

Oct. 10, 1939.

A. G. SHIELDS

2,175,673

CONTAINER

Filed May 14, 1938

3 Sheets-Sheet 1

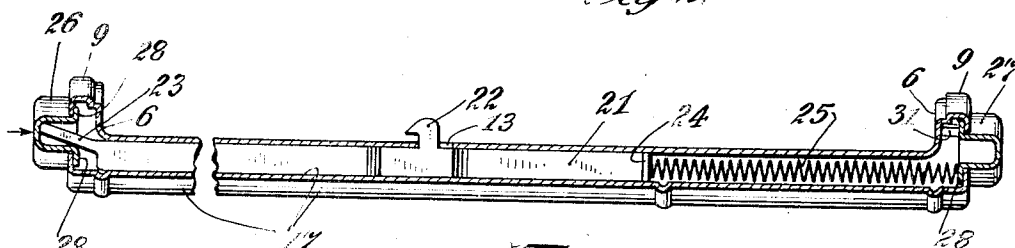
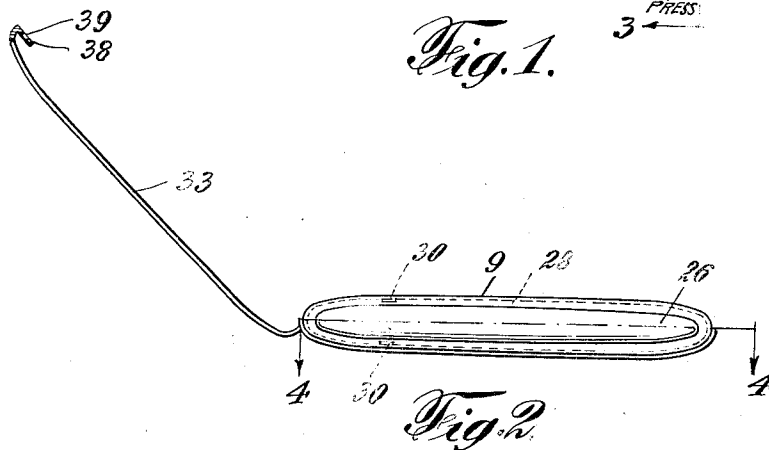
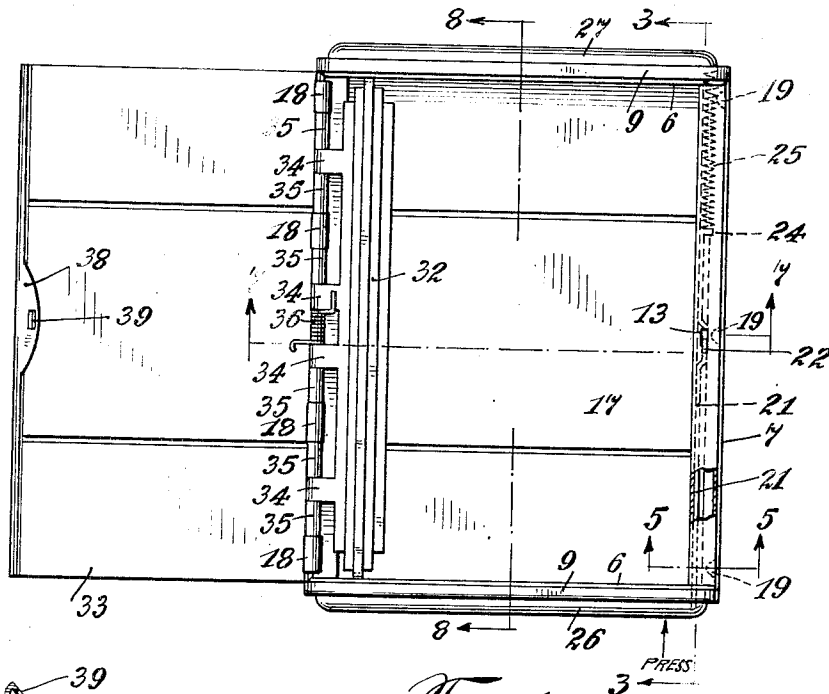


