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Levin

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[45] **May 21, 1974**

[54] **TRANSIT/COMBINATION CASE PROVIDING UNIQUE LATCH ACCESSIBILITY AND NOVEL STACKING AND LATCHING FEATURES**

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[22] Filed: **Mar. 10, 1972**

[21] Appl. No.: **233,473**

[52] **U.S. Cl.** ..... **312/308,** 220/55 T, 220/46 R, 220/1.5

[51] **Int. Cl.** **B65d 21/00**

[58] **Field of Search** .. 220/97 R, 97 C, 97 D, 23–83, 220/59, 60, 55 T, 55 BD, 1.5, 46 R; 292/DIG. 49, DIG. 42, 256.69; 24/270, 68 T; 206/190.37; 229/DIG. 1

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Attorney, Agent, or Firm—John T. O'Halloran; Menotti J. Lombardi, Jr.; Richard A. Menelly

[57] **ABSTRACT**

This disclosure describes improvements in transit/-combination case design. The transit/combination case cover latches are mounted in angled recesses on each of the four sides of the case cover to permit easy removal thereof from the front when stacked with other cases. Novel arrangements of cover latching mechanisms which are multi-functional to provide a hinging capability are disclosed which are operable in the angled recesses of the cover. Multi-functional case body reinforcement and stacking facilities are included in the form of complementary elongated raised portions and depressions in the top and underside of the case body respectively, which serve the double utility on the inner surface of the case bottom of being slides, or of providing bases therefore, to facilitate easy removal of the case contents. Provision is also made for pivotable cover latch mechanisms which provide the additional function of intercase latching when in the stacked mode. In a preferred embodiment of latch mechanism having hinging capability and "round-the-corner" operation required from the mounting thereof in the angled recesses of the case cover, the latch hook is utilized as the tension member of the pivot arrangement, while the compression member of the pivot arrangement forms an integral part of the latch itself.

16 Claims, 22 Drawing Figures

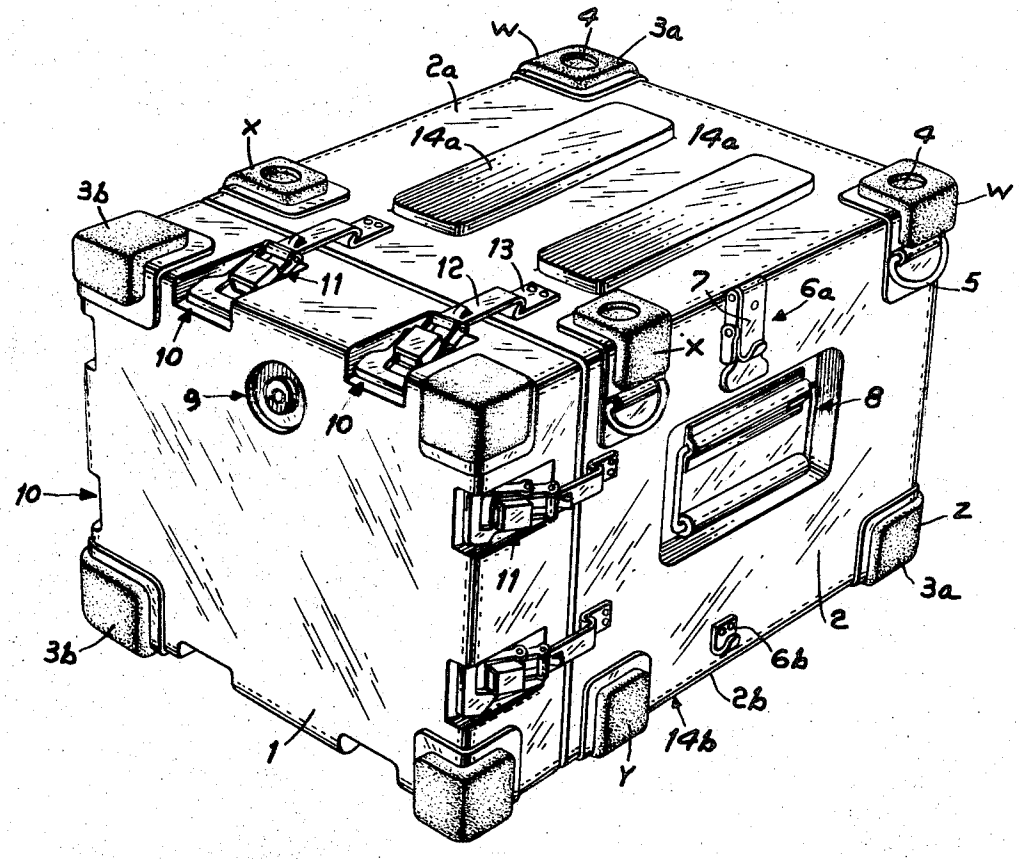


Fig. 1

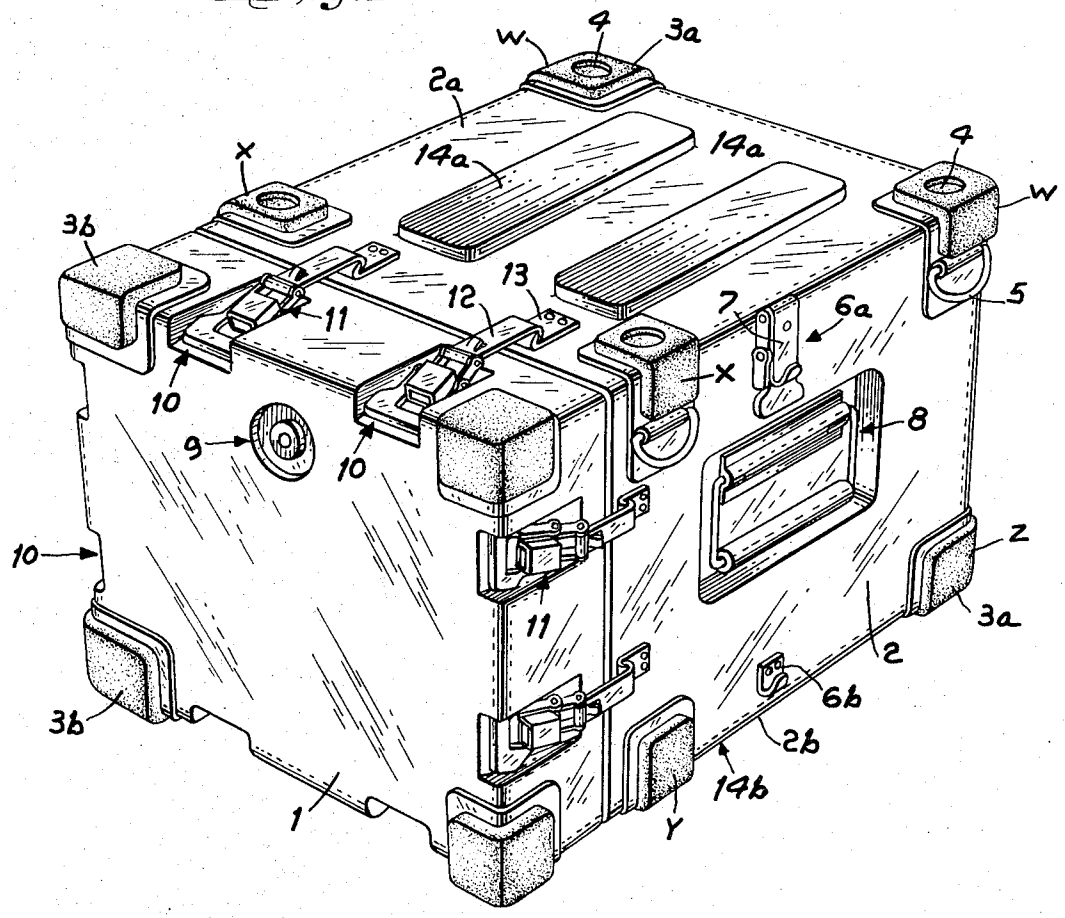

W
4
3a
2a
14a
14a
4
X
W
3b
13
12
11
7
6a
5
10
X
9
10
8
10
2
11
3a
2
6b
3b
2b
14b
1
Y

