

July 15, 1941.

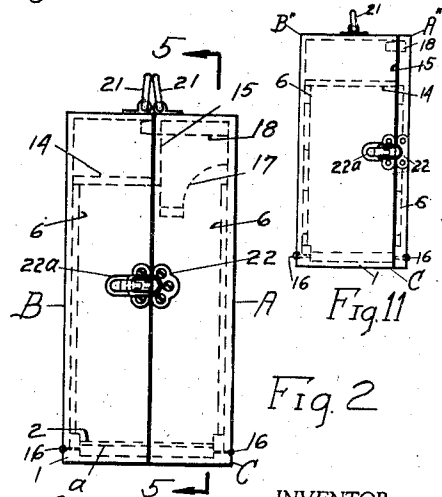
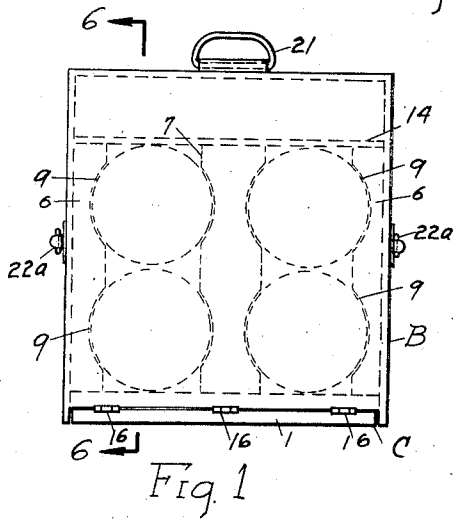
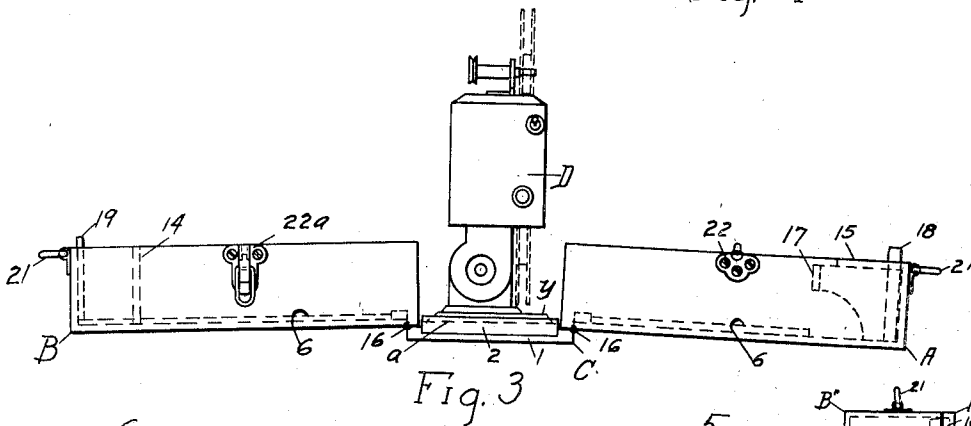
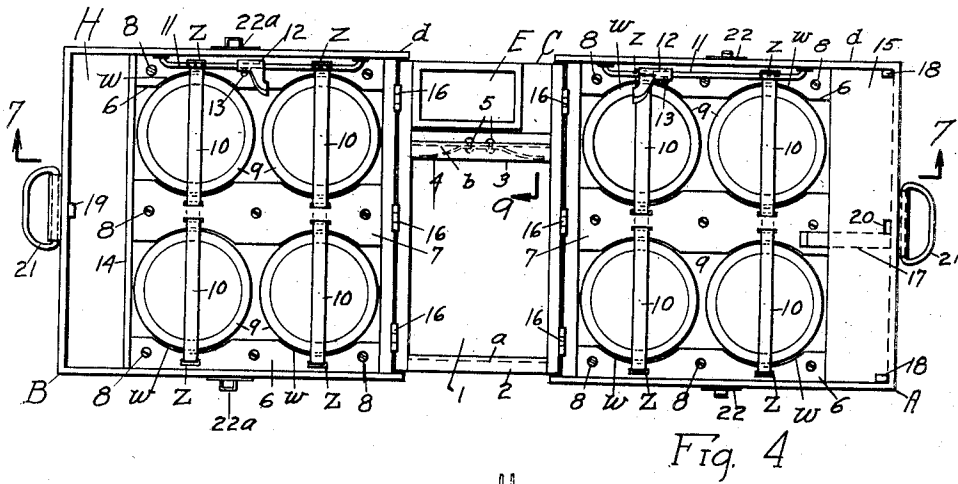
L. M. CORLESS

2,249,116

INSTRUMENT CARRYING CASE

Filed Sept. 30, 1939

2 Sheets-Sheet 1



INVENTOR.
Lee M. Corless
BY Myron J. Dikeman
ATTORNEY.

