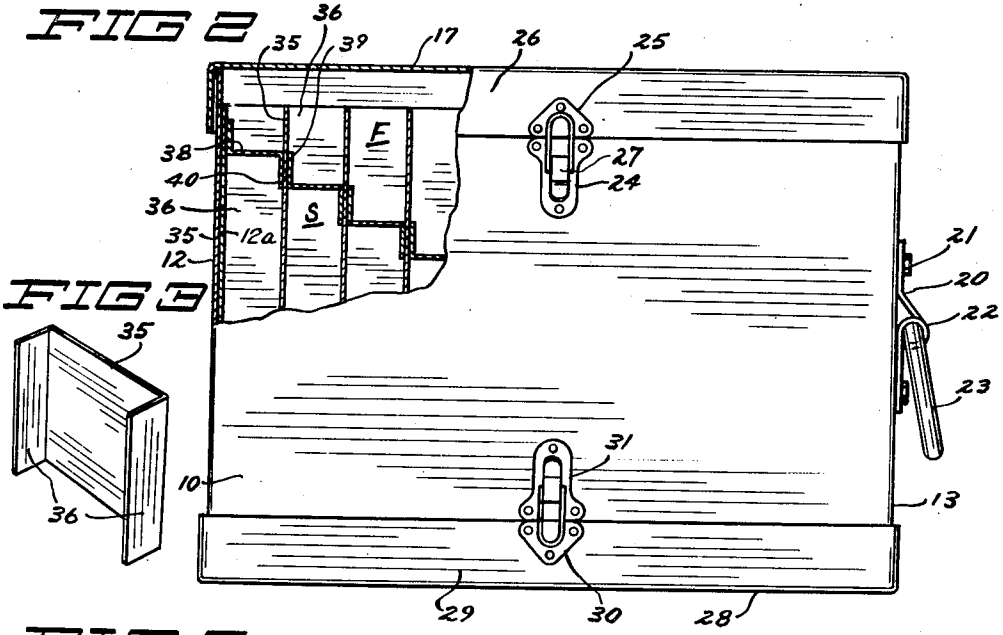
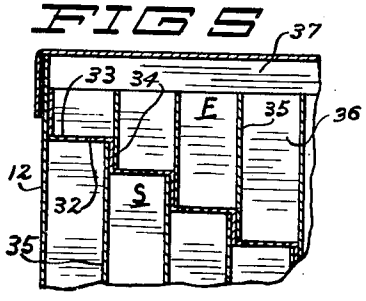


FIG 3

FIG 5



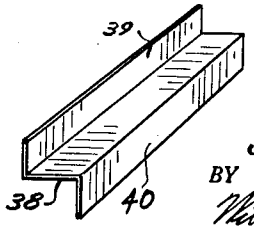


FIG 4

INVENTOR.
JAMES P. THON
BY
Williamson & Williamson
ATTORNEYS

United States Patent Office

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KIT FOR PIPE NIPPLES AND THE LIKE

James P. Thon, Owatonna, Minn.

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1 Claim. (Cl. 220—20)

This invention relates to compartmented boxes and more particularly to that type of box which is adapted to compactly contain classified articles and maintain them in readiness for selection or for display purposes.

It is a prime object of the invention to provide a box having a novel arrangement of partitioned structure with oppositely disposed series of various sized compartments or cells and wherein the partitions co-act with each other within the box walls to provide structural strength and to utilize the entire space in the box.

Another object of this invention is to provide stepped partitions disposed between vertical partitions in a box structure so that the tread portions of the stepped partitions each form a common bottom for oppositely disposed compartments and the risers of the steps form co-extending surfaces for fastening the compartment partitions together.

It is a further object of my invention to provide a box compartment structure in which a series of various sized compartments or cells comprise an upper portion of the box when it is lying in one position with a first movable cover providing access thereto; and when the box is inverted with the first cover closed the second opposite series of compartments become the top portion of the box and likewise are accessible when the second movable cover thereover is moved to an open position.

These and other objects and advantages of my invention will more fully appear from the following description made in connection with the accompanying drawings wherein like reference characters refer to similar parts throughout the several views and in which;

Fig. 1 shows a top view of one form of my compartmented box with the top cover in open position and shown only in fragment.

Fig. 2 is a side elevation of the box shown in Fig. 1 with a segmented vertical sectional view taken on the lines 2—2 of Fig. 1.

Fig. 3 is a detailed perspective view of one of the vertical partition sheets.

Fig. 4 is a detailed perspective view of the transverse partition sheet employed in the structure of Fig. 1.

Fig. 5 is a segmented vertical section of an alternate structure taken in the same portion of a similar box as the sectional segment shown in Fig. 2.

Referring more particularly to the drawings my novel compartmented box consists of a side wall **10** and a side wall **11** in spaced parallel relation. End walls **12** and **13** join the side edges of the walls **10** and **11** so as to form a rectangular frame. The end walls **12** and **13** may be reinforced as by additional plates or walls **12***a* and **13***a* in juxtaposed relation. The box is formed preferably of sheet metal such as steel and all the parts may be spot-welded or otherwise secured throughout the structure wherever it is desired to fix one part to another. Thus walls **12***a* and **13***a* may have flanged portions as at **14** on wall **12***a* and **15** on wall **13***a*. At the upper edge of side wall **11** as viewed in Fig. 1 a hinge element **16** is attached between the side wall and the cover wall **17**. The cover may have L-shaped corner reinforcements **18** for additional strength. Disposed on the outside face of the end wall **13** is a handle element **19** which may be formed of an ordinary plate **20** bolted or otherwise secured to the wall **13** at **21** and containing a cylindrical portion **22** in which the hand grip **23** is pivotally secured. On the side wall **10** as viewed in Fig. 2 a cooperating latch member **24** is disposed with one detent portion **25** being affixed to the front flange **26** of cover **17** and the cooperating detent **27** being attached to the side wall **10**. At the bottom of the box as shown is a cover wall **28** having flange sides **29** to one of which is attached a latch member **30** cooperating with detent **31** attached in turn to side wall **10** near its lower edge.

