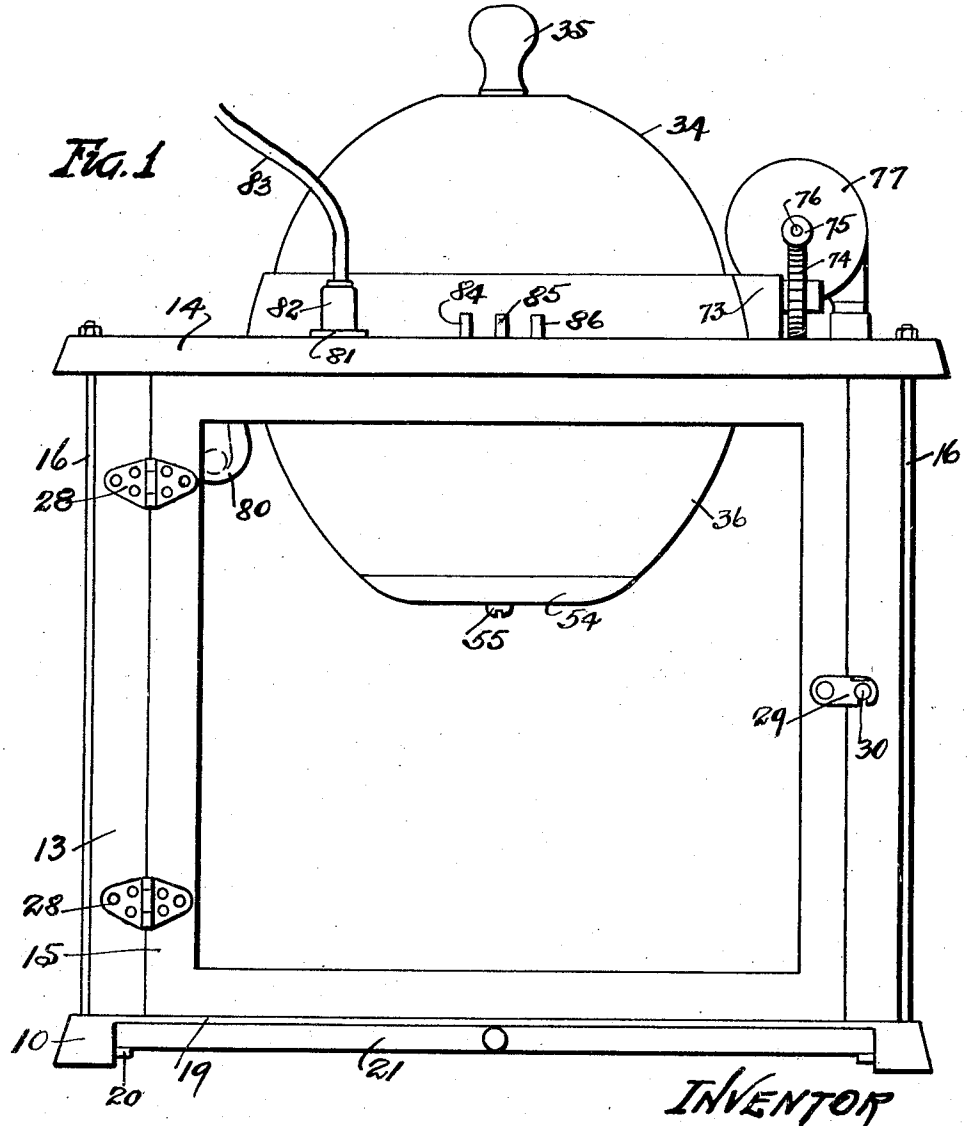
May 20, 1930. T. S. WALKER 1,759,475

CORN POPPER

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Fig. 1



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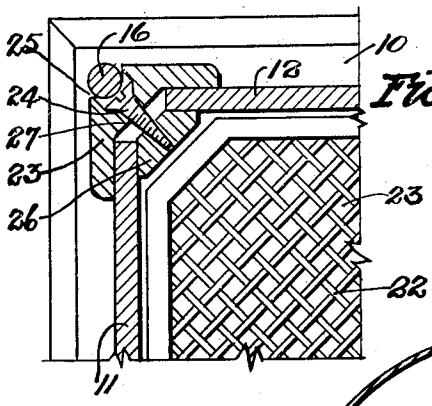