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2 Sheets-Sheet 2

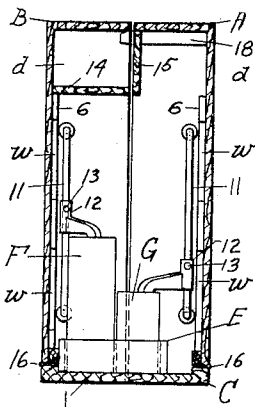


Fig. 6

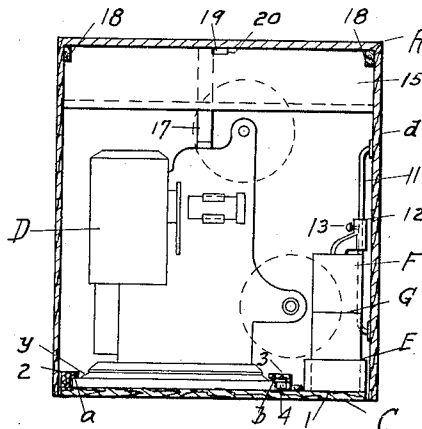


Fig 5

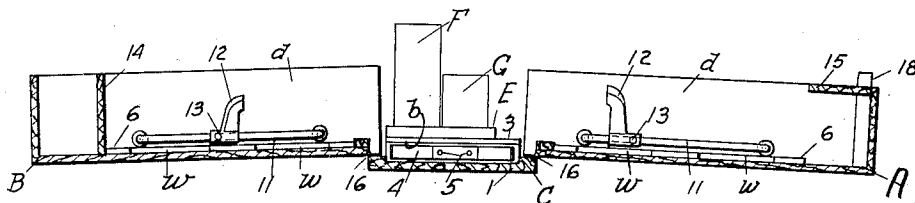
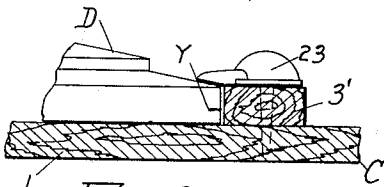


Fig. 7



$F_{Iq} \cdot q$

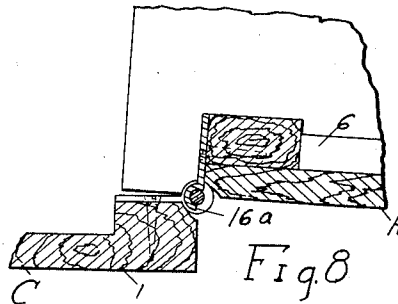


Fig. 8

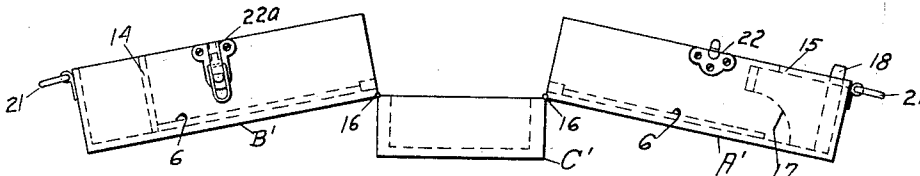


Fig. 10

INVENTOR.
BY *Lee M Corless*
Myron J Dikeman
ATTORNEY.

UNITED STATES PATENT OFFICE

2,249,116

INSTRUMENT CARRYING CASE

Lee M. Corless, Royal Oak, Mich.

Application September 30, 1939, Serial No. 297,252

3 Claims. (Cl. 312—20)

The object of my invention is to produce a special case for instruments, designed for conveniently packing all necessary equipment incidental to the special instrument adapted.

Another object is to provide a folding case adaptable to various special instruments, and that can readily be opened in a flat position upon a supporting table in a manner that any chosen equipment is accessible without disturbing other parts therein inclosed.

A further object is to provide a folding case especially adapted for transporting motion picture projectors, or similar instruments, so that the projector may be readily operated without removal from the case, and all necessary equipment available for immediate use therewith.

A still further object is to provide a special folding carrying case that is simple in construction, easily and efficiently operated and that can be manufactured at a very low cost.

These several objects are attained in the preferred form, by the construction and arrangement of parts as is more fully hereinafter set forth.

Similar parts on all drawings are marked by similar numerals or letters.

Fig. 1 is a side elevation of the closed case, showing the exterior formation and connecting means between the sections.

Fig. 2 is an end elevation of the closed case showing the relative position of the side and bottom sections and means for connecting same.

Fig. 3 is an end view of the case, in its open position showing a special projector instrument mounted therein and ready for operation without removal from the case.