Fig. 6A

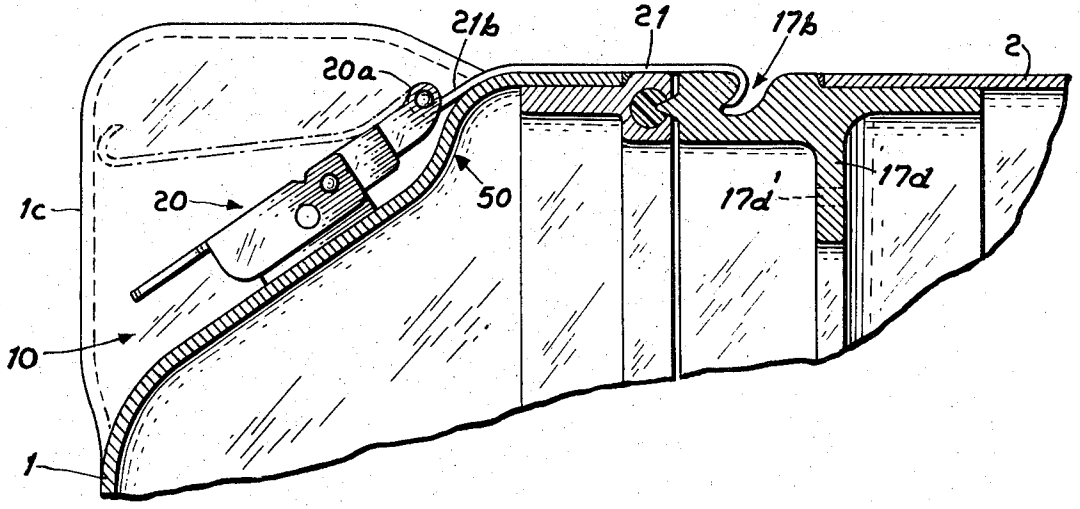

21b
21
17b
2
20a
1c
20
50
17d'
17d
10
1

Fig. 2

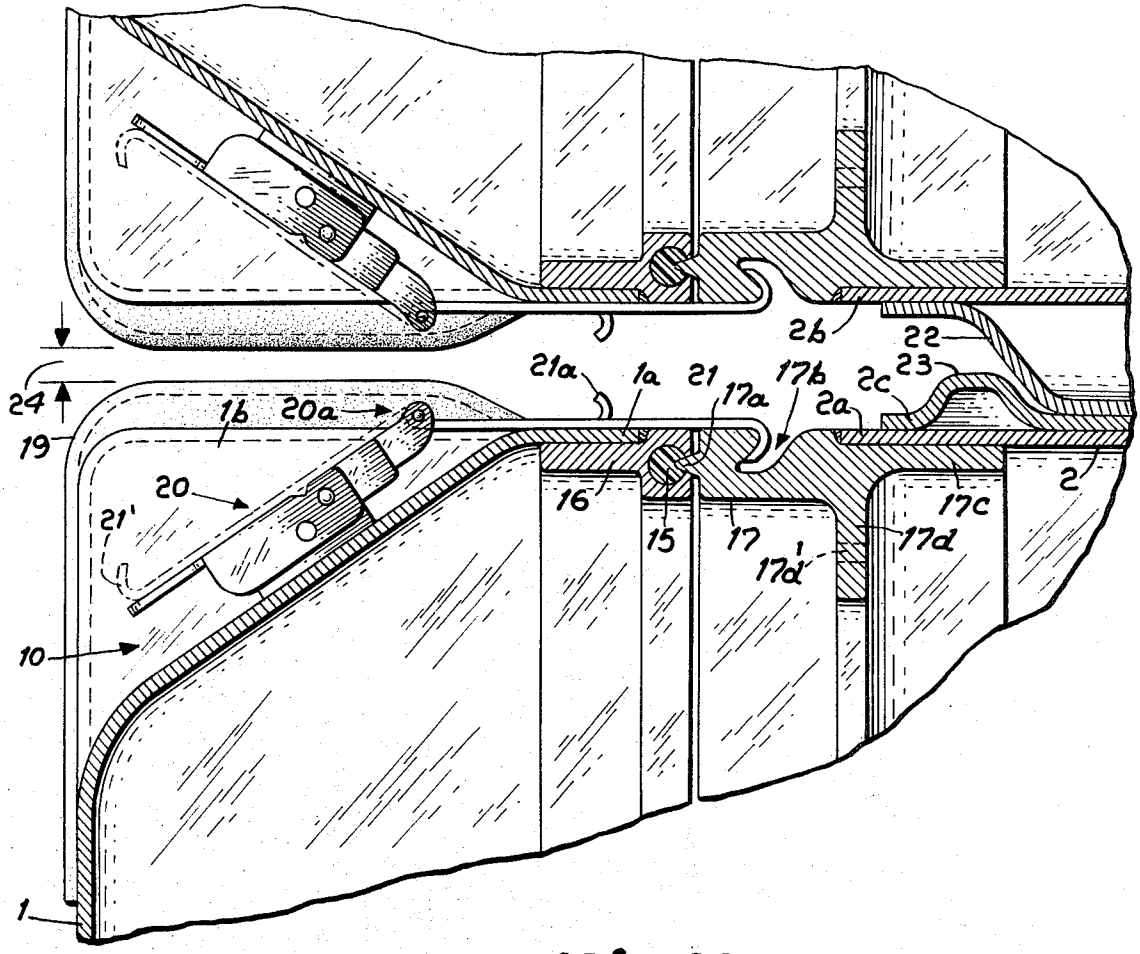

24
19
1b
20a
20
21'
10
1
21a
1a
21
17a
17b
2a
2c
23
22
2b
16
15
17
17d'
17d
17c
2