Fig. 3

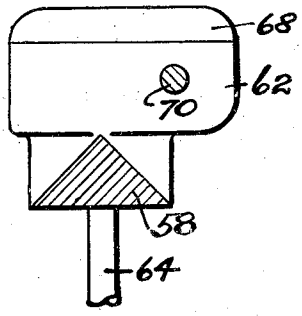


Fig. 4

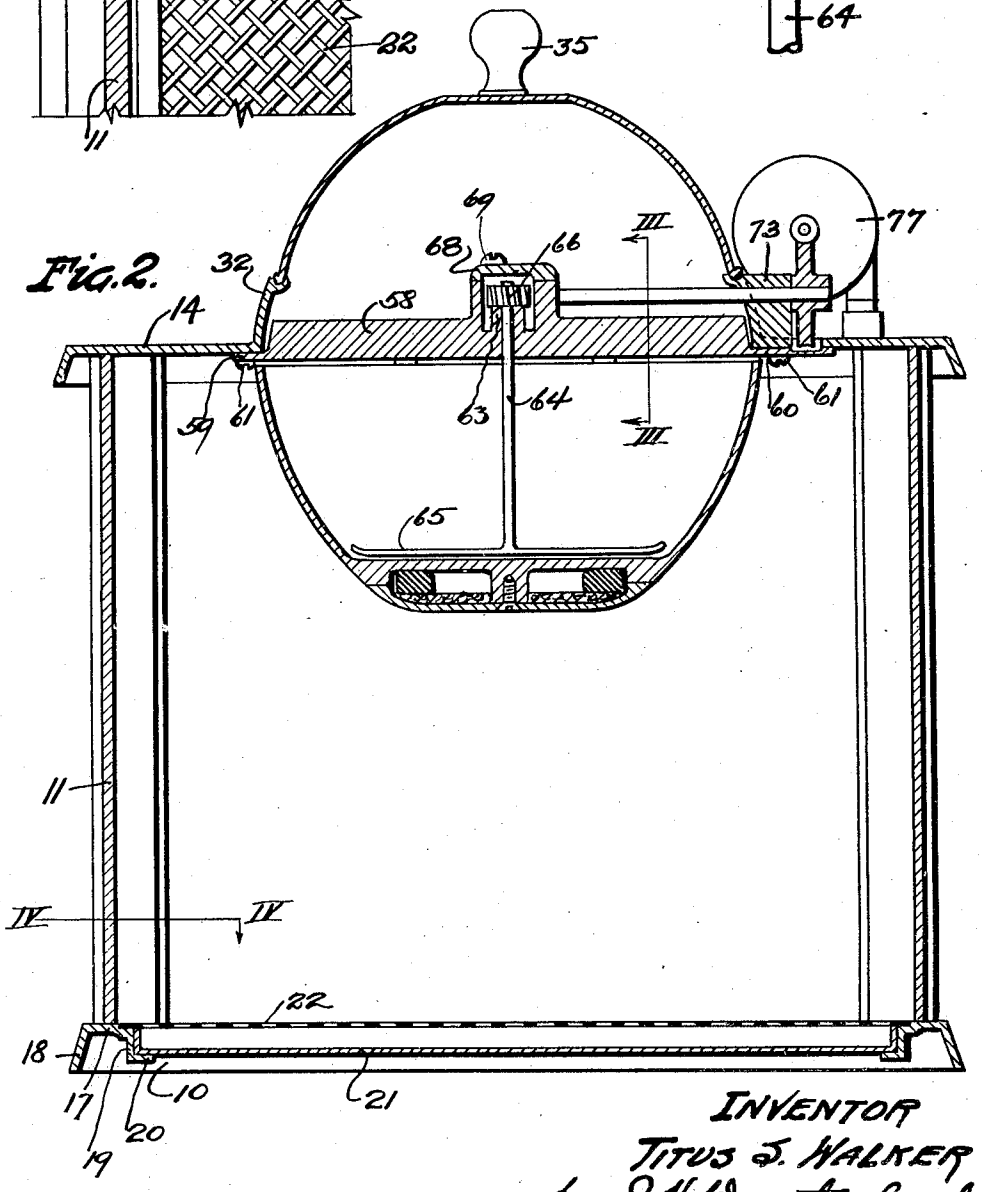