Fig. 4 is a plan view of the open case shown in the Fig. 3, but with the projector instrument removed, showing the various compartments formed therein and the means for retaining the special equipment within recesses provided.

Fig. 5 is a vertical sectional view taken on the line 5—5 of the Fig. 2, showing the relative position of an inclosed instrument and accessories within the closed case, and the special means for retaining them in position.

Fig. 6 is another vertical sectional view taken on the line 6—6 of the Fig. 1, illustrating the adjustable means for retaining box containers within the base compartment, when the case sections are closed together.

Fig. 7 is a longitudinal sectional view lengthwise through the opened case, taken on the line 7—7 of the Fig. 4, showing the general construc-

tion of the case walls and the semi-compartment recesses formed therein.

Fig. 8 is an enlarged detail of an alternate hinge structure, illustrating one detachable means for conveniently separating, or removing the side sections from the supporting base, when desired.

Fig. 9 is another enlarged detail showing an alternate clamping unit, in the form of a thumb latch, for more securely attaching inclosed instruments to the case base section, when the type of instrument inclosed may require.

Fig. 10 is an end elevation, illustrating a deep, or box base and with the side case sections closing thereon.

Fig. 11 is a modified end view of the case showing variable depths of the side sections as may be also used.

While my folding carrying case is herein illustrated as applied, or adapted to a moving picture projector instrument and projector accessories, yet it is to be understood that the case is also adaptable to other types of instruments equally as well, and are intended to be included herein.

In general my carrying case comprises two box shaped side sections positioned with their open faces together, and hingedly mounted on opposite sides of a supporting base. Both base and side sections are formed with special recesses and instrument compartments, and provided with special retaining means for clamping the various units placed therein. The instrument preferably is mounted on the base section as herein illustrated.

I will now describe more fully the detail construction of my carrying case, referring to the drawings and the marks thereon.

The side sections A and B are preferably made of wood, or fiber, or of any other suitable material as may be desired, and is formed box shaped, open at the inner side and the bottom end. The side sections may be made to any desired size or depth, depending upon the special instrument with which it is to be used. The rectangular base C is preferably made shallow, and is herein illustrated as a grooved board section I provided with cross cleats 2 and 3 securely attached thereto, preferably by proper cement materials, or screws. The cross cleats 2 and 3 are formed with longitudinal grooves a and b for receiving the base flange edges y of the inclosed projector instrument D, as shown mounted therein in the Fig. 5 of the drawings. The groove b of the cleat 3, is formed deep and carries a strong retaining spring 4 mounted therein. The retaining

spring 4 is preferably made of a flat spring bar, curved outwardly at both ends, and fixedly attached to the cleat at the center by suitable screws or rivets 5. The outer ends of the spring are designed to recede within the groove *b* under pressure applied through the instrument base flange *g*, and sufficiently to allow the instrument flange edge to enter the opposite groove *a* of the base end cleat 2. The restraining spring 4 is sufficiently stressed to retain the instrument base firmly within both cleat grooves. Where the nature of the instrument D does not require, both the grooves and the spring 4 may be omitted if desired. A box compartment E is provided at one end of the base C, designed for receiving special box containers F and G therein, and as may be required for the special instrument adapted. The side sections A and B are pivotally attached to the base C by the hinges 16, and allow the sections to be closed tightly together, and latched, as shown in the Fig. 2 of the drawings. Each case section is provided with special retainer bars 6 and 7, positioned in parallel alignment and fixedly attached to the section side walls by suitable screws 8. The retainer bars as herein illustrated, are formed with circular segment recesses *w* along their respective edges, designed for retaining thin circular reel cans 9 therein, and as are required with the illustrated projector instrument D. Elastic retainer bands 10 are mounted between the bars 6 and 7 through slotted recesses *z* formed therethrough, and are positioned across the respective circular recesses, stressed for firmly retaining the circular reel cans 9 therein, or allow their removal when desired. The bars 6 and 7 are detachably mounted to the case side walls by the screws 8, which allows the removal thereof for replacing the elastic retainer bands 10, when necessary. These retainer bars may likewise be designed to receive different shaped equipment units within their respective recesses, as may be required by different types of instruments to which the case may be adapted. Along the end wall *d* of each case section A and B, in alignment with the base box container E, is mounted an elongated clamp slide bar 11, fixedly attached to the wall. An adjustable clamp arm 12 is slidably mounted on each slide bar 11, capable of adjustment thereon for engaging and retaining the box containers F and G within the base compartment E when the case sections are closed together, as illustrated in Fig. 6 of the drawings. The clamp arms 12 are securely attached to the slide bars 11 by suitable set screws 13. The case section B is provided with a cross partition wall 14 across the outer end thereof, forming a packing compartment H therein. The opposite case section A is provided with a cross wall bar 15 along the outer edge thereof, positioned opposite the opposing compartment H, for closing same when the two case sections are closed together. A special instrument clamp block 17 is fixedly mounted in the outer end of one case section, preferably the section A, and positioned therein to engage the instrument top when the case is closed, and firmly hold said instrument in position within the base recess, during transportation. Small, rectangular shaped dowel pins 18 are fitted within the outer corners of the case section A, fixedly attached thereto, designed to engage the opposite corresponding corners of the section B when the two sections are closed together, for forcing both sections in alignment. A further reinforcing dowel pin 19 may also be

mounted at the top center of the section B, positioned to engage the dowel recess 20 formed through the cross wall bar 15, if desired.