Fig. 6B

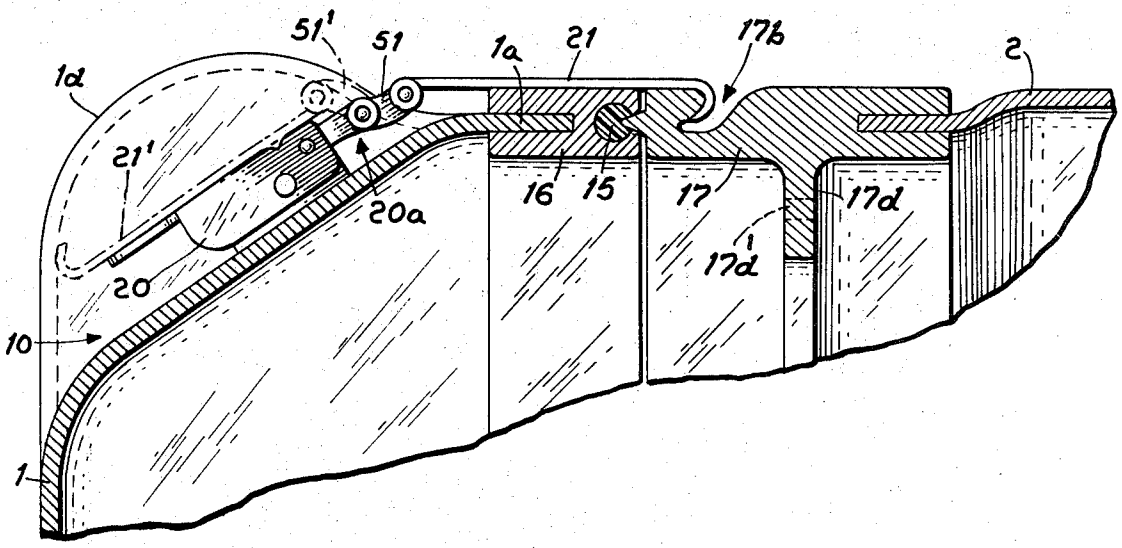

51'
51
1a
21
17b
2
1d
21'
20a
20
16
15
17
17d
17d'
10
1

Fig. 3A

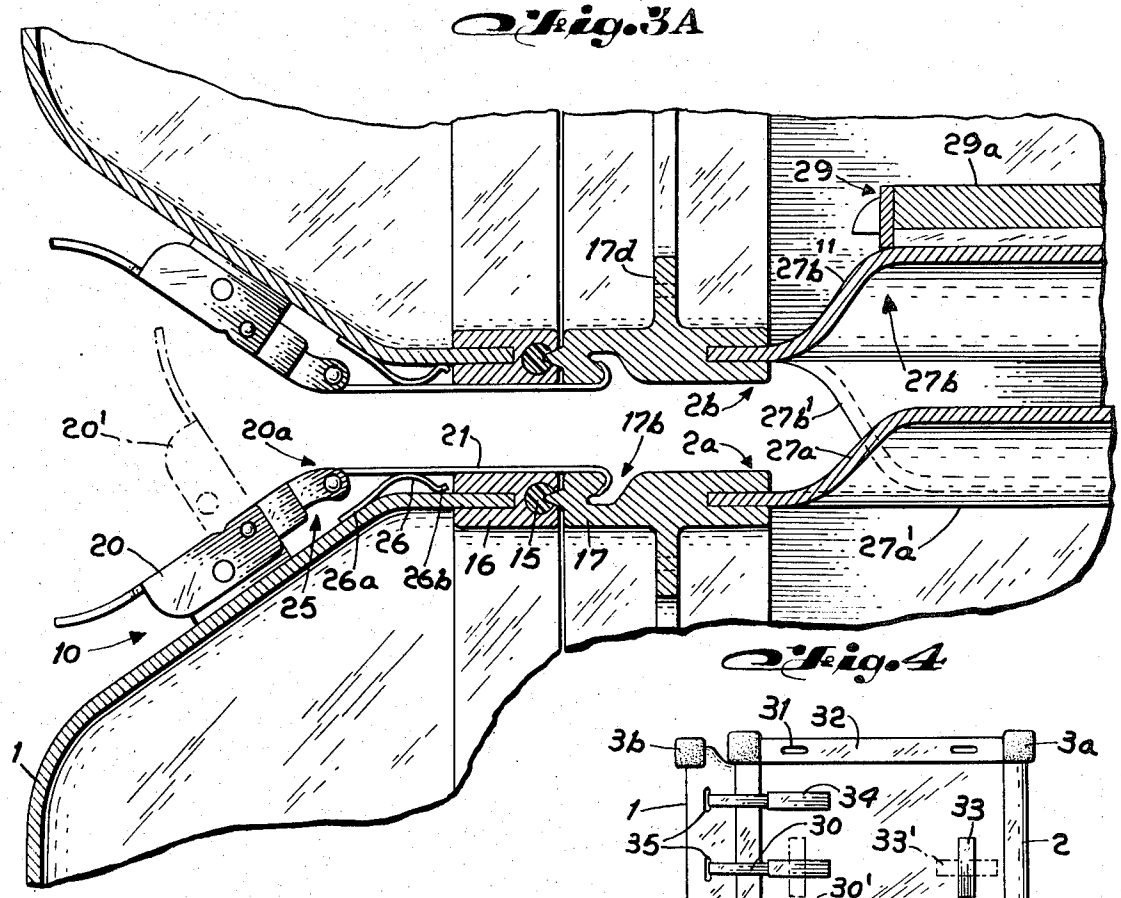


Fig. 4

Fig. 3B

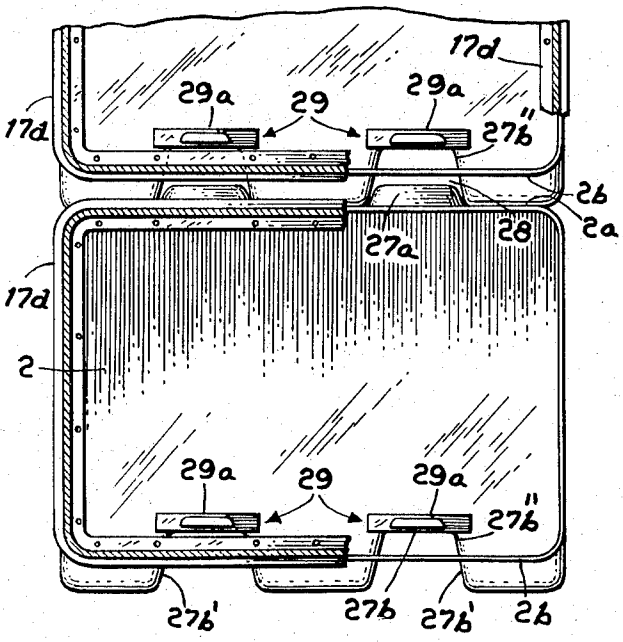


Fig. 5

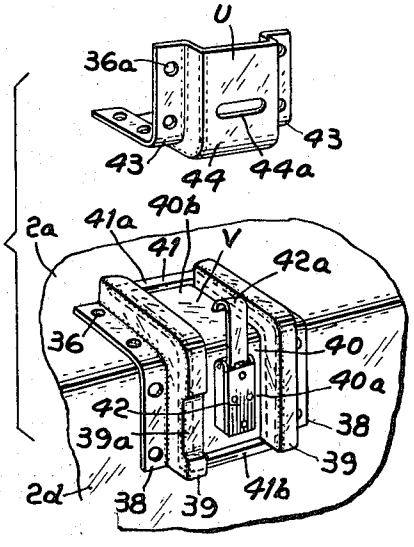


Fig. 7A

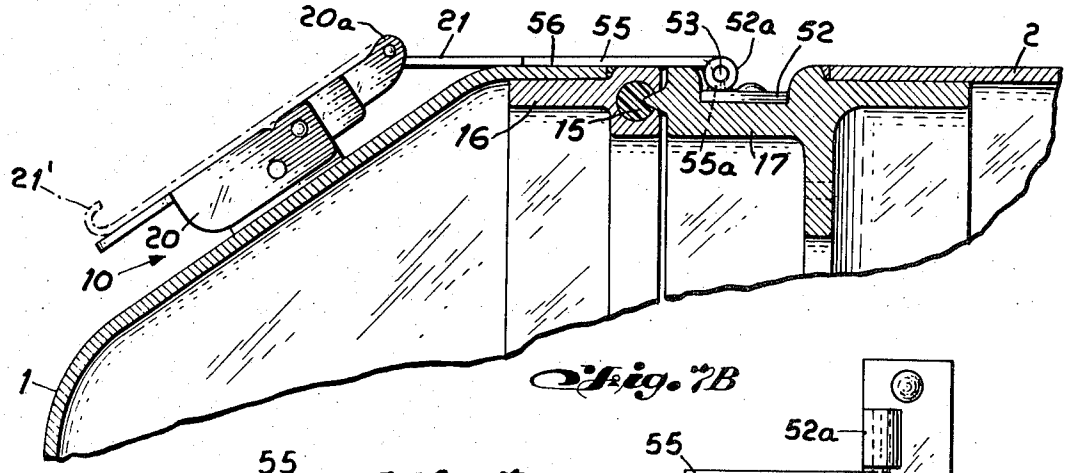


Fig. 7B

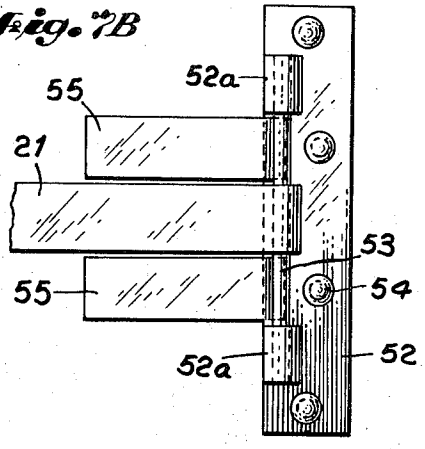


Fig. 7C

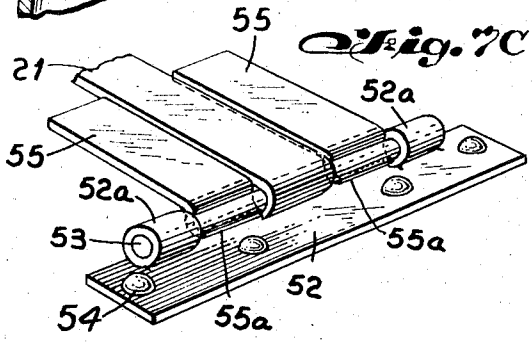


Fig. 8B

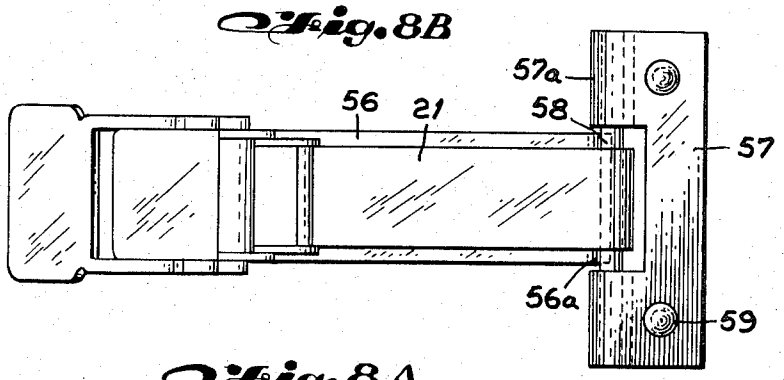


Fig. 8A

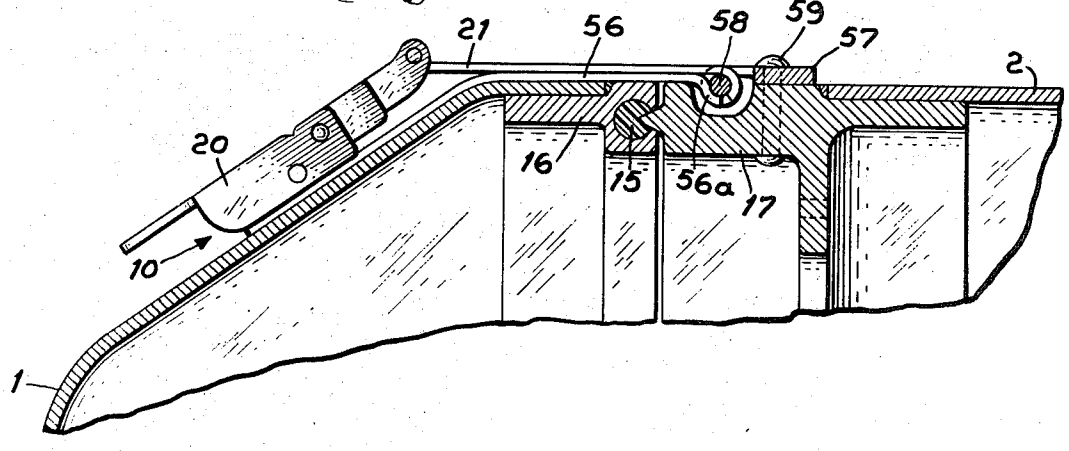


Fig. 9A

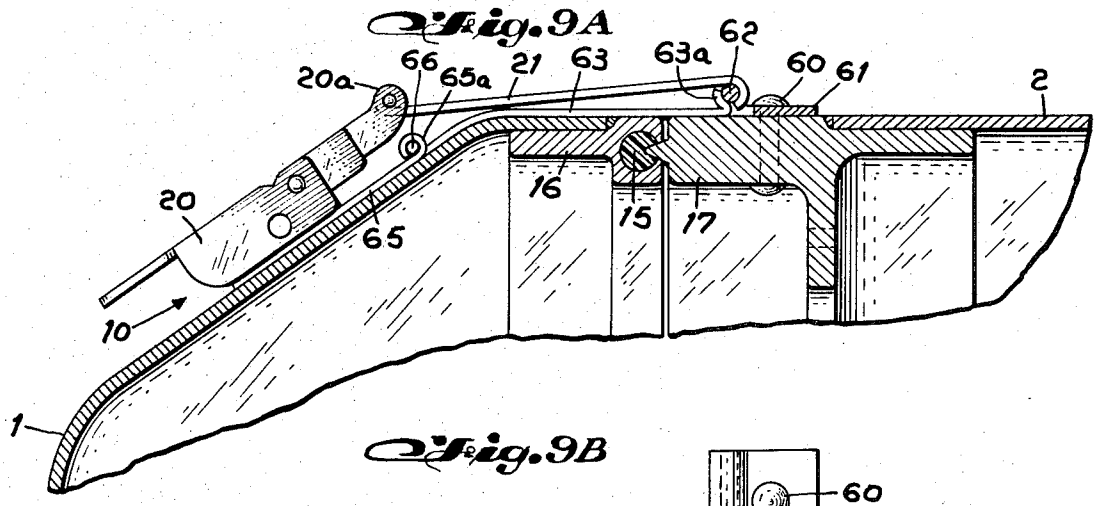


Fig. 9B

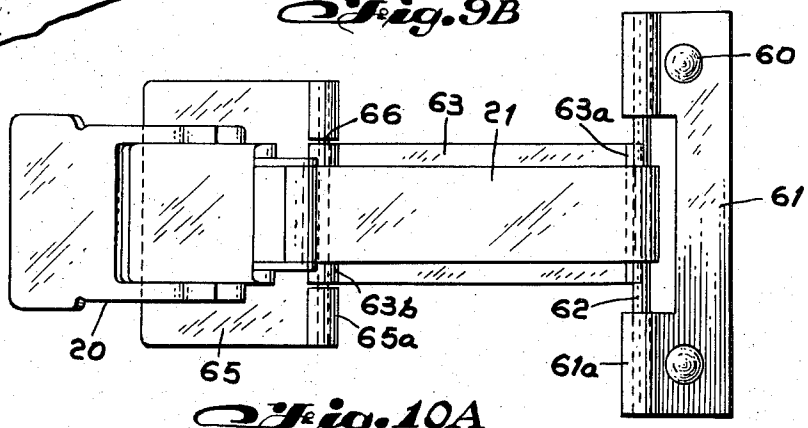


Fig. 10A

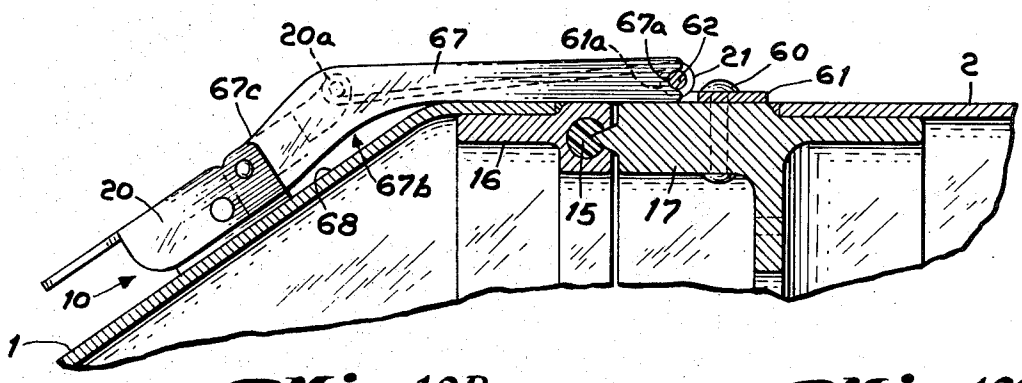


Fig. 10B

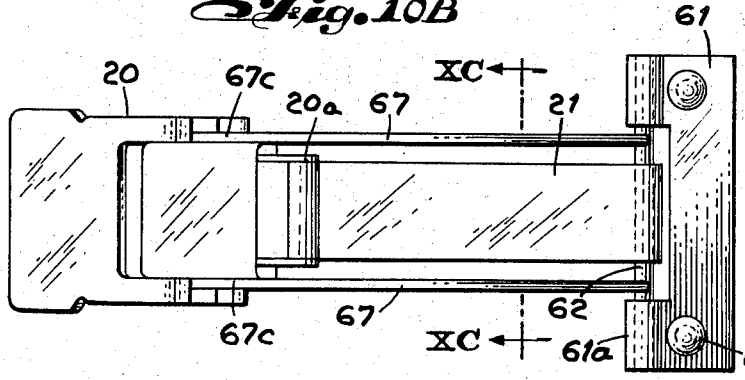


Fig. 10C

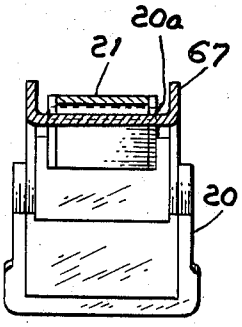


Fig. 11A

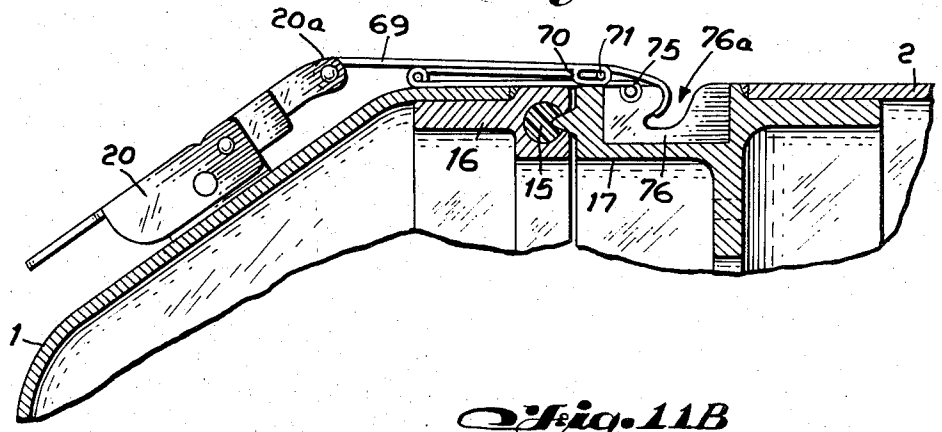


Fig. 11B

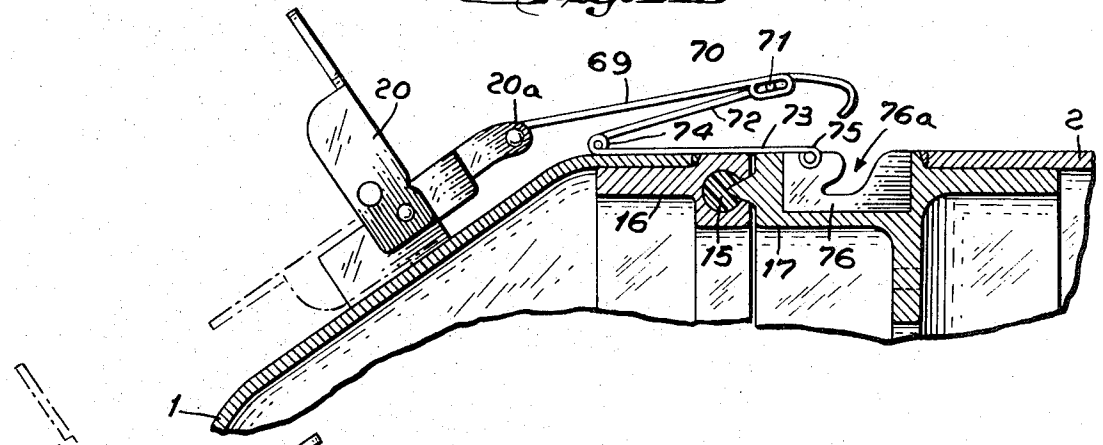
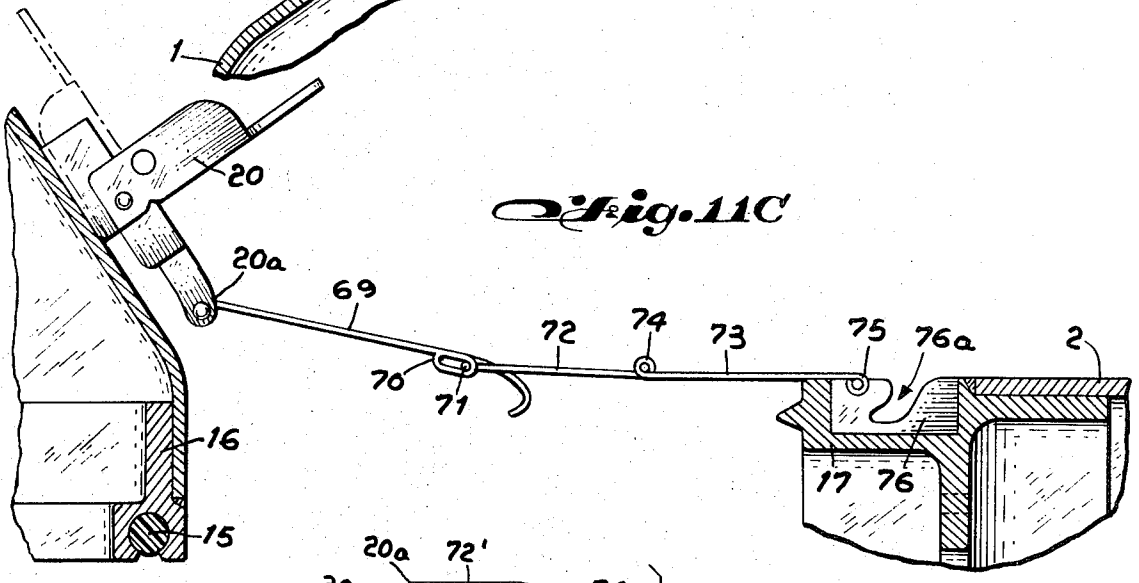


Fig. 11C



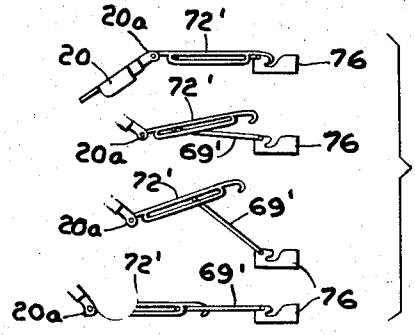


Fig. 12

TRANSIT/COMBINATION CASE PROVIDING UNIQUE LATCH ACCESSIBILITY AND NOVEL STACKING AND LATCHING FEATURES

BACKGROUND OF THE INVENTION

This disclosure relates to transit/combination cases which are primarily used as shipping containers and which may become, at the operation site, an integral part of the equipment (e.g. radio) contained therein, and further relates to latch mechanisms for these cases which combine such properties of latching as hinging, going around a corner, separation and protection.

Of major consideration in designing and constructing transit cases, combination cases, spare parts cases, etc. for the military are the requirements and provisions contained in military specification MIL-T-4734C. Most military combination cases are designed so that when the cases are stacked one atop the other the front covers cannot be removed unless the inaccessible top and bottom latches were previously opened at the time of stacking. This condition is not satisfactory for long term storage conditions since moisture can penetrate a partially latched cover. Also human errors may easily result in determining and remembering which latches are to be opened and which latches are to remain closed. This requirement occurs for example when transit cases are stacked on a pallet or in the field, and the equipment (e.g. radio equipment) contained therein is coupled together by cabling and put into operation. Since the radio equipment is operated within the same case in which it is transported, the front covers must be opened to permit cable interconnection of the cases. On presently used military cases, this requires unstacking in order to gain access to the top and bottom latches and, if the stacks are close together, a separation or movement of the stacks to gain access to the left and right side latches.

It has been determined that military case mnaufacturers use basically only two approaches to permit removal of the front covers from a stack of cases. One approach uses a cover which fits into a recess formed by the thin front edge of the case. This design suffers from several serious disadvantages, examples of which are:

1. The thin front edge will not withstand the military case drop tests nor regular rough handling, thus requires the use of a pair of heavy and expensive protective transit frames for each case.
2. The latches are complicated and special, and available presently from a single source only.
3. The amount of finger space between the thin front lip and the front cover that is available for opening and closing the latch is too small for cold weather, gloved-hand operation.
4. The covers are easily jammed and may be frozen into place by ice build-up since the ice cannot be readily broken out of the cover recess.

The other approach involves a small light weight type case which uses Simmons hook-lock latches to close the top and bottom of the cover. Examples of the disadvantages of this design are:

1. The latches are springless and therefore violate the latch requirements of the referenced military case specification.