Fig. 2.

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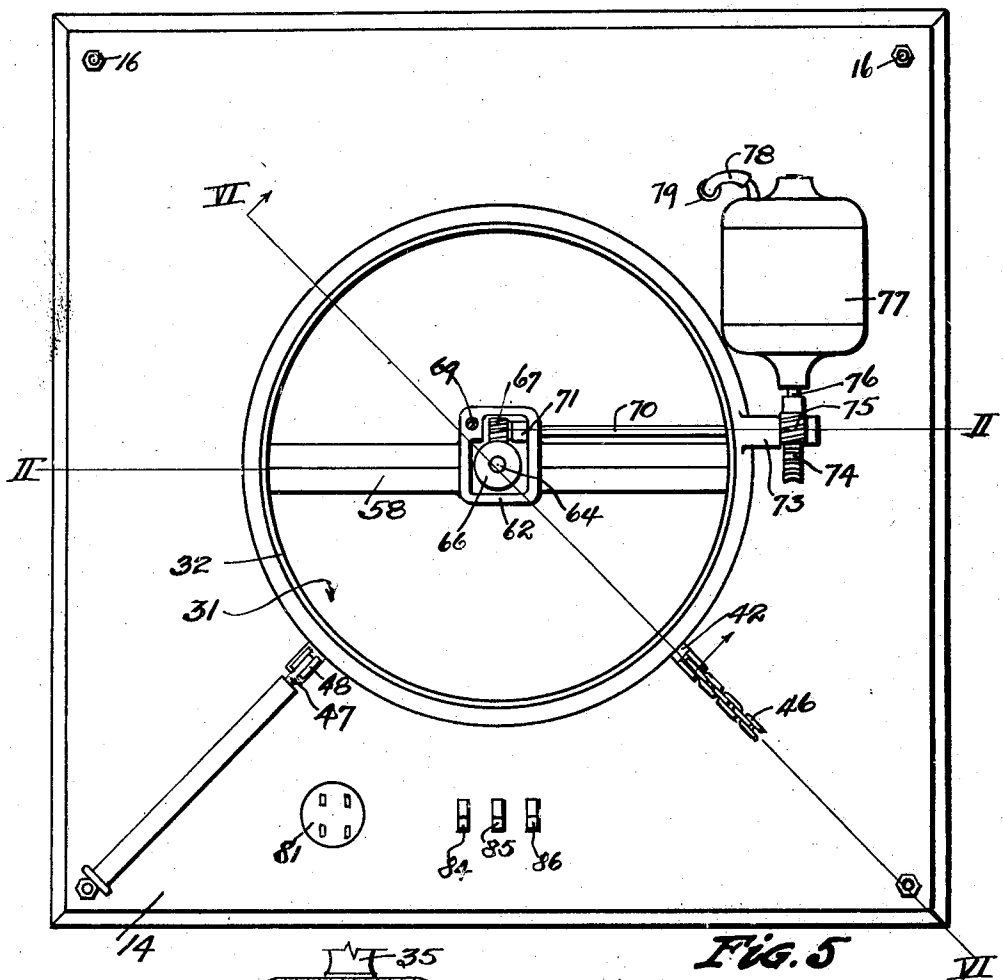


