Sept. 27, 1949. E. S. CURTIS 2,483,038

CLAMP FOR HOLDING SPACED ICE-CREAM CANS

Filed June 10, 1947 2 Sheets-Sheet 1

FIG. 1

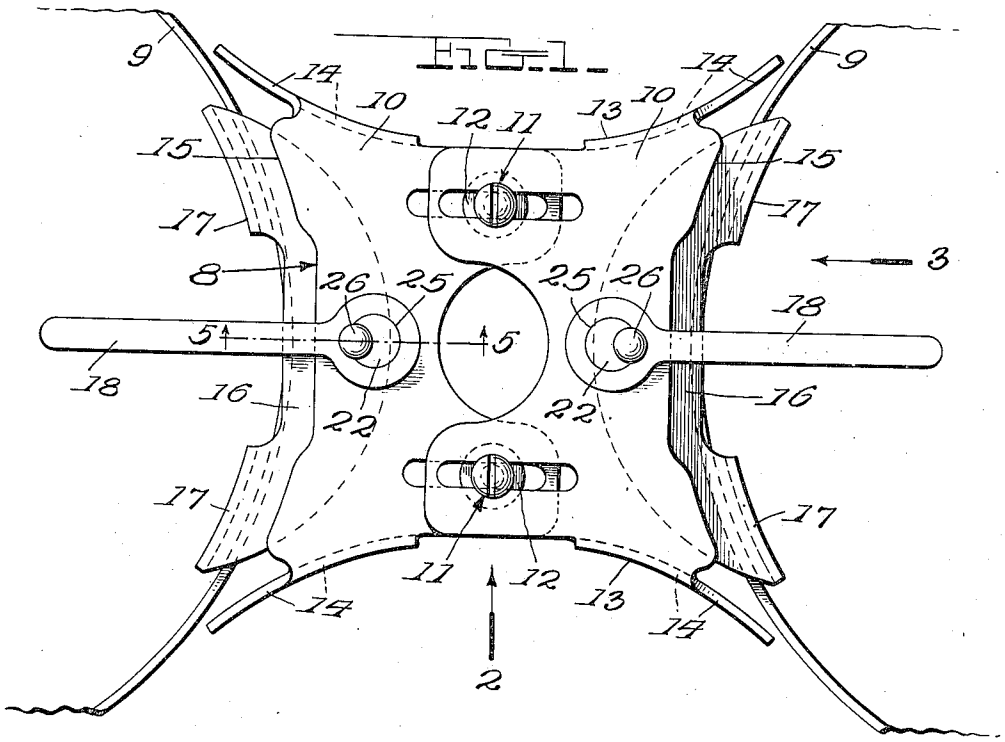


FIG. 2

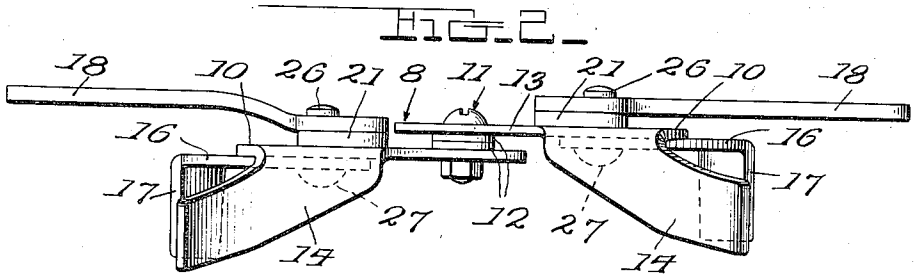
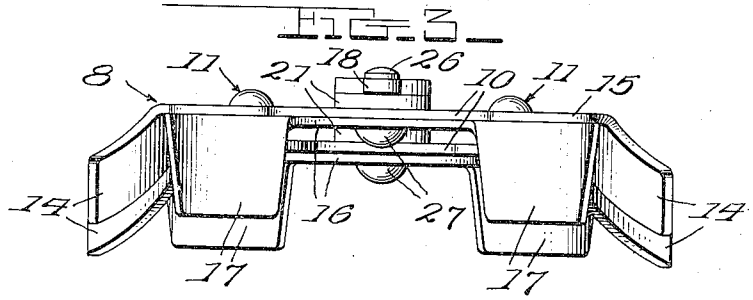


FIG. 3



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Filed June 10, 1947 2 Sheets-Sheet 2