Fig. 3

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3 Sheets-Sheet 2

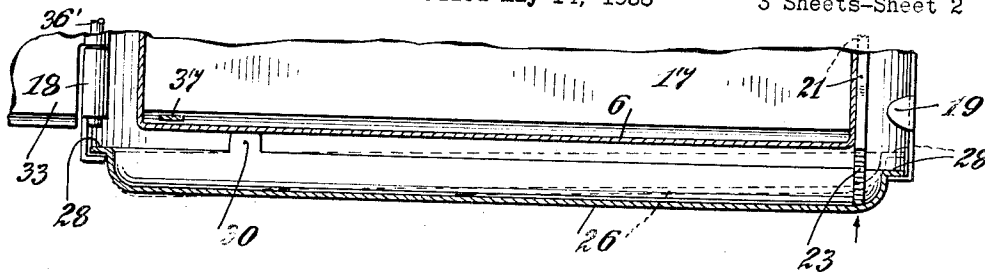


Fig. 4.

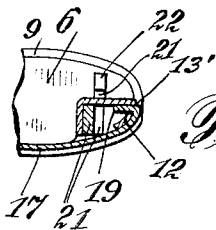


Fig. 5.

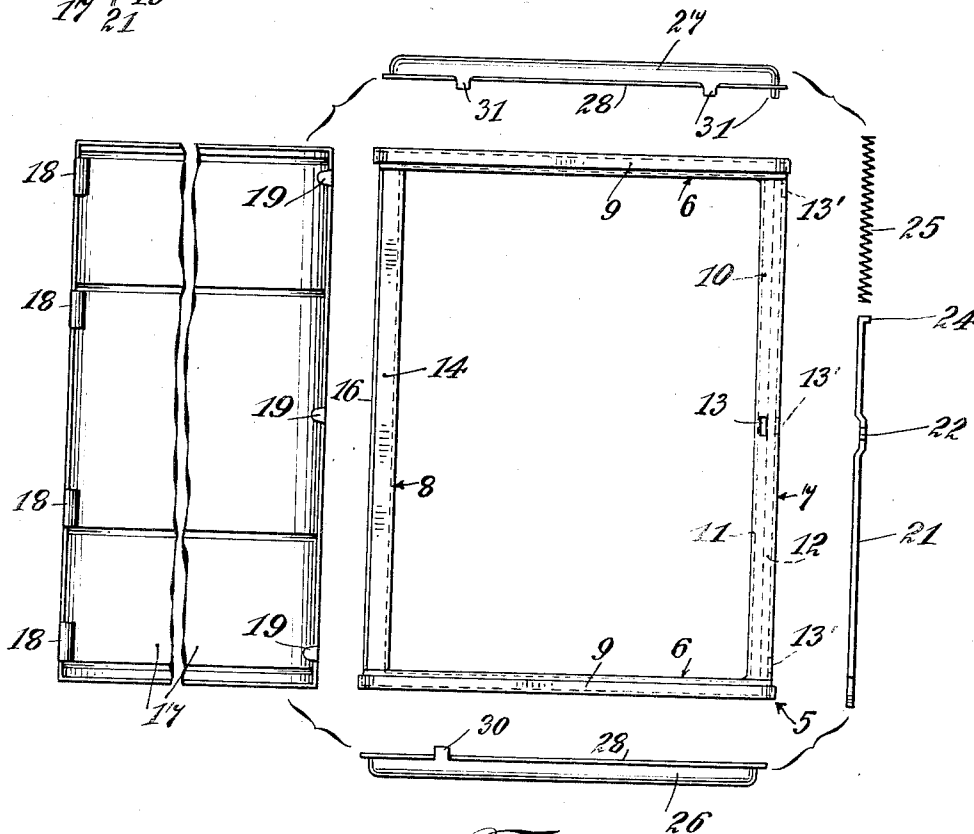


Fig. 6.

