

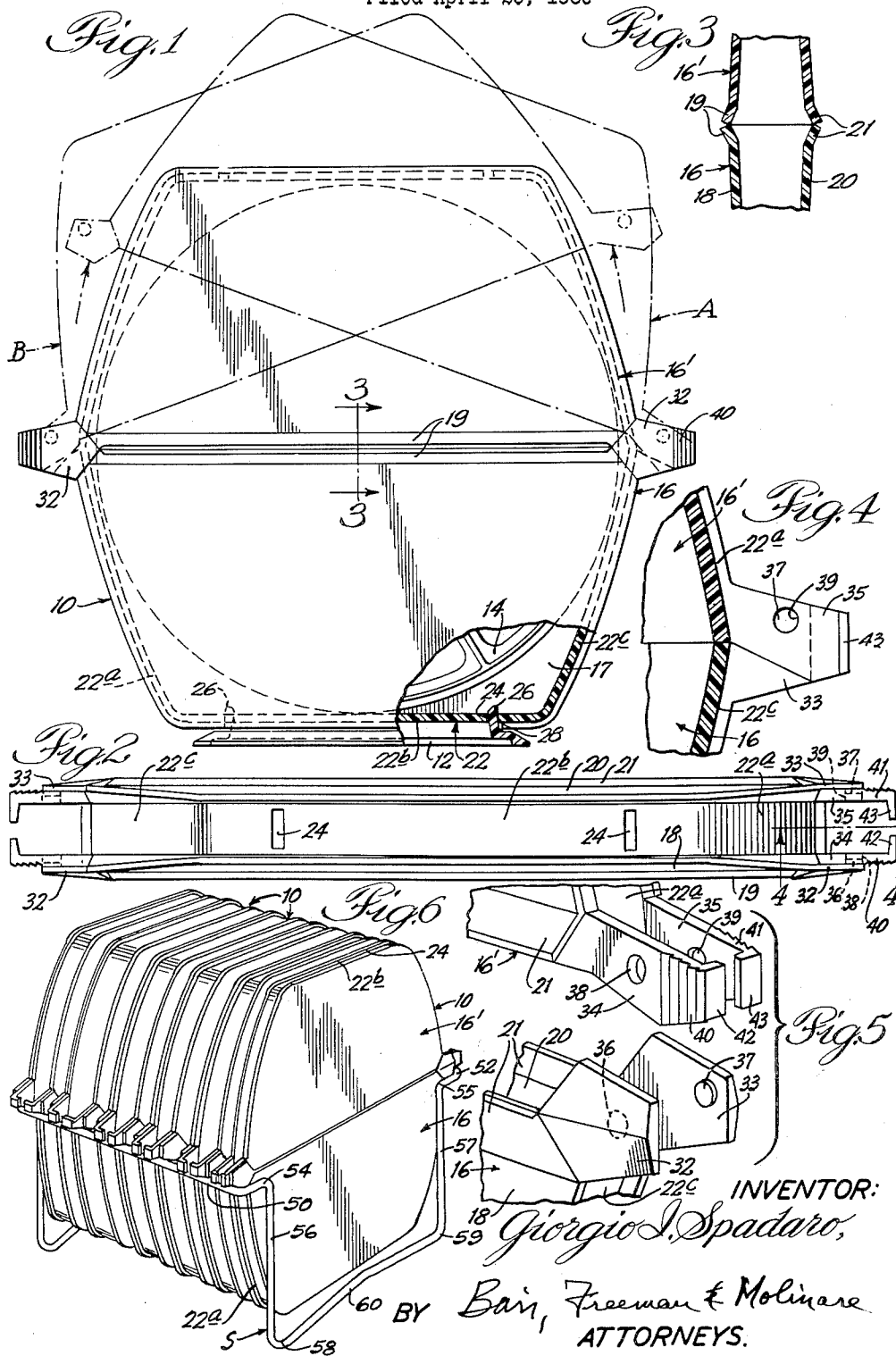
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REEL HOLDER

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REEL HOLDER

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This invention relates to a reel holder and more particularly relates to a reel casing having hollow complementary parts which may be selectively opened to permit of edgewise movement of reels into or out of the casing.

In the storage of reels, upon which are wound tapes, motion picture films, or the like, there arises the problem of having convenient access to such reels. Heretofore such reels have generally been stored individually in cylindrical cans, or the like. Such cylindrical cans pose access problems in that if the cans are stacked vertically on their flat sides, all cans located above the one desired must be moved to have access to the desired can. If such cylindrical cans are stacked horizontally on edge, the individual can must still be removed from the stack to permit of opening the can to have access to the reel therewithin. Furthermore, the cylindrical cans tend to roll when stacked on edge and to avoid this difficulty, usually some container or support must be provided having a plurality of arcuate seats for receiving and seating the cylindrical cans.