FIG. 4

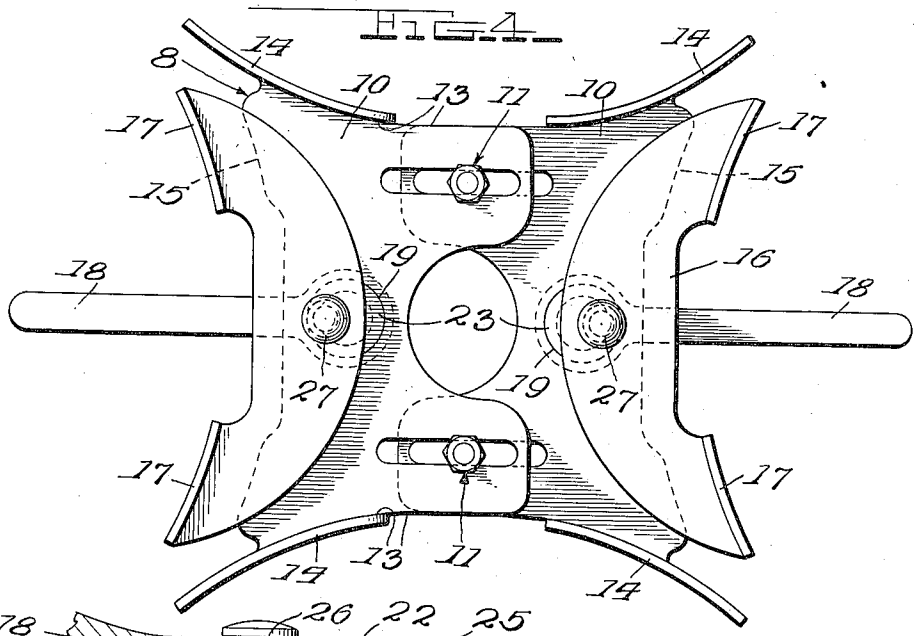


FIG. 5

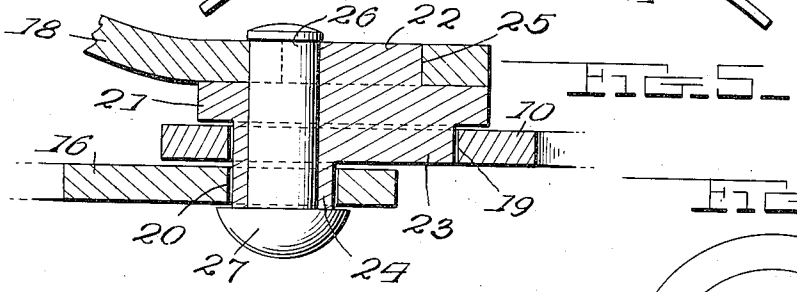


FIG. 6

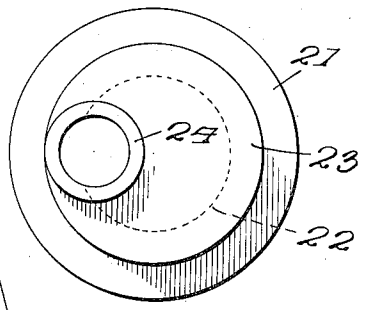
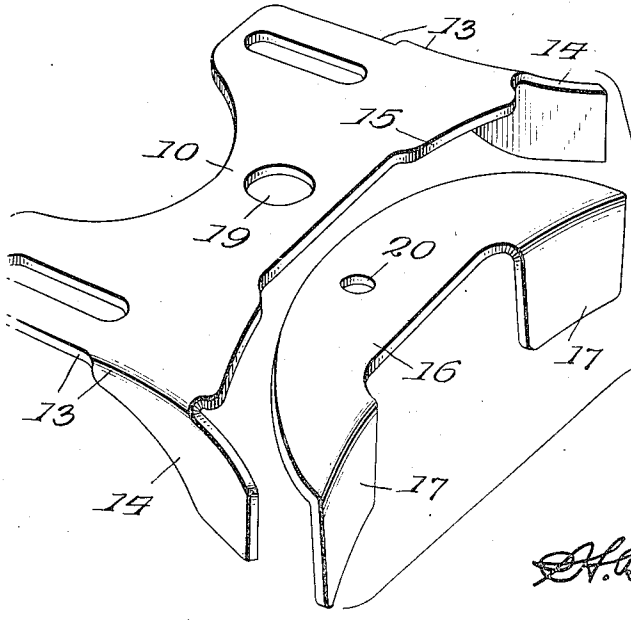


FIG. 7



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CLAMP FOR HOLDING SPACED ICE-CREAM CANS

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6 Claims. (Cl. 24—81)

1

The invention relates to devices for holding ice cream cans in fixed relation within refrigerating cabinets, to facilitate scooping of the ice cream therefrom, and it aims to provide a simple, inexpensive and effective device which may be engaged with the cans and removed therefrom with unusual ease.