2. There is no built-in take-up for tolerances or differential expansion due to temperature changes.

3. They are long and thin and prone to damage from, for instance, normal tactical radio set-up and use.

The design of a novel transit/combination case (to be described hereinafter) to correct the drawbacks mentioned above, established the desireability for a new latch that would permit easy removal of front case covers from case bodies when the cases are stacked. In some cases military requirements call for, in addition to the front covers being removable from the case, these covers to be hinged. The two perhaps most prominent latch arrangements providing this additional function, while being successful in many commercial applications, are not satisfactory for most military applications in view of the following:

Commercial Type No. 1 (hinge-type latch)

a. The clamping force is obtained by stressing a precurved leaf-type tension spring. This action is undesirable for military cases because of spring breakage due to metal fatigue and embrittlement at low temperatures;
b. The high side profile of the latch is wasteful of allotted case volume;
c. The latch design does not lend itself to "going around the corner"; and
d. The mating strike (onto which the hook spring is attached) has a high profile.

Commercial Type No. 2 (compression spring latch)

a. This arrangemnent can be used only for a straight line pull (i.e. "it cannot go around a corner");
b. It requires additional supporting means for the yoke if other than a straight line pull is desired.
c. It does not have any protective features to prevent sideswipe or drop test damage to the hook portion; and
d. It does not have separating or hinging features.

SUMMARY OF THE INVENTION

It is, therefore, a principle object of this invention to provide a transit/combination case arrangement in which the front cover/case body interface permits opening and/or removing the front covers while the cases are stacked, while eliminating the above-mentioned drawbacks of the prior art, thus permitting a rapid change-over from a transit or storage mode to an operating mode.

It is another object of this invention to provide structural elements which are multi-functional to reduce weight and cost and to simplify operation.

It is a further principle object of this invention to provide a transit or combination case latch mechanism that facilitates easy front cover removal and which combines such properties of latching as "going around the corner", hinging, separation and protection.

According to the broader aspects of the invention there is provided a transit/combination case arrangement in which the case cover is provided with at least one angled recess on each side thereof for mounting a cover latch mechanism therein in order to facilitate removal of the case cover when the case is for example one of a stack of cases. A latch mechanism capable of operation when mounted in one of the angled recesses of the case cover and having a hinging capability is provided which comprises a tension member for engaging in the latched, and therefore pivotable, position a pivot mounted on the case body, the tension member being coupled to the latch body mounted on the case cover,

and at least one compression member extending from the case cover to engage the pivot in opposition to the tension member.

A major feature of the inventive latch arrangement is that the compression member is multi-functional and may be made to form an integral part of the latch body itself.

Another feature of the inventive latch/case arrangement is that complete protection is provided for the entire latch mechanisms, including the latch hooks.

A further feature is that neither the compression member nor the strike extends beyond the outline of the case cover or case body when the cover is opened or removed, thus providing protection against damage due to sideswipe and protection to personnel from extended objects.

Yet another feature of the latch arrangement is that the shape of the compression member can accommodate a wide range of front cover radii.