The case sections A and B are provided with suitable carrying handles 21 mounted on their respective top walls, also securing clasp sections 22 and 22*a* are fixedly attached to the respective case section ends, for locking them together when closed. The handle may be omitted for small cases, if desired.

When desirable, an added thumb clamp 23 may be mounted on the base cross cleat 3, and as indicated in Fig. 9 of the drawings, for more securely attaching the instrument D to the base section C. Either the clamp 23, or the retaining spring 4, or both may be omitted if the character of the instrument D will permit.

When the operation of any inclosed instrument D may require, special detachable hinge units 16*a*, as illustrated in Fig. 8, may be substituted for the ordinary hinges 16, thus allowing the case side sections A and B to be readily lifted from the base hinge pivots when the side sections are rotated to their full open positions.

A modified case section is illustrated in Fig. 10 of the drawings, showing a deeper base C', resembling box construction, and with the side sections A and B hingedly attached thereto, but with the case end walls engaging the box edges instead of extending thereby as in the former structure. The remainder of the case and its application to instruments and accessories, is the same as previously described.

The Fig. 11 shows a further modification of the case, with the side sections formed of different thicknesses, herein illustrated as side A' reduced to substantially a panel section, although each side section may be varied in thickness according to the needs of the special instrument to be inclosed therewith. The remaining construction is the same as previously described. Should the character of the instrument inclosed require, the instrument base mounting may be attached to one of the side section walls instead of the base section previously illustrated. Neither the case, or its operation will be effected.

It is to be understood that my folding carrying case also adaptable for various other articles and uses, and I not only claim the actual design herein shown, but any modifications thereof that is substantially a substitution of parts or sections herein illustrated.

Having fully described my instrument carrying case, what I claim as my invention and desire to secure by Letters Patent is:

1. A folding carrying case adapted for special instruments and incidental equipment and used therewith, comprising a shallow recessed base section, two open rectangular side sections hingedly mounted on opposite sides of said base closable therewith to form a closed case compartment, retaining ribs mounted across the base recess designed to fit and restrain an instrument base in a predetermined position thereon, equipment unit recesses formed within the side sections, restraining means mounted over each equipment recess, engaging means mounted within one side section for engaging the instrument top and clamping the instrument to the base recess when the case sections are closed together, lock units mounted on the case section walls for firmly attaching them together when the sections are closed, and a carrying handle mounted on each of the side section walls.

2. A carrying case adapted for special instru-

ments and equipment incidental thereto and used therewith, comprising a rectangular base section, two open rectangular side box sections hingedly mounted on opposite sides of the base closable therewith to form a closed case compartment, instrument retaining ribs mounted across the base section top for retaining an inclosed instrument in a predetermined position thereon, instrument clamping means provided on said base cross ribs, equipment recesses formed within each side section wall, adjustable restraining means provided over each equipment recess, an open packing compartment formed in one side section, a closing panel mounted in the opposite side section positioned to coincide with the opposite open packing compartment when the case sections are closed together, a clamp block mounted in one side section positioned to engage and restrain an inclosed instrument within the base recess when the case is closed, clasp means mounted on the side sections for locking them together, and suitable handle carrying means mounted on the side section walls.

3. A carrying case adapted for projector instruments and equipment incidental thereto and used therewith, comprising a suitable box shaped base

section, two open box side sections hingedly mounted on opposite sides of the base, closable therewith to form a closed case compartment, means provided on said base section for retaining a projector instrument in a predetermined position thereon, instrument clamping means mounted in one side section, engageable with the projector instrument when the sections are closed together, a package compartment formed in one case end, equipment recesses formed within the side sections, restraining means mounted over each equipment recess, clamp means mounted on the side sections, positioned to engage units placed in the base package compartment when the case is closed, an open packing compartment provided in one side section and a closing panel therefor mounted in the opposite side section, section alignment units mounted along the edges of one side section engageable with the opposite side section when closed together, latch means mounted on the case sections for retaining them in their closed position, and suitable handle carrying means mounted on the side sections opposite the base section.

LEE M. CORLESS.