FIG. 5

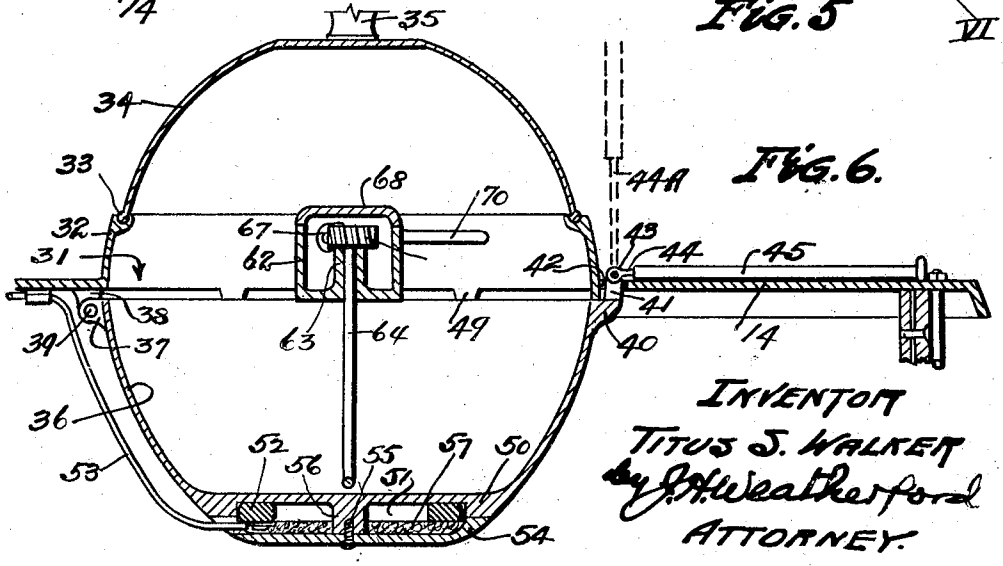


FIG. 6.

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UNITED STATES PATENT OFFICE

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CORN POPPER

Application filed May 15, 1929. Serial No. 363,284.

This invention relates to improvements in devices for popping corn.

Among the objects of this invention are:

(*a*) To provide a simple and efficient device for popping corn, preferably utilizing electricity as a heating means;

(*b*) To provide ready and convenient means by which access may be had to the popping pan, whereby the corn to be popped may be placed therein;

(*c*) To provide means for preventing lodging of corn so placed on undesired portions of the machine;

(*d*) To provide simple and efficient means for retaining an electrical heating element for a corn popper;

(*e*) To provide simple and efficient stirring or agitating means during popping and means for actuating such stirrer;

(*f*) To provide simple and efficient means for dumping the popped corn after popping has been accomplished;

(*g*) To provide a display case in which the corn already popped is displayed to prospective customers;

(*h*) To provide means for separating unpopped corn from that which has properly popped;

(*i*) To provide means for collecting and removing unpopped corn; and

(*j*) To generally improve the design and construction of such a machine.

The means by which the foregoing and other objects are accomplished and the manner of their accomplishment will readily be understood from the following specification on reference to the accompanying drawings, in which:

Fig. 1, is a front elevation of the machine;

Fig. 2, is a sectional elevation on the line II—II of Fig. 5;

Fig. 3, is a fragmentary sectional elevation on an enlarged scale taken as on the line III—III of Fig. 2;

Fig. 4, is a similarly enlarged fragmentary sectional plan taken as on the line IV—IV of Fig. 2;

Fig. 5, is a plan view of the machine with the cover and the cap for the stirrer gears removed;

Fig. 6, is a fragmentary sectional elevation taken as on the line VI—VI of Fig. 5.

Referring now to the drawings in which the various parts are referred to by numerals; the machine comprises essentially a base 10, a display section having transparent sides 11, ends 12, and 13, and a top 14, the front end, or front 13, having a glass panelled door 15 therein. The sides, and ends rest on the base 10, and the top 14 is disposed over and rests on the sides, and ends, and these parts are held together by four bolts 16, one at each corner thereof.