BRIEF DESCRIPTION OF THE DRAWINGS

The above-mentioned and other features and objects of this invention will become more apparent by reference to the following description taken in conjunction with the accompanying drawings, in which:

FIG. **1** is a diagrammatic perspective illustration of a transit/combination case according to the invention, showing conventional cover latches mounted in angled recesses on the cover, and case body reinforcement, stacking, and latching facilities;

FIG. **2** is an enlarged fragmentary partial-sectional side illustration of the nesting relationship of two adjacent cases in a stack, showing the angled recess mounting of the cover latches and one arrangement of the case body stacking features illustrated generally in FIg. **1**;

FIG. **3A** is an enlarged fragmentary partial-sectional side illustration of the nesting relationship of two adjacent cases in a stack, showing an alternate angled recessed cover latch arrangement and case body multifunctional stacking facility according to the invention;

FIG. **3B** is a breakaway diagrammatical front illustration of the stacked cases in FIG. **3a** with the covers removed, showing the multi-functional case body stacking and equipment slide arrangement;

FIG. **4** is a fragmentary diagrammatic side illustration of a stack of cases, showing a multi-functional latch arrangement for securing the cover and alternatively providing intercase latching;

FIG. **5** is an enlarged fragmentary perspective view of an alternate multi-functional case body reinforcement and stacking arrangement, wherein the illustrated complementary parts replace the case body top and bottom front corner bumpers of the transit/combination case shown in FIG. **1**;

FIG. **6A** is an enlarged fragmentary partial-sectional side illustration of the cover/case body interface, showing modifications of a conventional latch to permit a mounting thereof in the angled recesses of the cover according to the invention;

FIG. **6B** is an enlarged fragmentary partial-sectional side illustration of the cover/case body interface, showing an alternate modification of a conventional latch for mounting in the angled recesses of the case cover according to the invention;

FIG. **7A** is an enlarged fragmentary partial-sectional side illustration of the cover/case body interface, showing a unique latching and hinging arrangement according to the invention;

FIGS. **7B** and **7C**, are respectively fragmentary top and perspective views of the latch/hinge arrangement according to FIG. **7A**;

FIG. **8A** is an enlarged fragmentary partial-sectional side illustration of a modified hinge/latch arrangement of that shown in FIGS. **7A—7C**;

FIG. **8B** is a top view of the modified hinge/latch arrangement of FIG. **8A**;

FIG. **9A** is an enlarged fragmentary partial-sectional side illustration of another modification of the latch-/hinge arrangement shown in FIGS. **7A—7C**;

FIG. **9B** is a top view of the modified latch/hinge arrangement of FIG. **9A**;

FIG. **10A** is an enlarged fragmentary partial-sectional side illustration of the cover/case body interface, showing another unique latch/hinge arrangement according to the invention, wherein both the tension and compression members comprising the hinging capability are parts of the latch mechanism itself;

FIG. **10B** is a top view of the latch/hinge arrangement of FIG. **10A**;

FIG. **10C** is a cross-sectional view of the latch/hinge arrangement in FIG. **10B** taken along the line XC;

FIGS. **11A–11C** are enlarged fragmentary partial-sectional side illustrations of yet another cover latch arrangement according to the invention, shown respectively in the closed, partially disengaged and fully disengaged or extended positions; and

FIG. **12** is a schematic representation of a modification of the arrangement in FIGS. **11A–11C**, in which the latch hook is provided with only one pivotable extension.

DESCRIPTION OF THE PREFERRED EMBODIMENTS

The transit/combination case design according to the invention is represented generally in FIG. **1**. The transit case is shown in perspective with the case cover **1** conventionally being designated the front of the case and sides **2***a* and **2***b* respectively the top and bottom sides. Many of the parts of the case illustrated in FIG. **1** are represented by conventional apparatus and which are modified or replaced by unique substitute latch arrangements according to the invention to be described hereinafter. Among those parts shown which are known to the art are the corner bumpers provided at each corner of the case body and cover, designated **3***a* and **3***b* respectively. For a better understanding of the corner bumpers illustrated in FIG. **1** the reader is referred to my copending U.S. application Ser. No. 214,008, filed Dec. 30, 1971 (H.L.Levin-11). As represented in FIG **1**, the corner bumpers **3***a* are provided with stacking features **4** and D-rings **5**, the latter being provided so that the cases may be lashed together in a stacked mode. Other transit/combination case hardware shown conventionally in FIG. **1** includes intercase latches and strikes indicated at **6***a* and **6***b* respectively. As shown, the latch mechanism **6***a* is provided with the latch hook **7** folded back in the fully recessed position. Note, however, that latch hook **7** would be engageable with the strike **6***b* of the adjacent case above it in the stacked mode. Also, the side handle **8** is shown conven-

tionally recessed, and the front cover **1** is provided with a pressure relief valve at **9.**

The novel combination/transit case envisaged here is capable of housing electronic equipment and ancillary gear, and will preferably be rectangular and submersion proof, and of welded aluminum construction. It is to be understood, however, that these features are not to represent limitations on the scope of the invention. The aluminum skin for instance is formed and welded to provide stiffness and structural strength without need for a separate transit and shock framework. As the transit cases are stackable by means of the four mating female stacking dimples **4** on the top and four complementary male protrusions (not shown) on the bottom corners of each case, this feature together with the tiedown rings **5** and securing fasteners **6***a* and **6***b* serve to stabilize the transit cases when stacked for instance to a height of six feet. The recessed handles **8** are located on each side of the case above the center of gravity and serve to facilitate handling and stacking. The handles permit comfortable lifting and carrying with a bare hand and are proportioned with suitable length and width to accept a heavily gloved hand for cold weather operation, and due to their location they also serve the dual function as secondary tie-down rings.

In accordance with the invention the transit/combination case in FIG. **1** is provided with angled recesses **10** in the front cover for mounting the latches therein so that the cover latches may be easily opened fron the front of the case when the cases are stacked. Thus the cases which are stacked on a pallet, for example, do not have to be unloaded to remove the covers or to leave same partially latched during transport in order to eliminate the otherwise necessary and tedious set-up process which would involve unloading, opening the latches, removing the covers and reloading of the cases into the stacks or pallet. The angled recesses in the front cover serve additionally as gussets to stiffen the relatively deep, thinwalled cover. Since the latches are mounted to the front covers in the inventive arrangement, the stack, with the covers removed from the cases, is free from protruding latches which could catch an operator's clothing. In addition to providing structural support for the front cover by way of the angled recessed surfaces for mounting the latches, the walls on each side thereof create a recess for protection of the latches during, for example, drop tests and transport.

It is to be noted in FIG. **1** that conventional latches are mounted in the recesses **10** of the front cover. Associated with the latch hook **12** of each conventional latch **11** mounted on the cover, is a corresponding strike **13** shown mounted on the body **2** of the case. It is to be understood, however, that the preferred arrangement as to the relationship between strike and latch hook is to provide the strike as an integral part of the case body itself, such as is more particularly illustrated in FIG. **2.**

The transit/combination case shown in FIG. **1** is provided with elongated raised portions **14***a* in the top side or surface **2***a* thereof. Together with indented or recessed portions **14***b* of complementary design in the bottom side or surface **2***b*, (not particularly shown in FIG. **1**) these male and female "ribs" prOvide, according to the invention a unique stacking and interlocking arrangement formed as integral portions of the case sides. As with the slanted or angled recesses **10** for the mounting of the cover latches **11,** the raised and recessed portions **14***a* and **14***b* of this case body stacking and interlocking feature serve to stiffen and reinforce the side walls of the case for added protection.

Referring to FIG. **2,** there is illustrated an enlargement in cross-section of the cover/case body interface of FIG. **1,** showing an angled recess in the cover for mounting the latch and one embodiment of the case body stacking and reinforcement feature according to the invention. In actuality, FIG. **2** shows the case design on a 1:1 scale as to the preferred dimensions of the interface between case cover **1** and case body **2.** A resilient (e.g. rubber) submersion proof seal **15,** located on the periphery of cover **1,** is retained in the grooved portion of a female extrusion **16** (e.g. aluminum) running along the entire edge of the cover and which in turn is bonded, welded or otherwise fixedly attached to the cover walls at **1***a*. The case body **2** contains the male portion **17** of the mating aluminum extrusions **16** and **17.** It may, therefore, be seen that the rubber gasket **15** is in a protected posture when the front cover **1** is removed and stored. This rubber seal **15** creates a barrier aginst water or moisutre, sand, dust and other foreign particles when compressed by the tongue **17***a* of the male extrusion **17.** A secondary purpose of the tongue and groove design is to prevent radial movement between the cover **1** and case body **2** so as to maintain the "box" structure and prevent degradation of the rubber gasket. Also, since the rubber gasket **15** is of the compression type, it will cause the front cover to spring open, and therefore make an incompletely closed condition easily discernable. Note additionally that male extrusion **17** has integrally formed therein a slanted recess **17***b* which serves as the strike for the latch hook **21.** As is the case with female extrusion **16,** male extrusion **17** runs along the entire length of the front edge of the case body **2** as a single piece, and it is bonded, welded or otherwise fixedly attached to the case body at **2***c*. The strike **17***b* for the latch hook **21,** therefore, forms an integral part of the case body **2,** with strike recess **17***b* continuously running around the entire case. Male extrusion **17** is also provided with an extension **17***d* perpendicular to the case walls which runs along the entire inner side surface of the case. Extension **17***d* serves as a means for demountably retaining the case contents (e.g. radio gear) BY FOR EXAMPLE SCREWS ENGAGING EXTENSION **17***d* by way of threaded holes **17***d* positioned at spaced intervals along the case mouth.

FIG. **2** shows a full scale latch configuation which is workable "around a corner" as required by the slanted or angled recesses **10** which house the latches on the cover **1.** Since a conventional latch, indicated generally at **20,** is depicted in FIG. **2,** it is necesary to position this latch sufflciently close to the side of the cover **1** to enable the latch hook **21** thereof to adequately and securely engage the strike **17***b* in a substantially flat and unprotruding manner along the side of the case. However, in this position the nose **20***a* of the latch protrudes beyond the normal outer dimension **16** of the side of the cover. Thus fixed or demountable corner members **19,** such as the corner bumpers disclosed in the referenced co-pending application, are here included which serve to protectively recess the latches **20** on the cover **1** and to reinforce the corners of the cover as added protection. Alternatively, elements **19** may be protective hollow metallic corner pieces which particularly

recess the hinge area **20***a* of the latch **20.** One advantage of this arrangement is that if the hollow corner members **19** become punctured, no leakage may occur to the inside of the cover. As shown in dashed lines at **21'**, the latch hook **21** may be folded completely back, when disengaged, to a protective storage position which is maintained by the friction fit of extension **21***a* with a recess (not shown) in the latch **20** of complementary design.