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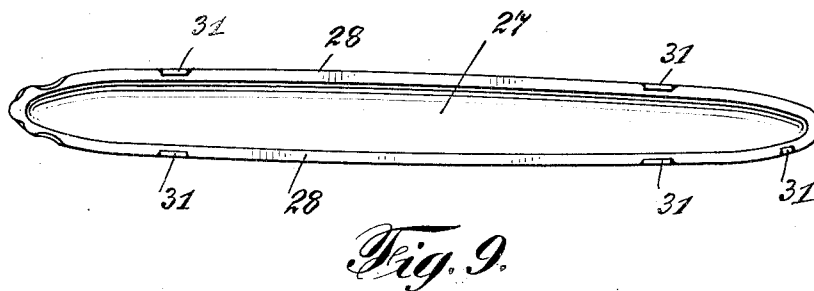
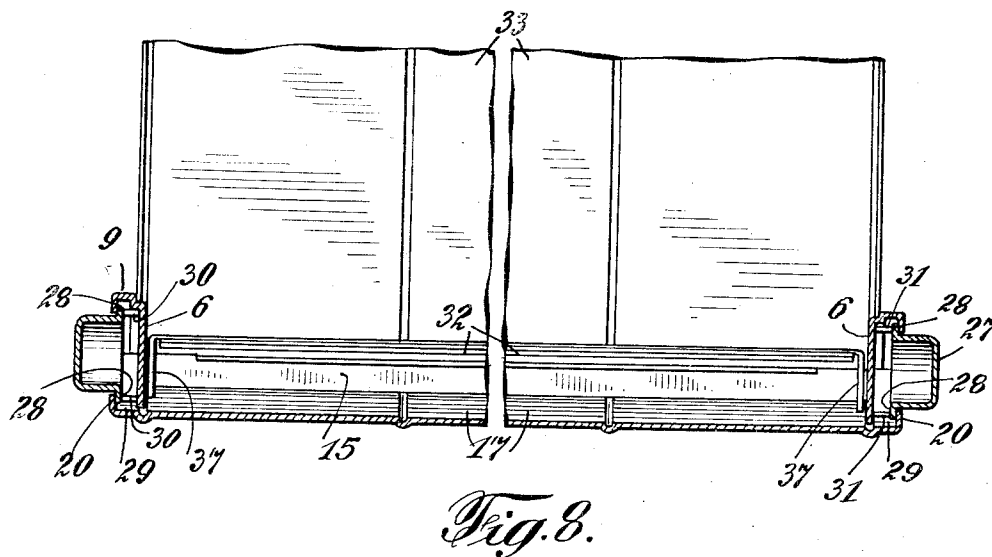
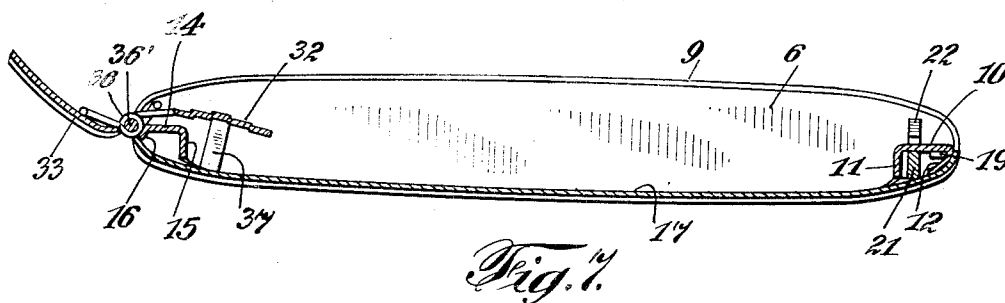
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CONTAINER

Filed May 14, 1938

3 Sheets-Sheet 3



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UNITED STATES PATENT OFFICE

2,175,673

CONTAINER

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Application May 14, 1938, Serial No. 207,862

2 Claims. (Cl. 220—55)

This invention relates to containers, such as cigarette cases and analogous articles and broadly comprehends a case or container of this type which may be inexpensively fabricated from simple, die-stamped sheet metal parts.