Figure 1 of the accompanying drawings is a top plan view showing the device resting upon the upper ends of two cans, in readiness for clamping engagement therewith.

Fig. 2 is a side elevation looking in the direction indicated by the arrow 2 of Fig. 1.

Fig. 3 is an end elevation as indicated by the arrow 3 of Fig. 1.

Fig. 4 is a bottom plan view.

Fig. 5 is an enlarged detail vertical section on line 5—5 of Fig. 1 showing the manner of mounting each clamp-operating lever and its eccentric stud.

Fig. 6 is a bottom plan view showing the lever-mounting disk, its lower hub, and the eccentric stud of said hub.

Fig. 7 is a fragmentary disassembled perspective view showing one of the sections of the bridge and the associated clamping member in juxtaposition.

A preferred construction has been illustrated in the drawings and will be specifically described, with the understanding, however, that minor variations may be made within the scope of the invention as claimed.

A horizontal bridge 8 is provided, to extend between the upper ends of two upwardly open cans 9, said bridge preferably comprising two slidably overlapped halves 10 adjustably connected by bolt-and-slot-connections 11, permitting the length of said bridge to be varied according to the distance between the cans 9. The two halves 10 are also spaced apart somewhat by means of washers 12 in order that the lowermost of these sections will clear the clamping member mounted on the other section, as will hereinafter appear.

The longitudinal edges 13 of the bridge 8 are preferably longitudinally concave as shown, said edges being provided with integral downwardly bent flanges 14, the outer ends of which are adapted to abut the outer sides of the two can walls. These outer ends of the flanges 14 preferably project beyond the end edges 15 of the bridge 8, and these edges 15 may well be shaped as shown.

Two movable clamping members 16 underlie the end portions of the bridge 8 and are preferably in the form of crescent-shaped plates, each of which is provided with two integral downwardly bent fingers 17 adjacent its ends, said fingers being adapted to lie against the inner sides of the can walls. Two hand levers 18 are mounted on the end portions of the bridge 8, and said levers have eccentric connections with the clamping members 16, whereby swinging movement of said levers in either direction from the positions shown in the drawings, will move said clamping members 16 inwardly, thus causing tight clamping of the can walls between the fingers 17 and the flanges or abutments 14. It will thus be seen that the device may be quickly and easily engaged with the cans, and disconnected therefrom with equal speed and ease.

2

The manner of providing the levers 18 with the eccentrics, and mounting said levers, and connecting their eccentrics with the clamping members 16, is most clearly shown in Figs. 5 and 6, for one end of the device, and the structure is the same at the other end. From Fig. 5, it will be observed that the plate or bridge section 10 is formed with a relatively large opening 19, which opening is of circular outline. It will also be seen that the underlying clamping member of plate 16 is formed with a comparatively small opening 20 eccentric to the opening 19, said opening 20 being also of circular outline. A disk 21 contacts with the upper side of plate 10, said disk being provided at its outer or upper side with a hub 22 and being provided on its inner or lower side with another central hub 23. These two hubs are integral with the disk 21 and are coaxial with it, and the lower or inner hub 23 is provided with an integral eccentrically positioned stud 24. The hub 23 is rotatably received in the opening 19 of the plate 10, and the stud 24 is similarly received in the opening 20 of the plate 16. The inner end of the lever 18 rests upon the upper or outer side of the disk 21 and is formed with an opening 25 which tightly receives the outer hub 22, and a rivet 26 passes through the elements 18, 22, 21, and 24 to secure lever 18 to disk 21. The head 27 of this rivet is large enough to project beyond the stud 24 at the outer or lower side of the plate 16, holding the latter engaged with said stud 24. It will thus be seen that swinging of the lever 18 causes the hub 23 to rotate in the opening 19, causes rotation of the stud 24 in opening 20, and bodily moves the plate 16 inwardly or outwardly, according to the direction in which said lever is swung. It will be noted that the eccentric studs 24 also serve as pivots for the clamp plates 16 and hence the fingers 17 of the latter are permitted to shift slightly with respect to the flanges 14 so that the cans whether of paper or metal will be effectively gripped and held.

In the manufacture of the device, there is of course no such conspicuously visible clearance between parts, as that shown in Fig. 5, for illustrative purposes, the various elements being in fact in light contact with each other, wherever clearance is shown in the drawings.

From the foregoing, taken in connection with

the accompanying drawings, it will be seen that novel and advantageous provision has been made for attaining the desired end, and while preferences have been disclosed, attention is again invited to the possibility of making variations within the scope of the invention as claimed.