Included in FIG. **2** is one embodiment of the case body male/female stacking and reinforcing feature generally described with reference to FIG. **1.** In FIG. **2,** the bottom or under side **2***b* of the cases in this instance are provided with "male" protrusions **22,** and the top side **2***a* provided with "female" stacking/reinforcing means **23.** While the novel case body stacking arrangement consisting of elements **14***a* and **14***b* in FIG. **1** was shown and described as extending from front-to-rear on the case and the elements shaped to be substantially rectangular, it is well within the scope of the invention to provide male and female elements thereof (**22, 23**) as extending parallel to the case front on the top and bottom surfaces (**2***a*, **2***b*) of the case body **2,** as shown in cross-section in FIG. **2.** Also while the elements **14***a*, **14***b* were described with reference to FIG. **1** as being integral parts of the case sides, the arrangement in FIG. **2** illustrates the ease with which extra transit case pieces **22, 23** may be demountably or fixedly mounted to provide the male/female stacking and reinforcement facility, while keeping within the scope of the invention. From the arrangement of elements **22, 23** it is seen that both the "male" (**22**) and "female" (**23**) elements provide raised portions which serve to protectively recess the case hardware and outer walls. The elements may be closely complementary in design to reduce to a minimum the possibility of one case shifting with respect to another in the stacked mode. Preferably, the raised portions of elements **23** extend outward farther than the protective corner members **19** so as to provide the cover with additional protection for example from flat side drop tests and general rough handling. Moreover, the "male" elements **22** are intended to serve a dual purpose in protruding downward from the bottom sides of the cases. On the one hand they serve to elevate the cover **1** for free access to the latches on the under side of the cover when the case is placed on the ground or is the bottom case in a stack. On the other hand elements **22** serve to provide vertical clearance, i.e. a gap, illustrated in FIG. **2** at **24,** which facilitates removal of the covers from stacked cases by providing additional room in which to swing the latch **20** up in order to permit a disengagement of the latch hook **21** from the strike **17***b*. Also, the angled recesses **10** in the cover for mounting the latches may be positioned opposite one another, from case to case, in uniform arrangement. Thus, with the cases in a stack, the recesses from the latches on the cover of one of the middle cases, for instance, directly align with the latches and recesses of the adjacent upper and lower case covers, and therefore provide even grater available space in which to swing up the latch handles on either case to disengage the respective latch hooks. This added space will further facilitate cover removal where it is necessary for example to wear heavy gloves.

Referring to FIG. **3A,** there is shown, in a view similar to FIG. **2,** an alternate latch arrangement for mounting in the angled recesses **10** of the cover **1** and a multifunctional case body stacking and reinforcing facility according to the invention. The actual interface between cover and case body here differs from that shown in FIG. **2** only in the mounting of the female aluminum extrusion **16** to the edge of the cover **1.** In this embodiment, a conventional latch mechanism **20** is arranged in its associated angled recess **10** with the nose portion **20***a* oriented to follow generally the outer surface of the cover so as to enable the latch hook to achieve proper engagement. In this regard the arrangement of the female extrusion **16,** as well as the outer surface of male extrusion **17** serve as a cooperating flat, protective and supporting surface to this latch hook.

As is the case in FIG. **2,** the latches **20** are mounted in recesses **10** which are positioned such that the recesses of adjacent cases in a stack provide greater clearance for the latch to be swung open, as indicated in the dashed portion **20'**. The normal outer edge dimension of the cover **1** is not shown in FIG. **3** for purposes of clarity.

The arrangement according to FIG. **3A** illustrates the adaptation of a compression spring latch to the case arrangement. Latch **20** is provided with a spring mechanism, shown here by way of example as a bent metallic piece **26** positioned under the latch hook **21** and which is in contact with the latter when the hook is in engagement with the strike **17***b*. Spring **26,** in the example embodiment, may be fixedly mounted to the cover at **26***a* and bent so as to have its other end **26***b* freely moveable along the outer surface of the cover **1** against the bias inherent in the bend under the influence of the engaging latch hook **21.** When each of the cover latches **20** is swung open to position **20'**, spring **26** is designed to urge the latch hook **21** away from the strike **17***b* with a predetermined amount of separation, in order to facilitate disengagement of the cover **1** held by latches on all four sides. By virtue of the spring **26** it is impossible for the latch hook **21** to fall back and re-engage the strike **17***b*. Moreover, use of spring-loaded cover latches such as the one illustrated in FIG. **3A** serve as indicators when they do not engage their strike. Thus a cover is "flagged" when it is improperly secured. Other related spring-loaded latch arrangements for achieving the predetermined minimum separation will become apparent without departing from the scope of this disclosure.

It is intended with the latch arrangement of FIG. **3A** that the latch hook **21** may be folded back completely to lie flat on the latch body to be secured in this position by for example friction fit means (not shown) such as that described with reference to the latch hook in FIG. **2.** If the latches in FIG. **3A** were to be positioned on the cover **1** so as to reduce or substantially eliminate the protrusion of their respective noses **20***a* beyond the case cover outer dimensions, the latch yoke would require raised support between itself and the cover at **25,** in order to obtain proper latching action "around the corner". Protrusion of the latch noses **20***a*, however, requires protection by way of corner bumpers (not shown) or other means which would serve to protectively recess the latches.

Such a provision is automatically achieved as one of several functions of the illustrated (FIG. **3A**) alternative embodiment of multifunctional male/female "ribs" **27***a* and **27***b* forming, as integral parts of the top and bottom case side surfaces **2***a*, **2***b* respectively, the novel case body stacking and interlocking feature generally

described with reference to elements **14***a* and **14***b* in FIG. **1.** In addition to being sloped to facilitate sliding and inherently strengthening the case surfaces of which they form an integral part, it may be seen in FIG. **3A** that the male elements **27***a* extend beyond the normal case body outer surface **27***a'* sufficiently to recess entirely the latch mechanisms mounted on the top side cover surface. As is more clearly indicated with reference to FIGS. **3A** and **3B** together, at least two sets of male/female ribs **27***a*, **27***b* are preferably (although the invention is not to be thusly limited) running from front to back, with male ribs **27***a* arranged on the top side surface **2***a* of each case to closely engage the female ribs **27***b* arranged on the bottom side surface **2***b* of the adjacent case. While the normal bottom side outer surface **27***b'* is extended somewhat normally to aid in recessing the bottom side cover latches and to raise the case slightly off the ground for reasons given hereinbefore as to a case on the bottom of a stack, the female ribs **27***b* constitute elongated indentations or recesses in the case body underside which recess substantially more than is required for inter-locking with the male ribs **27***a*, as may be seen in FIG. **3B** by the gap **28** formed therebetween. This is exaggerated for clarity by also reducing the size of ribs **27***a* in FIG. **3B** with respect thereto. This additional recessing of the female ribs **27***b* enables the inner surfaces **27***b''* thereof to be raised up sufficiently from the case bottom to provide slides, to facilitate the removal of the case contents past extension **17***d*, which, as partially shown in FIG. **3B**, extends around the entire inner surface of the case body for mounting thereto the front cover of the case contents.

Alternatively, the gap **28** may be lessened somewhat by modifying or reducing the recess provided in female ribs **27***b*, in order to mount on the corresponding flat inner surfaces **27***b''* equipment slides **29,** which are well known in the art. Although the arrangement in FIG. **3A** shows the slide upper surface **29***a* to extend for purposes of clarity beyond mount **17***d*, it is to be understood that the cooperative arrangement between equipment slide **29** and the female rib **27***b* associated therewith may be such as to have the upper surface **29***a* level with the lip of extension **17***d* providing easy removal of the case contents and thus preserving a greater inner case volume.

Referring now to FIG. **4,** a side view of a stack of cases is illustrated in which conventional latches have been modified to be pivotable into a second position to provide an intercase latching feature. As shown, the latches in this arrangement are mounted to the case body with the strikes being integral with the cover, and the lower right (and left) side latch **30** of the top case (each case in actuality) is arranged to be pivotable by conventional means on the case body to a downward 90° position **30'**, in which the latch hook may engage a strike **31** integrally provided on the upper edge of the adjacent case side. In this manner such a latch, rather than merely having its latch hook swung back in the secured storage position (not shown here) upon removal of the cover **1,** may instead be pivoted to the 90° position **30'** to engage the lower case. As a similar latch arrangement may be provided on both vertical sides of a case in the stack, a far more stable stack of cases is achieved then would normally be the case. Where it is contemplated that several stacks of cases are to be adjacently arranged in a stacked row for instance, or in a pallet, it is well within the scope of this invention to provide for both the outermost top side latches to have the same pivotability, with the top surface **2***a* of the cases being correspondingly provided with mating strikes for the latch hooks of adjacent cases. Although the strikes **31** are shown in FIG. **4** as being apertures in the upper edge member **32** of the illustrated cases, it is intended that any suitable strike facility integral with the case body or otherwise would suffice.

For a balanced intercase latching action, each case may be provided with an extra pivotable latch **33,** the normal or unlatched position **33'** of which is shown in dotted lines with the latch hook securely stored flat against the latch body in a manner described hereinbefore. In its operative position, latch **33** may be pivoted (by way of conventional pivot means) to the position shown, in which it, like latch **30** in position **30'**, may engage a second strike provided in the edge member **32** of the case below. In this manner a case may be secured, upon removal of its cover, with as many as four side latches to the adjacent case below it. It is well within the scope of this invention for the upper side cover latch **34** to be pivotable instead of latch **30,** and for the corresponding strikes to be provided in the bottom edge members, and for latch **33** to be positioned level with and to the right of latch **34.** In this way, one case would be instead secured to the adjacent case above it, by way of as many as four side latches. In either orientation, it is to be noted also that the strikes on the cover **1** while shown to be integrally provided in the cover as apertures, may take any suitable form for the purposes here intended.

FIG. **5** illustrates a supplementary or alternate solution to the case body stacking and interlocking feature represented in FIG. **1** by way of elongated male and female ribs **14***a* and **14***b*. As shown in FIG. **5,** the complementary parts, labeled U and V, may be considered as replacing respectively the top and bottom front corner bumpers labeled X and Y of either or both sides of the case in FIG. **1.** Complementary parts U and V are shown as being demountable by way of screws **36,** or other suitable means for demountable coupling, and screw apertures **36***a*; fixed mounting by way of rivets etc. is, however, not to be excluded. The lower appearing part V is bent so as to fit flush with the top and side surfaces **2***a* and **2***d* respectively. The arrangement of piece V is in the form of a single piece of metal shaped so as to provide: flat outer edges **38,** by which the piece V is to be mounted to the case **2**; stiff raised portions **39** adjacent to the flat outer edges **38**; and an inner flat area **40** between the two raised portions **39.** The inner flat area **40,** although being flush with the case surfaces **2***a* and **2***d*, is in effect recessed by the raised portions **39** to either side. The raised portions **39** are open at either end and thus form bent channels or tunnels with the case surfaces **2***a* and **2***d*. The inventive arrangement provides here a continuous bent rectangular loop **41** to be fitted within the channels formed by portions **39,** such that a stop **41***a* is formed thereby between the portions **39** on the horizontal case surface **2***a*, while a form of tie-down ring **41***b* is formed thereby between the other ends of portions **39** on the vertical case surface **2***d*. A conventional latch mechanism is mounted to the vertical portion **40***a* of the inner flat area **40** of metallic piece V. In the position shown, the latch hook **42***a* is intended to be engageable with the strike **44***a* of com-

plementary metalic piece U in an intercase latching mode.

Member U is also a single bent metallic piece, having flat outer edges **43,** but the width of these outer edges **43** is greater than those of its counterpart V. Complementary with the general area formed between raised portions **39** and stop **41***a*, member U is constructed with a single raised section **44** which spans the entire separation between flat outer edges **43.** When in the stacked mode, the outer surface of the horizontal portion of raised section **44,** which is flush with the bottom surface **2***b* of its associated case, would closely nest with the horizontal recessed area **40***b* of member V.