One important object of the invention is the provision of interengaging coacting elements on the case parts whereby they may be rapidly and accurately assembled without welding or the use of extraneous connecting or securing means to produce a rigid and durable case structure.

In a particular embodiment of the invention, the case body includes a frame in the form of a one piece sheet metal stamping and a body wall closing one side of said frame, said frame and the body wall being formed with coacting interlocking parts, engageable by the momentary relative distortion of the frame and body wall and acting to permanently retain said body wall in rigidly assembled relation with the frame.

It is a further object of the invention to provide an improved latch construction and its operating means for a hinged top or closure for the body of the case or container, the presence of which is not discernible from visual inspection and which enables such a case to be produced with uninterrupted, symmetrical, external, ornamental contours.

It is also a further general object of my invention to provide a case or container structure and latch means as above characterized which is capable of production in a variety of novel and ornamental forms and which will be efficient and reliable in practical use.

With the above and other objects in view, the invention consists in the improved container, and in the form, construction and relative arrangement of its several parts, as will be hereinafter more fully described, illustrated in the accompanying drawings and subsequently incorporated in the subjoined claims.

In the drawings wherein I have illustrated one simple and practical embodiment of the invention and in which similar reference characters designate corresponding parts throughout the several views:

Fig. 1 is a plan view of a case or container showing the same open and partly in section, constructed in accordance with one embodiment of the invention.

Fig. 2 is an end elevation, a part of the case cover or closure being shown in section.

Fig. 3 is a longitudinal section on an enlarged scale taken substantially on line 3—3 of Fig. 1.

Fig. 4 is a horizontal sectional view taken substantially on the line 4—4 of Fig. 2.

Fig. 5 is an enlarged detail sectional view taken on the line 5—5 of Fig. 1.

Fig. 6 is a plan view of the several parts of the case body and latch means in separated relation.

Fig. 7 is a transverse sectional view taken substantially on the line 7—7 of Fig. 1.

Fig. 8 is a longitudinal sectional view taken on the line 8—8 of Fig. 1, and,

Fig. 9 is an inner side elevation of one of the end trim members for the case body.

Referring in detail to the drawings, the case body structure includes a frame (Fig. 6), generally designated at 5, which in the present instance, is of rectangular form and consists of a one piece light sheet metal stamping. This frame stamping embodies the end walls 6 integrally connected at their corresponding ends by the front and rear side rails 7 and 8 respectively.

Each of the end walls 6 above the plane of the rails 7 and 8 is provided upon its upper edge with an outwardly and downwardly extending flange forming a channel 9, the purpose of which will later become apparent. As illustrated, for the purpose of producing a desired ornamental effect, these upper flanged edges of the walls 6 are downwardly curved toward the rails 7 and 8.

The front frame rail 7 includes a top portion 10 (Fig. 7), a rear downwardly extending flange 11, and the front downwardly and inwardly curved flange 12. The top 10 of said rail is centrally provided with an opening 13 for a movable latch element to be later described and at the juncture of the said top portion 10 with the flange 12, said rail is provided at longitudinally spaced points with slots 13'.

The rear frame rail 8 includes a top portion 14, the front downwardly extending flange 15, and a rear, relatively narrow, downwardly curved lip 16 preferably extending the entire length of said rail.

The bottom wall 17 for the case body closes one side of the frame 5. This wall consists of a light sheet metal stamping having its opposite longitudinal edge portions, in the present instance, curved in conformity to the edges of the end walls 6 of the frame. Upon one of these curved edges of the body wall spaced hinge knuckles 18 are formed while the opposite longitudinal edge of said wall is provided at spaced points with the inwardly projecting tongues 19. The opposite ends of the case wall 17 are provided with narrow upstanding flanges 20 (Fig. 8).