I claim:

1. A clamp for holding spaced ice cream cans comprising a bridge to extend horizontally between the upper ends of two upwardly open cans, said bridge having longitudinal edges provided with integral, downwardly-bent and horizontally spaced flanges to abut the outer sides of the can walls, two horizontal clamping plates contacting slidably and swingably with the lower side of said bridge and disposed at the ends of said bridge respectively, said clamping plates having integral, downwardly-bent and horizontally spaced fingers to lie against the inner sides of the can walls at points adjacent said spaced flanges, two vertically extending circular hubs rotatable in the central portions of the ends of the bridge, eccentric studs on the lower ends of said hubs and on which the central portions of said plates are pivotally supported, and handle means on the upper ends of said hubs for rotating the latter.

2. The structure of claim 1 in which said bridge is composed of two flat plates having their inner portions in overlapping relation and slot and bolt fasteners adjustably connecting the overlapped inner portions of said bridge plates for varying the length of the bridge.

3. A clamp for holding spaced ice cream cans comprising a bridge to extend horizontally between the upper ends of two upwardly open cans, said bridge being of rectangular shape and having at its ends flat plate-like portions, the longitudinal edges of each of said portions being formed with integral downwardly-bent flanges, said flanges at each end of the bridge being spaced apart horizontally to abut the outer side of one of the can walls, two flat horizontal clamping plates at the ends of said bridge respectively and contacting slidably and swingably with the lower faces of said plate-like portions, said clamping plates having portions projecting beyond the ends of the bridge and formed with integral downwardly-bent fingers to lie against the inner sides of the can walls, said fingers of each clamping plate being spaced apart horizontally and positioned substantially opposite the adjacent flanges at one end of said bridge, and a manually actuated hub rotatably mounted on the central part of each of said plate-like portions of said bridge and provided with a downwardly extending eccentric stud on which one of said clamping plates is supported at its longitudinal center for swinging movement.

4. In a device of the class described, two plates having flat inner sides contacting slidably with each other, one of said plates having a relatively large opening of circular outline, the other of said plates having a relatively small opening of circular outline and eccentrically located with respect to said large opening, a disk contacting with the outer side of said one of said plates and covering said large opening thereof, said disk having an outer integral hub on its outer side and an inner integral hub on its inner side, said hubs being of circular outline and axially alined with each other, said inner hub being rotatably received in said large opening and having an eccentric stud

received in said small opening, a lever contacting with said outer side of said disk and having an opening in which said outer hub is tightly received, and a fastener extending through said disk, hubs, stud and lever and securing said disk and lever together.

5. In a device of the class described, two plates having flat inner sides contacting slidably with each other, one of said plates having a relatively large opening of circular outline, the other of said plates having a relatively small opening of circular outline and eccentrically located with respect to said large opening, a disk contacting with the outer side of said one of said plates and covering said large opening thereof, said disk having an outer integral hub on its outer side and an inner integral hub on its inner side, said hubs being of circular outline and axially alined with each other, said inner hub being rotatably received in said large opening and having an eccentric stud received in said small opening, a lever contacting with said outer side of said disk and having an opening in which said outer hub is tightly received, and a fastener extending through said disk, hubs, stud and lever and securing said disk and lever together, said fastener having a portion projecting beyond the periphery of said stud and disposed at the outer side of said other of said plates to hold the latter engaged with said stud.

6. A clamp for holding spaced ice cream cans comprising a bridge to extend horizontally between the upper ends of two upwardly open cans, said bridge having longitudinal edges provided with integral downwardly-bent flanges to abut the outer sides of the can walls, two horizontal clamping plates contacting slidably with the lower side of said bridge and disposed at the ends of said bridge respectively, said clamping plates having integral downwardly-bent fingers to lie against the inner sides of the can walls, said bridge having a pair of relatively large circular apertures therein, each of said clamping plates having a relatively small circular aperture therein, each of said last-mentioned apertures being eccentrically located relative to one of said large apertures, disks contacting with the outer side of said bridge and covering the large openings thereof, each disk having an outer integral hub on its outer side and an inner integral hub on its inner side, all of said hubs being of circular outline, and the inner and outer hub of each disk being axially aligned, each of said inner hubs being rotatably received in the adjacent large opening, and having an eccentric stud received in the adjacent small opening, levers contacting said outer sides of said disks and each having an opening in which the adjacent outer hub is tightly received, and fastening means extending through each disk and its associated hubs, stud and lever, securing each disk and its associated lever in related assembly.

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