As was the case with reference to FIG. **4,** the latch **42** in FIG. **5** may be pivotably mounted on member V so as to provide the function of cover latching as well as intercase latching. In this regard the raised portion **39** nearest the front of the case is provided with an indented portion **39***a* within which the latch hook **42***a* may rest in the cover latch mode. The indented portion **39***a* in this mode would serve as a protective support for the latch hook as well as permitting the hook to be recessed below the outer dimensions of the member V. Here again, the latch mechanism **42** is conventional and may have provision for a disengaged latch hook to be swung completely back to be stored securely and protectively against the latch body, and without protruding beyond the dimensions of the raised portions **39** of member V.

In a preferred arrangement it is also desirable to replace the top and bottom rear bumpers W and Z on both sides of the transit/combination case illustrated in FIG. **1** with the members U and V respectively. However, in this arrangement, there would be no need for the latch **42** to be pivotable. Thus intercase latching is once again provided between adjacent stacked cases by as many as four latches. Also case reinforcement and stacking features are provided at each of the corners of the case body **2** in the arrangement according to FIG. **5.** Moreover, it is within the scope of this inventive arrangement for the functions or roles of members U and V to be reversed, with minor modification, i.e. the female members V could be mounted instead on the bottom corners of the case body while the male members U could be mounted to the top corners.

From the above, it is apparent that the arrangement according to FIG. **5** is indeed multifunctional, inasmuch as there is provided thereby:

1. a cover latching facility, whereby at least one cover latch on each vertical side of the case is provided;
2. an intercase latching feature, whereby one or two latches are provided on each vertical side of a case to latch with the case above it (or below it as the case may be) in the stacked mode;
3. reinforcement of the case structure at the corners where it is most vulnerable, particularly at the front corners (nearest the cover);
4. recessing of the case hardware (all the case hardware with the raised portions being sufficiently high), particularly the multifunctional latches mounted on the V members;
5. a male/female stacking feature whereby the stops **41**a are included together with the multifunctional raiwed portions **39** on the V members to prevent lateral and front-to-back shifting between adjacent cases in a stack by permitting the multifunctional raised portion of the U members to securely nest therein; and
6. tie-down rings for lashing the cases together in the stacked mode, and for tying the stack of cases to for example ground stakes with guy wires.

Referring now to FIG. **6**A a sectional side view of the cover/case body interface is given showing a modified conventional latch mechanism mounted in its angled cover recess according to the invention. This arrangement particularly seeks to ewliinate the projection of the latch noses **20***a* from protruding beyond the normal outer dimensions of the cover **1.** Two adjustments have been made in doing so. First the latch hook is bent at **21***b* to aid in proper "seating" as to strike **17***b* while remaining flush with the relatively flat surface of the cover/case body interface, and to improve the latch's ability to go around the corner. To further this latter endeavor, the second adjustment is made, in the form of a curve provided in the base of the angled recess **10** at **50.** In this manner the base, and therefore the entire body, of latch **20** is further inclinded toward the strike **17***b*, while clearance is maintained between the latch nose **20***a* and the cover **1.** Therefore, the arrangement succeeds in protectively hiding the entire latch while permitting secure around-the-corner latching without a protruding latch hook in the engaged position. However, as shown by the dashed line position **21'** in FIG. **6**A, the latch hook is incapable of achieving the normal stored position mentioned and demonstrated hereinbefore secure to the top of the latch body, and as a result protrudes beyond the normal cover outer dimensions, and would therefore be readily subject to damage and catching on things. Thus in this embodiment, cover corner bumpers or hollow metallic corner pieces are required to give the protection necessary in the unlatched mode. Alternatively the normal outer dimensions of the cover **1** could be shaped in between the angled recesses **10** and at the corners as shown by **1***c* in FIG. **6**A. In this way protection is guaranteed all along the edges of the cover and not just at the corners. It is to be noted, however, that the bent portion **21***b* of the latch hook **21** serves as its own built-in spring to insure a clearance of the hook from strike **17***b* in the disengaged position. Moreover, it serves to limit the closing forces and reduces resistance to shocks.

In FIG. **6**B another modified conventional latch is shown which provides around-the-corner latching while remaining substantially hidden or protected from rough handling. In this arrangement the pivot connection of the latch hook **21** with the latch nose **20***a* is replaced with a knuckle **51** pivotably coupled to both the latch hook **21** and the nose **20***a*. In this manner the problem of a protruding latch hook in the fully disengaged position is avoided, in that the knuckle **51** insures the achievement of the fully open storage position **21'** of the latch hook **21** by itself assuming the dashed position **51'**. In order to provide firm support for the latch hook **21** in the engaged position, and to recess, in effect, the knuckle **51,** the female extrusion **16** mounted to the cover **1** at **1***a* has been modified to that shown in FIG. **6B.** In this manner the latch hook/knuckle combination presents a supported and substantially flat orientation at the side of the case. While FIG. **6B** illustrates extended protective outer dimensions to the cover edges and corners by way of rounded extension **1***d*, it is to be noted from FIG. **6B** that the top of the latch hook in position **21'** would not be protrud-

ing beyond the normal cover outer dimensions with or without protective outer edges 1*d*. This protective edge provision 1d has been included in FIG. 6B primarily to show that raised edges and corners can be molded to have continuously curving outer surfaces which are stronger and less susceptible to denting etc.

Inasmuch as the above-described alterations serve to illustrate that modified conventional latches tend to provide additional problems to be overcome, and serve to demonstrate their overall inability to provide acceptable operation in arrangement with the inventive case design, invention is required in order to provide around-the-corner latching from an angled recess, while remaining at the same time fully protected and recessed, and particularly so when adding the further consideration of separable hinging capability. Such a novel arrangement is shown in FIGS. 7A–7C which respectively illustrate sectional side, top and perspective views of a regular latch included in a unique latching/hinging facility. In FIGS. 7A–7C latch **20** has once again been mounted in an angled recess **10.** However, the normal strike of previous embodiments has been replaced by a hinging arrangement which comprises hinge pin bracket or holder **52,** hinge pin **53** and means **54** for fixedly securing or mounting hinge pin holder **52** to the male extrusion **17.** Any suitable means such as screws or rivets will suffice for means **54.** The holder **52** is positioned in a recess in extrusion **17** which is located substantially in the same place as the normal strike. It is within the scope of this invention to provide holder **52** as an integral part of male extrusion **17,** thus requiring no securing means **54.** In this arrangement, the latch hook engages hinge pin **53** as as looped link, and will be described hereinafter as the tension member of the hinging facility. A pair of brackets **55** are provided on either side of the latch hook **21** which serve as the compression members in the latch/hinge arrangement. Brackets **55** are fixedly mounted at one end to the cover **1** at **56** by any suitable means. The other end of each is provided with a concave inverted portion **55***a* which serves to seat around the hinge pin **53** and push thereon in opposition to the pull from the latch hook/looped link **21.** The hinge pin **53** in turn is secured or retained in place by holder **52** by way of cylindrical raised extensions or retainers **52***a*. The hinge pin **53** may be widened at its ends to prevent it from slipping out of retainers **52***a*.

The separable hinge joint provided in FIGS. 7A–7C is shown entirely recessed for protection and to reduce the case outer dimensions. This is made possible particularly by the shape of the free end **55**a of the brackets **55.** These compression members **55** are required to remove the force on and binding the gasket **15** as the male and female extrusions (**17** and **16** respectively) engage, and place this force instead onto the hinge pin and along the cover structure. If only the tension member, i.e. looped link **21,** were employed, without compression members **55,** most of the force in the hinging mode would be applied to the gasket areas, causing same to bind, instead of being transmitted along the compression member **55** on the outside of the cover and away from the gasket **15.**

In one preferred hinge/latch arrangement according to the construction employed in FIGS. 7A–7C (and FIGS. **8–10** as well), at least the two latches on the left side of the front cover incorporate the separable or removable hinge feature so that the cover may be unlatched in the other three sides and swung open, with the later possibility of the two left side latches being opened to permit complete removal of the cover **1.** When the left side latch handles are closed, the hook/-tension member **21** and the compression members or brackets **55** encompass the hinge pin **53.** When the latches on the other three sides are opened, the cover will hinge on the left side. Subsequently when the left side latches are opened the cover **1** is disengageable from the hinge pins **53** and is easily separated from the case body **2.**

Alternatively, all latches on the cover coule be provided with the separable hinge facility, thereby providing for the cover to be hingable on any desired side rather than merely the left side. It is to be noted in FIGS. 7A–7C that if the nose **20***a* of the latch **20** were facing or turned downward as for example the latch in FIG. 3A, the latch could be easily positioned to be fully protected within its angled recess **10,** while yet permitting round-the-corner latching/hinging with tension member/latch hook **21** remaining firmly secured and flat on the case surface.

FIGS. **8**A and **8**B illustrate a modification of the latch/hinge arrangement of FIGS. 7A–7C providing a more compact construction. A single compression member **56** is provided and arranged to engage hinge pin **58** via its curved end **56***a*. Member **56** is positioned under tension member/hook latch **21** and extends back under the latch body **20** in the angled recess **10.** In this arrangement the base of latch **20** and the extended end of compression member **56** are firmly mounted to each other and to the cover **1** in the recess **10.** By having only a single compression member **56** mounted under the tension member **21,** the longitudinal dimension of hinge pin **58** and hinge pin holder **57** is greatly lessened, thus providing curved retainers **57***a* close together in a generally stronger arrangement. The compression member **56** and tension member **21** encompass or engage hinge pin **58** as before and thus effect a separable hinge joint. The arrangement of holder **57** differs somewhat from that in FIGS. 7A–7C. Here holder **57** is mounted by rivets or other suitable means to the outside of extrusion **17** and flush therewith, with the retainers **57***a* curving downward into a recessed area of extrusion **17** rather than curving upward out of the recess as in FIGS. 7A–7C. This orientation serves to provide a flatter case outer dimension.

FIGS. **9**A and **9**B show a modification of the arrangement of FIGS. **8**A and **8**B, in which a double pivot is provided to swing the cover farther out of the way when extracting the case contents, while yet remaining hinged on the one side. The compression member **63,** by way of curved end **63***a*, and the tension member **21** engage or encompass hinge pin **62** as described above. Again the arrangement of hinge pin holder **61** is slightly different. Here there is no recess in male extrusion **17** and holder **61** is mounted flush on the outside surface of extrusion **17** by way of rivets **61** or other suitable means. The hinge pin retainers **61**a are therefore curved outward from the case. In this embodiment, the compression member **63** is not directly mounted to the cover **1.** Instead it is pivotably mounted by way of a curved retainer **63***b* and a hinge pin or pivot **66** to a hinge bracket **65** by way of the latter's curved hinge pin retainers **65***a*. Bracket **65** in turn is fixedly mounted along with latch body **20** to the cover **1** in the angled recess **10.** When the arrangement according to FIGS.