In assembling the frame 5 and body wall 17, the tongues 19 are first inserted inwardly through the slots 13' in the frame rail 7, until the curved front edge of the wall 17 closely contacts upon the inwardly curved flange 12 of said rail. The opposite rear edge of the wall 17 and the rail 8 of the frame are then forced under pressure towards each other, causing a momentary relative deformation of the edge of the body wall and said frame as the lip 16 on the frame rail rides over the convex surfaces of the hinge knuckles 18 until said lip assumes an interlocking relation to said knuckles as shown in Fig. 7. The return of the parts to normal condition results in a tight bearing contact of the concave face of the lip 16 against the hinge knuckles below the axial center thereof. Thus the frame and the body wall 17 are permanently secured in tightly interlocked relation with each other and rigidly held against relative displacement.

Before assembling the primary parts of the case body structure as above described the latch means is first assembled with the front rail 7 of the body frame. This latch means comprises a rigid metal strip 21 (Fig. 6) extending longitudinally beneath the top 10 of said rail and having a latch finger 22 projecting upwardly through the opening 13. One end of this latch member 21 is formed with a longitudinally projecting upwardly inclined arm 23 (Fig. 3) extending beyond the end of the rail 7. The other end of said latch member is provided with an angularly disposed lug 24, forming a bearing for one end of a coil spring 25 which yieldingly holds the latch member in its normal position.

The trim members 26 and 27 respectively are provided for the case body. Each of these trim members is in the form of a channelled sheet stamping having an external contour substantially conforming to that of the case body. The walls of these members at the open side of the channel are flanged as at 28. The flanges 28 at the upper sides of said trim members are positioned within the channels 9 on the upper edges of the frame walls 6 and the flanges 28 at the lower sides of said trim members are positioned within similar channels 29 formed between the end walls 6 of the frame and the flanges 20 on the body wall 17 when said wall and frame are assembled.

The arm 23 on the latch member 21 extends into the channel of one of the trim members 26 and bears against the base wall thereof while the outer end of the coil spring 25 has bearing contact with the lower flange 28 on the trim member 27.

The trim member 26 near the end thereof opposite to that engaged with the arm 23 of the latch member is provided on its upper and lower edges with inwardly projecting lugs 30 which have rocking contact with the adjacent end wall 6 of the body frame and constitute fulcrums for the trim member 26 as clearly shown in Fig. 4 of the drawings. This trim member is normally and yieldingly held in parallel relation to the end wall of the frame by the pressure of spring 25 against the latch member 21 yieldingly urging said latch member to its latching position and transmitting such pressure to the trim member 26 through the arm 23 which holds the flanges 28 of the trim member normally in contact against the inner sides of the opposed flanges of the channels 9 and 29.

The other of the trim members 27 is provided near each of its ends on its upper and lower

edges with the lugs 31, which have contact against the other end wall 6 of the body frame and thus prevent any inward movement of this trim member relative to the case body.

Also, prior to the assemblage of the frame 5 and body wall 17 of the case, a clamping or holding plate 32 (Fig. 7) for the cigarettes and the case top or closure 33 are first assembled with said body wall. The plate 32 has suitably spaced hinge knuckles 34 and one longitudinal edge of the closure 33 is also provided with similar hinge knuckles 35. A coil spring 36 is interposed between a central pair of hinge knuckles 34 on the plate 32 and has one of its ends engaged with one of said knuckles while its other end bears upon the case top or closure 33. After arranging the hinge knuckles of the plate 32 and cover or closure 33 together with spring 36, in alignment with the knuckles 18 on the body wall 17, a hinge rod or pintle 36' is inserted therethrough, whereby the several parts are connected for relative movement.

The plate 32 at its opposite ends is provided with downwardly extending arms 37 to contact with the body wall 17 and limit the movement of said plate under the action of spring 36 to its normal position.

The top or closure for the case at its free longitudinal edge is centrally formed with an inwardly projecting lip 38 (Fig. 1) having a slot or opening 39 therein which is adapted to receive the latch hook or finger 22 when said cover is moved to its closed position.