One object of this invention is to provide a casing for tape or film reels, or the like, wherein the casing is defined by hollow complementary casing parts which when opened permit of edgewise movement of the reel into and out of the casing.

Another object of this invention is to provide tape or film reel casings which may be horizontally stacked on edge and which permit of selective withdrawal or insertion of a reel relative to any selected one of said casings without having to remove the selected casing from the stack of casings.

A further object of this invention is to provide a casing for tape or film reels wherein the casing is formed of two hollow complementary parts having cooperating means thereon which permit of arranging the complementary parts to permit of swinging movement between said parts to afford selective opening or closing of the casing.

Still another object of this invention is to provide a casing for tape or film reels wherein the casing is formed of two hollow complementary parts having cooperating means thereon which define combination latch-and-pivot means which are adapted to selectively serve either as a latch means for latching the casing parts together or to serve as a pivot means which permits relative pivoting between the casing parts as the parts are moved between open and closed positions.

Still a further object of this invention is to provide improved storage casings for tape or film reels and improved stand means therefor.

Further objects and advantages of this invention will become apparent as the following description proceeds and the features of novelty which characterize this invention will be pointed out with particularity in the claims annexed to and forming part of this specification.

A preferred embodiment of the invention is shown in the accompanying drawings, in which:

FIGURE 1 is a side elevation view partly in cross-section showing, in full lines, the improved reel casing of this invention and showing the casing mounted on one form of stand therefor; and FIGURE 1 also illustrates by dot-dash lines the manner in which the casing may be opened selectively from either side of the casing;

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FIGURE 2 is an enlarged top plan view of the casing shown in FIGURE 1;

FIGURE 3 is a fragmentary cross-section view taken on line 3-3 of FIGURE 1;

FIGURE 4 is a fragmentary enlarged cross-section view taken on line 4-4 of FIGURE 2 and shows certain details of the combination latch-and-hinge means;

FIGURE 5 is an exploded fragmentary perspective view of the combination latch-and-hinge means of the reel casing disclosed herein; and

FIGURE 6 is a perspective view of a stack of reel casings of the type disclosed herein shown mounted on a modified form of stand for said reel casings.

Referring now to the drawings, there is shown in FIGURE 1 a reel casing 10 mounted on a support stand, or base, 12, and illustrating a film or tape reel 14 positioned within the casing. The casing 10 is formed of identical first and second hollow complementary casing parts, such as the lower casing part 16 and an upper casing part 16'. These complementary casing parts, 16 and 16', cooperate with each other in such a manner that said parts are adapted to be selectively arranged in open or closed condition relative to each other. In FIGURE 1, the full-line portion of the drawing shows the parts 16 and 16' in closed condition, and a first dot-dash line position, indicated at A, illustrates the upper casing part 16' when being swung in one direction toward an open casing position, and a second by dot-dash line position, indicated at B, illustrates the upper casing part 16' when being swung in a second direction toward an open casing position.

When the casing parts 16 and 16' are in closed condition they cooperate to define a substantially vertically elongated, narrow chamber 17, within which the tape, or film, reel 14 is stored. When the casing parts are swung to their full open condition, such condition permits of selective removal or insertion of a reel 14 edgewise with respect to the lower casing part 16. It will be seen that when the casing parts 16 and 16' are in closed condition, the junction between said complementary parts is disposed substantially diametrically of the reel 14.

Referring now more specifically to the construction of the complementary casing parts 16 and 16', it will be seen that each casing part is formed with a pair of upright spaced side walls 18 and 20 which are formed to diverge, or bevel, outwardly, respectively at 19 and 21, adjacent the open edge of the casing part. The spaced side walls 18 and 20 are interconnected by a peripheral edge wall 22, segments of which are identified in FIGURE 1 as 22a, 22b, and 22c. The segments 22a and 22c are upright segments, as viewed in FIGURE 1, and the segment 22b is a horizontal segment, as best seen in FIGURE 1.

The horizontal segment 22b is provided with a pair of spaced apertures 24 which are adapted to releasably receive thereinto, by a press fit, a pair of upstanding tangs, or connectors, 26, which are formed integrally with the base member 12. The base 12 also defines shoulders 28 adjacent the upstanding connectors 26, against which shoulders the outer surface of edge portion 22b is adapted to abut. The sides 18 and 20 and the upstanding edge wall segments 22a and 22c terminate at the open side of the casing part 16; and when looking directly at the open side of the casing part it appears to define a substantially rectangular opening into which the tape or film reel 14 may be introduced edgewise into the casing part.

Now, the complementary casing parts 16 and 16' are preferably identical in construction so that they may be formed from a single mould. Each casing part 16 has extending laterally therefrom, in opposite directions, a first connector means and a second connector means. Each first connector means is adapted to cooperate with

the second connector means on a complementary casing part, and vice versa. The cooperating first and second connector means define certain constructional features, one of which permits of the pivoting of one casing part relative to the other casing part, and another constructional feature permitting the releasable latching of one casing part to the other casing part.