9A and 9B is intended to perform a hinging operation while the cover is unlatched on the other three sides and swung open, a point is reached in the above-described arrangements where the cover cannot be suwng open any wider. It may be that this wide open position is not sufficient to swing the cover **1** sufficiently far enough to provide easy removal or loading of the case contents, which are in most instances quite heavy. The arrangement in FIGS. **9A** and **9B** according to the invention solves this problem by the secondary hinging facility above-described. This arrangement permits the cover **1** to be swung farther out of the way to one side by allowing same to pivot relative to the compression member **63** and the case **2** about hinge pin **66.** By this secondary hinge joint, the outside surface of female extrusion **16** physically separates from the under surface of the comparison member **63**; all the while the primary hinge joint remains intact. This additional manuvering advantage is perhaps best seen in instances where stacks of cases are placed side by side with only a limited space between the stacks. Note also in the arrangement of FIGS. **9A** and **9B** that the end **63a** of the compression member **63** is curved upward, in this instance, to match the position of the hinge pin **62,** while still providing the required force directed in opposition to the tension member **21.**

Referring to FIGS. **10A–10C**, a preferred arrangement of a separable latch/hinge having further novel advances in the art is illustrated, wherein FIG. **10C** is a cross-sectional view of FIG. **10B** taken along the line XC. In this arrangement the compression member **67** as in the arrangement of FIGS. **9A** and **9B**, is made multifunctional, only here the compression member is additionally an economical one-piece stamping forming an integral part of the latch mechanism **20.** In fact, the comression member **67** may be considered as an extrusion of the front portion **67c** of the latch body **20** as shown particularly in FIGS. **10A** and **10B**. The curved free end **67*a*** of compression member **67** is arranged to provide a very reliable U-shaped engagement with hinge pin **62.** The arrangement of holder **61** and hinge pin **62** is not unlike that of FIGS. **9A** and **9B.**

The separable latching/hinging arrangement of FIGS. **10A–10C** does not require a mounting of the compression member to the cover **1.** Here instead, only the latch **20** is mounted to the cover **1** in its angled recess **10.** Compression member **67** has a U-shaped cross-section (FIG. **10C**) throughout which permits it to protectively enclose or house the nose **20*a*** of the latch as well as the latch hook/tension member **21.** This construction is also stronger and stiffer than a flat member. Member **67** is angled somewhat by way of bump **67*b*** provided near the middle portion of its longitudinal dimension (FIG. **10A**). This bump **67*b*** prevents a bending of the latch hook **21** by permitting proper tension on the hook in the latched mode, while at the same time supporting the latch yoke for proper latching around the corner. This bend or bump **67*ib*** is molded or stamped automatically in the formation of this extension **67*c*** to the front portion of the latch **20,** thus eliminating the need for a support piece on the outer surface of the cover in the vicinity of point **68** in the angled recess, which would be required to raise the front of the latch mechanism to get proper leverage and tension to latch around the corner. The compression member **67** operates on the hinge pin **62** in much the same way as the previously described embodiments, with the difference that the free end **67*a*** is forked, having two blunt "tines" on both vertical edges of the U-shaped member to securely rest the hinge pin therebetween. Member **67** is constructed to lie flat on the case cover outer surface for additional support and protection in the latched/hinged mode. It may be noted in FIG. **10A** that compression member **67** completely recesses tension member **21** from possible damage. It is to be noted also that although the orientation of member **67** is shown to have its base portion under the latch hook **21** and its sides vertically rising therefrom, it is well within the scope of this invention to arrange member **67** such that its horizontal base portion is above the latch nose **20*a*** and the hook **21,** thus protectively covering same, with the vertical sides of the member **67** extending downward to complete the shelter around the entire front portion of the latch mechanism. Neither the compression member **67** nor the strike, i.e. the holder **61, 61*a*** and hinge pin **62,** extend beyond the outline of the case cover or case body respectively when the cover is opened or removed, thus providing protection against damage due to side swipes and protection to personnel from extended objects. It may be further noted that the disclosed shape of the compression member **67** can accommodate a wide range of front cover radii.

FIGS. **11A–11C** illustrate respectively in closed, partially open and open orientations a novel, extendable linked, hinged, compression-spring latch mechanism according to the invention. There is provided, in place of the conventional latch hook a modified latch hook **69** accompanied by an elongated loop **70** with a pivot pin **71** captivated thereby. To the loop/pivot pin **70, 71** arrangement is coupled one (**72**) of two extension elements **72, 73** which in turn are pivotably coupled together at **74.** Element **73** is coupled at its other end by way of a pivot **75** fixedly mounted in male extrusion **17** by way of a block **76** which also provides the strike **76*a*** for the latch hook **69.**

This arrangement may be physically realized in two different ways. The more preferred arrangement provides for elongated loop **70** to be integrally a part of the latch hook **69.** Center pivotable extension **72** in turn has the hinge pin **71** fixedly mounted to the one end thereof, which hinge pin **71** is captivated by the loop **70.** Alternatively, hinge pin **71** could be fixedly mounted to the latch hook **69,** with the center pivotable element **72** having the elongated loop **70** as the end portion thereof and loosely captivating the pin **71.** The loop **70** is elongated, in distinction from a regular pivot, to absorb compression due to the latch tension in the engaged position shown in FIG. **11A.** In this way the possibility of elements **72** and **73** causing latch hook **69** to buckle or bow outward due to a lack of facility for absorbing the compression is eliminted.

FIG. **11C** in particular clearly shows the three-piece extension arrangement which permits pulling the front cover **1** away from the case **2** and to swing open, without interferring with the adjacent case or with the case contents as they are withdrawn from the case, while remaining all the while in hinged connection at **75.** Although the arrangement shown is of the type having a permanently mounted hinge at **75,** it is to be understood that well known methods may be here employed to provide this hinge mounting **75** with a separable capability, thus permitting the cover **1** to be removed altogether if desired.

The arrangement in FIGS. 11A–11C could be modified to a two-piece extension arrangement by simply eliminating element 73 and fixedly mounting pivot 74 to the case body 2 an appropriate distance in front of the strike 76*a*. This embodiment would then operate substantially as shown schematically in FIG. 12, wherein former element 72 is in effect the latch hook, and former element 69 is now the extension piece pivotably mounted to the nose of the latch at one end and to the hinge pin 71, which is mounted on the new latch hook, by way of the elongated loop 71 at the other end thereof.

In the above there has been described various improvements to transit/combination case construction and associated hardware wherein the removal and attachment of the front cover with only front access when the cases are stacked is made possible by the unique angled recess/latch configuration. The various novel latch arrangements disclosed satisfy the need for a military-acceptable transit/combination case latch that will go around a corner to permit opening of front covers of cases which are stacked in close proximity to each other by making the latch handle accessible from the unobstructed case fronts. Several of these arrangements also permit hinging of the door from any side on which the latches remain unopened together with the capability of complete removal of the cover. Moreover, extensive consideration has been given to making as many parts and aspects associated with a case multifunctional for economical fabrication as well as maximum utility and space.

While the principles of this invention have been described above in connection with specific apparatus, it is to be understood that this description is made only by way of example and not as a limitation on the scope of the invention as set forth in the objects and features thereof and in the accompanying claims.

What is claimed is:

1. A transit/combination case comprising:
   a. a case body;
   b. a front cover removably attached to said body;
   c. at least one angled recess at a predetermined position on said front cover such that the recess on each cover in a stack of similar cases will align to provide a combined recess area; and
   d. latching means mounted within said recess for attaching said cover to said body whereby access to said latching means is provided by the combined recess area allowing for removal of said front cover from said body without removing the case from the stack.

2. A transit/combination case according to claim 1 wherein the front cover further comprises:
   a. a face portion;
   b. a pair of opposing top and bottom portions; and
   c. a pair of opposing side portions.

3. A transit/combination case according to claim 2 wherein the top and bottom portions each contain a pair of angled recesses therein.

4. A transit/combination case according to claim 3 wherein each pair of said top and bottom portion angled recesses contain a latch mechanism.

5. A transit/combination case according to claim 2 wherein the said side portions each contain a pair of angled recesses.

6. A transit/combination case according to claim 5 wherein each pair of side portion angled recesses contain a latch mechanism.

7. The transit/combination case of claim 6 wherein the height of said male members is predetermined with respect to the depth of said female members to result in a predetermined gap between two abutting cases in a stack to allow for ease in case removal from the stack.

8. A transit/combination case according to claim 1 wherein said latching means comprises:
   a. a latch fixedly attached to said case cover, with one end hingedly attached to said body; and
   b. a latch strike fixedly attached to said case body for receiving said latch hook to secure said front cover to said case body.

9. The transit/combination case of claim 1 further comrising a plurality of male protruding members on the top surface of said case body, and a plurality of female recesses on the bottom surface of said case body in a one-to-one correspondence so that the female members of a top case will intermate with the corresponding male members of a bottom case in a stack thereby providing intercase support.

10. The transit/combination case according to claim 1 further comprising:
   a. at least one first L-shaped intercase latching member containing an aperture on a raised section thereof fixedly attached to a predetermined position at the bottom of said case body; and
   b. at least one second L-shaped intercase latching member containing a pair of raised sections thereon, with a latching member intermediate said raised sections fixedly attached to the top of said case body in a predetermined position so that the first L-shaped member of one case will align and intermate with the second L-shaped member of an abutting case in a stack allowing said latching means to contact the aperture of said first member.

11. The transit/combination case according to claim 10 wherein said first member is a metallic piece having a broad L-shaped raised portion with an aperture in one leg thereof serving as a latching strike and wherein the second member is a metallic piece having a pair of L-shaped parallel raised portions, recessing a latch mechanism mounted therebetween on one leg and providing a stacking recess therebetween on the other leg of said L-shaped second member, the latter being of complementary design with and serving as a receptacle for said stacking portion of said first member arranged on the adjacent case in a stack, and said latch mechanism of said second member being arranged to engage with said strike of said first member provided on the adjacent case in the stack.

12. The transit/combination case according to claim 11 wherein the recessed latch mechanism from said second member is multi-functional and arranged to be pivotable to a secondary position for engaging and securing the case cover.

13. The transit/combination case according to claim 12 wherein the multi-functional latch mechanism is provided with means for storing the latch hook in a non-protruding storage position.

14. The transit/combination case according to claim 11 whereinsaid intercase stacking and latching arrangement further includes a bent rectangular metallic loop

captivated between said second member and the case body within said parallel raised portions, said loop being exposed on one end between said parallel raised portions for providing a stop and preventing lateral displacement of said first member in the stacked mode.

15. The transit/combination case according to claim **14** wherein said loop is exposed between said parallel raised portions at the other ends thereof for providing a means for lashing together the cases in the stacked mode and for tying down the stack.

16. The transit/combination case according to claim **15** wherein said parallel raised portions of said second member are arranged to cooperate with said raised portions of said second member of the adjacent case in a stack to prevent a front-to-back shifting between the respective cases.

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