After the member 32 and lid or closure 33 have been connected with the edge of the body wall 17, the end trim members 26 and 27 are then arranged between the ends of the frame 5 and the flanges edges 20 of said body wall. The tongues 19 are now engaged through the slots 13' in frame rail 7 and the rear edge portion of said body wall and the corresponding rear rail of the frame are then momentarily distorted under pressure and the lip 16 on frame rail 8 (Fig. 7) sprung downwardly into interlocking relation with the hinge knuckles 18 on the body wall, as above explained. The hinge knuckles on the plate 32 and the hinged top or closure 33 are of slightly less external diameter than the hinge knuckles 18 on the body wall so that the lip 16 does not have frictional bearing contact therewith, thus obviating resistance to the free pivoting movement of said member and closure upon the hinge rod 36. In this manner, the several parts of the case body may be quickly and rigidly assembled without welding or the use of additional fastening or securing means of any kind.

It will be noted that by reason of the construction and arrangement of the latch and its operating means, when the case or container is closed, no parts thereof are visible and the case will present longitudinally and transversely symmetrical uninterrupted contours, thus greatly enhancing the attractive appearance of containers of this kind.

The case may be easily opened by the application of pressure with the finger against the front end of the trim member 26. A pivoting or rocking movement of said trim member from the fulcrum lugs 30 takes place and the latch strip or member 21 is forced inwardly against the resistance of spring 25 to shift the finger or hook 22 in the opening of the lip 38 and thus release the cover or closure 33 which is then swung upwardly and rearwardly to its open position by the spring 36. Upon the release of pressure on the trim

member 26, the latch member 21 and the trim member are returned to normal position by the spring 25. The other trim member 27 is immovable with respect to the case body by reason of the bearing contact of the lugs 31 at each end thereof against the end wall of the frame 5.

From the foregoing description considered in connection with the accompanying drawings, the construction and several advantages of my improved case or container will be clearly understood. As this case is fabricated from simply formed parts of light sheet metal which can be rigidly and accurately assembled by unskilled labor it will be appreciated that the production cost of cases or containers of this character is reduced to a minimum. In the drawings I have illustrated a case of one desirable ornamental form, but it will of course be evident that the novel features of my invention may also be embodied in cases or containers of various other sizes and shapes. Of course the external surfaces of the body wall 17, the cover or closure 33 and the trim members 26 and 27 may be enameled or otherwise provided with desirable surface ornamentation in any selected colors. It will further be understood that, while I have herein shown and described a preferred practical embodiment of the invention, the several novel features thereof are susceptible of more or less modification in the form, construction and relative arrangement of the several parts. Accordingly, I reserve the privilege of embodying the invention in such other alternative constructions as may be fairly comprehended within the spirit and scope of the appended claims.

I claim:

1. A container of the character described having a body including a rectangular frame comprising end members and front and rear rails connecting said end members, a body wall rigidly connected with said frame and closing one side thereof, a hinged closure for the opposite side of the frame, a latch member for said closure longitudinally movable between the front rail of the

frame and the body wall, the ends of said frame and of the body wall having opposed flanges, a trim member for one end of the container body having oppositely projecting flanges engaged with the inner sides of the corresponding flanges on said frame end and body wall and provided with means coacting with the frame to rigidly hold said trim member against movement relative thereto, and a trim member for the opposite end of the container body having oppositely projecting flanges engaging the inner sides of the flanges on said frame end and body wall and provided with means at one of its ends having fulcrum contact with the frame, the other end of said trim member being inwardly movable between the frame and body wall and coacting with one end of the latch member to move the same to its unlatching position.

2. A container of the character described having a body including a sheet metal frame comprising end members and front and rear rails connecting said end members, a sheet metal body wall rigidly connected with said frame and closing one side thereof, a hinged closure for the other side of said frame, a latching member for said closure longitudinally movable between the front rail of the frame and said body wall and means yieldingly holding said member in a normal latching position, one end of the frame and the corresponding end of said body wall having opposed spaced apart flanges, a channel shaped trim member substantially coextensive in length with the frame end and having oppositely projecting flanges engaging the inner sides of said flanges on the frame end and body wall, said trim member at one of its ends having lugs in bearing contact with the frame and constituting a fulcrum for said trim member, said latch member having an end portion projecting into the channel of said trim member at the opposite end thereof whereby said latch member is moved to unlatching position upon rocking movement of the trim member relative to the container body.

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