In the structure as shown in Figs. 1 and 2 the vertical partition sheets **35** with their longitudinally disposed flanges **36** extend vertically for the entire height of the partition structure and are thus all equal in length. In this preferred structure as well as in the alternative structure a uniform space may exist between the tops of the partition sheets **35** with their flanges **36** and the plane of the cover **17**. It is, of course, understood that the partition sheets **35** and flanges **36** may extend all the way to the plane of the cover **17** and to the plane of the cover **28**. It has been found useful, however, to maintain this space between the extremities of the partition sheets **35** and the covers **17** and **28** so that articles placed lengthwise in the compartments may extend short distances above the tops of the partition sheets in order to be readily grasped by the user. Transversely disposed sheets or plates **38** as shown in detail in Fig. 4 traverse the vertical channels formed between the vertical partition sheets **35** as shown in Fig. 2. An upwardly extending flange **39** on each plate **38** is fixed to each of the partition sheets **35** and downwardly extending flange **40** on the plate **38** is fixed to the next adjoining partition sheet **35**. Where it is not necessary to have the additional structural strength fastening means may be employed between a vertical partition sheet **35** and only one of the flange members **39** or **40** with satisfactory results. Each of the transverse partition sheets or plates **38** may be placed at such a vertical position between the partition sheets **35** as to form a compartment of depth varying from its adjoining compartment as required for the specific type of article or articles to be classified and retained within the box.

It will be understood that I may use other types of materials such as molded plastic for the construction of my box and that the cellular structure may be formed from a one-piece molding operation as well as from separately formed partition sheets. In the case of such one-piece molded cellular structure the inside compartments may be formed as a unit and inserted into an empty box provided with double covers as hereinbefore described. The compartmented cellular structure may thus of itself be of novel construction regardless of the box in which it may be placed.

In the alternative structure shown in Fig. 5 a unitary stepped partition sheet **32** extends from the upper edge of wall **12** transversely of the entire box to the lower edge of wall **13** and is affixed to the respective end walls **12** and **13** by means such as spot welding. The stepped partition **32** has a tread portion **33** and a riser portion **34** as in the case of ordinary structural steps. It will be noted that the stepped partition is double-faced and presents the same tread and riser arrangement when inverted.

In the alternative structure shown in Fig. 5 the first series of compartments indicated generally at F is formed above the stepped partition **32** by vertical partition sheets **35** having the same width between parallel longitudinally extending flanges **36** but varying in length. The face of each of the partition sheets **35** having the same width between parallel longitudinally extending flanges **36** but varying in length. The face of each of the partition sheets **35** at the bottom thereof and opposite the laterally extending flanges **36** is attached as by welding to each of the riser faces **34** of the stepped partition **32** and the outwardly extending flanges **36** are fastened to the side walls **10** and **11**. The flanges **36** may abut against the face of the next partition sheet as shown or may extend only part way toward the face. Successive pairs of vertical partition sheets thus define a vertical compartment having the tread portion **33** of the stepped partition as a bottom therefor.

A second series of compartments is indicated generally at S. These compartments may be symmetrically disposed with respect to the upper series of compartments F with the flange portions **36** of the partition sheets **35** extending to the left as viewed in Fig. 5 whereas the

flanges **36** extend to the right in the same view in the case of the upper series of compartments F.

It is thus seen that I have constructed a novel and efficient box, utilizing all the space therein for the purpose of forming a plurality of compartments having various depths which may be used to contain classified articles such as workmen's supplies and tools or for displaying a multiplicity of the same articles having different sizes or different articles grouped in some other convenient classification. A specific example of the use to which my box may be put is the classification and retaining for convenient selection of pipe nipples for use by plumbers. Pipe nipples corresponding in length to each compartment may be placed therein and each compartment may contain one or more pipes having different diameters in the same length of nipple. In addition it will be observed that the transverse partitions may form two symmetrical series of compartments so that in the specific example cited black iron nipples may be placed in one series of compartments and galvanized iron nipples in the other series. Both covers **17** and **28** are maintained in a latched condition during carrying or when the box is not otherwise in use. When it is desired to view the articles contained therein or to remove any of them, the box is placed with the cover **28** at the bottom in order to gain access to the series of compartments denoted by the character F. When it is desired to gain access to the compartments S the cover **17** is placed at the bottom and the box will appear in inverted position from that shown in Fig. 2.

It will, of course, be understood that various changes may be made in the form, details, arrangement and proportions of the parts without departing from the scope of my invention.

What I claim is:

A container for pipe nipples and the like of varying

sizes and lengths comprising a substantially rectangular wall structure, two of the walls in opposed relation providing openable covers, a plurality of vertically disposed spaced parallel sheets forming vertical open-ended channels from one cover to the other, a transverse partition sheet mounted intermediate the ends of each open-ended channel to divide the channel into two opposed open-ended compartments, a flange structure at the side edges of each of said partition sheets having an upwardly disposed flange at one side and a downwardly disposed flange at the other side, each of said vertical sheets providing a common partition between two adjoining compartments and an upwardly disposed flange of each of said transverse partition sheets being fastened to each vertical sheet in opposed relation to a downwardly disposed flange also secured to the same partition sheet so as to cooperatively strengthen the compartment structure and at the same time provide a stepped series of narrow rectangular compartments for holding articles such as pipe nipples of dimension appropriate for a specific compartment.

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