Turning now to the specific construction, as best seen in FIGURE 5, the first connector means is shown to include a pair of first flanges 32 and 33 extending laterally respectively from casing walls 18 and 20, and the second connector means includes a pair of spaced flanges 34 and 35 extending laterally respectively from casing walls 18 and 20 on casing part 16'. The flanges 32 and 33 respectively carry studs 36 and 37, which extend toward each other; and the flanges 34 and 35 are respectively provided with apertures, or recesses, 38 and 39 adapted to cooperate and receive therein the studs 36 and 37 to form a combination latch and pivot joint between said first and second connector means.

The flanges 34 and 35 are of greater lateral extent than flanges 32 and 33, so that gripping portions of flanges 34 and 35 extend beyond flanges 32 and 33. These gripping portions of flanges 34 and 35 are the serrated portions indicated respectively at 40 and 41. The outermost ends of the flanges 34 and 35 are provided with inwardly extending stop elements 42 and 43, whose terminal ends are adapted to abut each other and which are spaced closer together than the spacing of the flanges 34 and 35.

The operation of the cooperating parts of the complementary casing parts 16 and 16' will now be understood by reference to the drawings and to the following description. When the casing 10 is closed, the flanges 34 and 35, being spaced closer together than flanges 32 and 33, are positioned between the spaced flanges 32 and 33. Normally, the studs 36 and 37 extend into the apertures 38 and 39 to provide a first connector means between the casing parts 16 and 16' which defines a hinge to permit of selective swinging of one of the casing parts relative to the other casing part, selectively to open or closed positions. Since each casing part 16 is provided on one side thereof with a set of flanges 32 and 33 and on the other side thereof with a set of flanges 34 and 35, there thus exists two cooperating connections at opposite ends of the diametral junction between the complementary casing parts.

The flanges 34 and 35 are somewhat resiliently mounted and this permits that the serrated portions 40 and 41 of such flanges may be gripped and selectively squeezed toward each other, and such action moves the flanges 34 and 35 toward each other, against the inherent resiliency of the parts, a distance sufficient to release the connection of flanges 34 and 35 with the studs 36 and 37 formed on flanges 32 and 33. The latter action permits of separation of the connector means between the two casing parts, so that the casing may then be selectively opened. The stops 42 and 43 are positioned to engage each other to limit the amount of distortion or deflection of flanges 34 and 35 toward each other.

Thus, it can be seen that a combination hinge and latch is provided on each of the opposite sides of the casing shown in FIGURE 1 and, by proper manipulation, the casing 10 may be opened from either side as indicated by the dot-dash line positions at A and B, as seen in FIGURE 1.

FIGURE 6 shows another form of support stand that may be used in combination with the reel casings that has been hereinabove described. In FIGURE 6, there is shown, as part of the support stand, means for defining a pair of spaced ledges 50 and 52 which are spaced close enough to each other to serve as supports for engaging the under side of portions of the flanges 32, 33, 34, and 35 which extend laterally of the casing parts.

In the specific form shown in FIGURE 6, the pair of spaced ledges 50 and 52 are part of a continuous wire

stand "S" that has been appropriately shaped or formed not only to define the said ledges 50 and 52, but also to define inwardly extending elbows 54 and 55 adjacent each end of the ledges 50 and 52, support legs 56 and 57 extending downwardly and outwardly from the elbows 54 and 55, the said legs 56 and 57 merging with rounded support-engaging elbows, or feet 58 and 59, which are interconnected by an upwardly bowed base segment 60. The upwardly bowed segment 60 provides a certain amount of resilience and tends to flatten out when the stand S is loaded with a plurality of casings 10. The elbows 54 and 55 extending toward each other, inwardly of the spaced ledges 50 and 52, provide lateral restraints which are adapted to be engaged by portions of the side walls of the casings to prevent the casings 10 from slipping edgewise off the ledges 50 and 52.

The stand S that is shown in FIGURE 6 so supports each of the casings 10 as to permit of complete freedom of opening of each casing 10 from either side, and for simultaneously maintaining any number of selected casings 10 in open condition, thereby providing instant access to each of the reels 14 within the casings 10. This simultaneous access to a plurality of reels 14 can not be had with existing types of casings, wherein the portions of the casings move axially of each other and wherein such casings are generally arranged axially of each other, thereby preventing axial opening of a plurality of casings simultaneously where the casings are arranged in axially stacked relation.

While there has been shown and described a particular embodiment of this invention, it will be obvious to those skilled in the art that various changes and modifications may be made therein without departing from the invention and, therefore, it is intended in the appended claims to cover all such changes and modifications as fall within the true spirit and scope of the invention.

