



# UNITED STATES PATENT OFFICE

2,316,978

## REINFORCING CLAMP

Leroy O. Schneeberger, St. Louis, Mo.

Application October 31, 1941, Serial No. 417,369

2 Claims. (Cl. 217-19)

This invention has to do generally with reinforcing fittings. More particularly, my invention relates to a certain new and useful improvement in re-inforcing fittings adapted especially, though not exclusively, for use in strengthening the crossed partition-walls of a beverage-bottle case or the like and has for its chief object the provision of a fitting of clamp-type for the purpose stated which may be easily, cheaply, and economically manufactured, which is durable in structure, which may be readily and conveniently applied upon and attached to the case-walls or partitions, and which is efficient in the performance of its intended functions.

And with the above and other objects in view, my invention resides in the novel features of form, construction, arrangement, and combination of parts presently described and pointed out in the claims.

In the accompanying drawing,

Figure 1 is a perspective-plan view of a reinforcing fitting or clamp of my invention;

Figure 2 is an edge-view of the fitting or clamp;

Figure 3 is a perspective view of a beverage-bottle case having crossed partition-walls equipped with and re-inforced by fittings or clamps of my invention;

Figure 4 is an enlarged fragmental plan view of the re-inforced case of Figure 3; and

Figure 5 is a sectional view of the case, taken approximately on the line 5-5, Figure 4.

Referring now more in detail and by reference characters to the drawing, which illustrates a preferred embodiment of my invention, the fitting or clamp, generally designated A, is constructed of suitable bendable metal and in plan, as best seen in Figures 1 and 4, has preferably the form, shape, or contour of a formée or patée cross, the clamp A being readily, by means of a die or the like, punched from a metallic sheet, blank, or section and thus lending itself to economical mass production.

As shown, the clamp A includes preferably integrally or as a unit a central or body-portion *a*, presented or extending outwardly from which are pairs of opposed arms *b, b*, and *c, c*, the one pair being disposed at right angles to the other pair and spaced the one from the other by relatively deep recesses or cutouts *d* each rounded at its base, as at 1, and having a somewhat U-shape in contour in plan, as best seen in Figures 1 and 4.

Each arm *b, c*, at its free end or margin, is cut or formed square, as at 2, relatively to the body-

portion *a* has considerable breadth, and terminates in oppositely presented tapering fingers or claws 3, in turn, terminating in sharp prongs 4 bent to project angularly out of the plane, and away from the one or so-called upper face, of the body-portion *a*, as best seen in Figures 1 and 2.

In addition, in the formation or punching of the clamp A, the fingers or claws 3 of each arm *b, c*, are bent or constructed to normally oppositely incline downwardly or away from said one or upper face of the clamp, as best seen in Figure 2, the one set of arms *b* being at the same time formed or provided centrally of the clamp with a slightly arcuate ridge, as at 5, extending from the free margin of the one arm *b* to the free margin of the companion arm *b*, and each arm *c* being likewise formed or provided centrally of the clamp with aligning slightly arcuate ridges 6, 6, each extending from the free margin of a respective arm *c* to, but not crosswise of, the ridge 5, all also as best seen in Figures 1, 2, and 5.

B designates a beverage-bottle case of common or standard type comprising a shell preferably of rectangular contour having a base-wall (not specifically shown) and upright side and end walls 7, 8, suitably permanently secured together in case-formation, the chamber of the shell B being divided by means of right-angularly crossing partition-walls 9, 10, into a predetermined plurality or number of bottle-accommodating spaces, as at 11.

Such cases B and their partition-walls 9, 10, are subjected to more or less hard usage, and to strengthen and reinforce the partition-walls 9, 10, against breakage and thereby prolong the useful life of the case, clamps A of my invention are engaged therewith, as illustrated in Figure 3. More particularly, a clamp A is disposed upon a pair of the partition-walls 9, 10, at a crossing therebetween, with its unbroken or non-interrupted ridge 5 extending over and in registration with the one partition 9 and with its interrupted ridges 6 disposed over and in registration with the partition 10 upon opposite sides of the partition 9, and its claws or fingers 3, by means of a suitable tool (not shown), clinched upon the respective side faces of the interposed partition-walls 9, 10, and their prongs 4 embedded therein, as clearly seen and illustrated in Figures 3, 4, and 5.

The clamp fulfills in every respect the objects stated, and it is to be understood that minor changes in the form and construction of the

clamp and in the arrangement and combination of the same with the case may be made and substituted for those herein shown and described without departing from the nature and principle of my invention.

Having thus described my invention, what I claim and desire to secure by Letters Patent is:

1. A reinforcing clamp for crossed partition walls comprising a single bendable member of sheet material having an initial contour substantially approximating a pattée cross with the arms at their inner portions of substantially no greater width than the width of partition walls to which the clamp is to be applied and at their outer ends widened out to relatively greater width and terminating in sharp points, said member being bent to provide intersecting ridges with the ridges extending medially of the arms and said arms each having the widened end portions bent down as spaced tapering finger claws and the sharp points bent to project angularly inwardly as penetrating points.

2. A reinforcing clamp for crossed partitions

of a crate-like structure, said clamp being produced from a single piece of sheet metal initially having substantially the contour of a pattée cross with the inner portions of the arms of substantially no greater width than the width of a partition and the outer ends widened out to be of relatively greater width and terminating in sharp points, one pair of said arms being disposed substantially at right angles to the other pair and the arms of each pair being bent to provide intersecting substantially medial arcuate ridges, said arms then having the widened out portions bent downwardly as spaced finger claws and having the sharp points thereof bent to project angularly inwardly whereby said sharp points will serve as penetrating and securing prongs when said reinforcing clamp is placed with the arcuate ridges thereof fitting upon the top edges of crossed partition walls and the finger claws are clampingly bent in against the sides of the partition walls.

LEROY O. SCHNEEBERGER.