What I claim as new, and desire to secure by Letters Patent of the United States, is:

1. A casing for tape or film reels comprising, in combination: a pair of identical, complementary, casing parts each defining one-half of a chamber for receiving, by edgewise entry, a tape or film reel, each casing part defining an opening of generally rectangular form at the open terminus of said half-chamber, said casing parts being arranged to abut each other edgewise adjacent said rectangular opening, said pair of casing parts when in edgewise abutment defining a substantially totally enclosed chamber in which a tape or film reel may be stored, one of said casing parts being provided with a first pair of spaced connector means in the edgewise periphery thereof, and base for maintaining the casing in a vertical edgewise condition including a second pair of connector means on said base releasably connected to and cooperating with said first pair of connector means.

2. A casing for tape or film reels comprising, in combination: a pair of identical, complementary, casing parts each defining one-half of a chamber of elongated depth for receiving, by longitudinal edgewise entry, a generally flat but elongated tape or film reel, each casing part defining an opening of generally rectangular form, and narrow width relative to the elongated depth of the chamber, at the open terminus of said half-chamber, said casing parts being arranged to abut each other edgewise adjacent said rectangular opening, said pair of casing parts when in edgewise abutment defining a substantially totally enclosed and elongated chamber in which a tape or film reel may be stored, each casing part carrying a first connector means and a second connector means adjacent opposite ends of said rectangular opening, said first and second connector means adapted to coact respectively with the second and first connector means on the other identical casing part to define a pair of combination latch-and-pivot means on opposite sides of the casing which permit of selective opening of said casing from opposite sides,

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and each of said combination latch-and-pivot means including a pair of spaced flanges on one casing part carrying a pair of oppositely extending studs, and a second pair of spaced flanges on the other casing part having recesses therein for receiving said studs therewithin, and one of said pair of spaced flanges being positioned between the other pair of spaced flanges, and gripping means on said one pair of spaced flanges extending beyond the other pair of spaced flanges for temporarily deflecting said one pair of spaced flanges with respect to the other pair of spaced flanges to permit of selective release between the first and second connector means, whereby upon squeezing of the gripping means, the first and second connector means are released one from the other to thereby provide a manually releasable latch for the openable casing.

3. A casing as set forth in claim 2 wherein the complementary terminal edges of the casing parts adjacent the open edge of each casing part are formed to diverge outwardly, to provide a flared opening to conveniently receive entry of a reel into the casing part.

4. A storage device for tape or film reels comprising, in combination: a pair of identical, complementary, casing parts each defining one-half of a chamber for receiving, by edgewise entry, a tape or film reel, each casing part defining an opening of generally rectangular form at the open terminus of said half-chamber, said pair of casing parts when juxtaposed defining a substantially totally enclosed chamber in which a tape or film reel may be stored, each casing part carrying a first connector means and a second connector means adjacent opposite ends of said rectangular opening, said first and second connector means adapted to coact respectively with the second and first connector means on the other identical casing part to define a pair of combination latch-and-pivot means on opposite sides of the casing which permit of selective opening of said casing from opposite sides; and stand means for said casing including a pair of spaced horizontal ledges engaging portions of each of said pair of latch-and-pivot means on the casing to support said casing thereby, while affording selective opening of said casing from either of opposite sides for access to the contents thereof.

5. A storage device as set forth in claim 4 wherein the stand means is formed of a continuous wire shaped to define said ledges, a plurality of support feet for engage-

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ment with a support surface, and lateral restraints extending inwardly of said ledges toward each other to limit lateral movement of the casings along said ledges.

6. A casing for tape or film reels comprising, in combination: a pair of identical, complementary, casing parts each defining one-half of a chamber for receiving, by edgewise entry, a tape or film reel, each casing part defining an opening of generally rectangular form at the open terminus of said half-chamber, said casing parts being arranged to abut each other edgewise adjacent said rectangular opening, said pair of casing parts when in edgewise abutment defining a substantially totally enclosed chamber in which a tape or film reel may be stored, each casing part carrying a first connector means and a second connector means adjacent opposite ends of said rectangular opening, said first and second connector means arranged to coact respectively with the second and first connector means on the other identical casing part to define a pair of combination latch-and-pivot means on opposite sides of the casing which permit of selective opening of said casing from opposite sides, and at least one of said combination latch-and-pivot means including a pair of spaced flanges on one casing part carrying a pair of oppositely extending studs, and a second pair of spaced flanges on the other casing part having recesses therein for receiving said studs therewithin, and one of said pairs of spaced flanges being positioned between the other pair of flanges and permitting of manual temporary deflecting as to the spacing thereof toward each other to permit of selective release between the first and second connector means, to thereby serve as a selectively manually releasable latch means for the openable casing, and means on the deflectable flanges for engaging each other to limit the amount of temporary deflection of said flanges toward each other.

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