Preferably, the base consists of a rectangular, ordinarily square, metal casting with open center. The sides and back end of the base are essentially bars L shaped on cross section having one leg 17, horizontally disposed to form the top of the base and the other leg 18 extending downward. In front the vertical leg of the L has been cut away to provide space for a drawer leaving the horizontal leg only. The side bars each have a vertically depending web 19 carrying an inwardly projecting flange 20 at the bottom of the flange and adjacent the bottom of the base which flanges form a support for a drawer 21. 22 is a screen conforming substantially to the interior of the display section and resting on the base. The openings 23 in this screen are large enough to pass unpopped grains of corn but sufficiently small to retain popped grains thereon, and the screen is preferably readily removable.

The glass sides 11, and back 12 are each rectangular in cross section with their bottom edges resting on the flanges 17 of the base 10 and their upper edges against the top 14. The vertical edges of these panels are secured in posts 23, each of which is substantially L shaped in cross section with a triangular fillet 24 at the interior junction of the legs and a bolt groove 25 at the exterior junction thereof. The glass panels are disposed against the interior surface of the post legs and extend to the fillets 24, they are secured in place by a securing strip 26 which is substantially a triangular strip, preferably truncated to provide clearance for the fillet 24. The securing strip is clamped

against the glass panels by screws 27 which preferably pass through the posts and into the securing strip so that they may be inserted from the outside of the case. They are concealed by the bolts 16.

The door 15 is preferably secured to the front of one of the posts by hinges 28 and is provided with a latch 29 engaging a headed pin 30 on the opposite post.

The top 14 is provided with a central opening 31 which is surrounded by an upwardly extending annular flange 32. This flange is provided at its top with an annular groove in which the lower edge 33 of a spherically shaped cover 34 may be disposed, the cover and flange forming a substantially hemispherical top. 35 is a handle for the cover. The cover may be of glass or metal as may be desired.

Disposed beneath the top 14 and concentric with the opening 31 therein, is a hemispherical popping pan 36 which pan is provided with outwardly extending lugs 37, which coact with lugs 38 depending from the top 14 to form hinges about which the pan 36 may be swung. 39 are hinge pins. Extending outwardly from the opposite edge of the pan is a lug 40 from which two prongs 41 extend upward through a hole 42 in the top 14, adjacent but exterior to, the flange 32. Hinged to these prongs 41, by a pin 43, is a rod 44 which when turned horizontally downward to rest on the top 14, as shown in Fig. 6, engages the top, adjacent the hole therethrough, and supports the edge of the popping pan. When turned vertically upward, substantially to position 44A, this rod may be slid downward through the hole 42, permitting the free edge of the pan to swing downward and the contents thereof to be dumped into the lower part of the case. If the rod 44 is made of sufficient length to permit a full swing of the pan downward, it would extend beyond the limit of the top 14 when turned horizontally downward. I therefore prefer to make the rod in two parts. The part 44 telescoping within the other part 45 so that when telescoped the entire rod will lie within the confines of the top 14. The extension of this rod may be limited in any usual or well known manner and the limit stop for such extension is therefore here not shown.

In Fig. 5, a chain 46 has been shown as substituted for the rod 44. In such case a rod 47 at one side of the pan also may be used if desired, this rod being hinged as before to prongs 48 similar to the prongs 41, and if used supplementing the chain. The rod 47 may have a telescopic cover section as in the previous case should it be desired. Incidentally, the telescopic rod 47 illustrates the manner in which the rod 44 lies on top of and within the confines of the top 14. 49 are lugs projecting downward from the underside of the top 14, limiting upward movement of the pan and spacing same from the top.

The base 50 of the pan 36 is thickened and hollowed out to form a chamber 51 in which a heating element 52 may be disposed. 53 are circuit wires leading to such elements. 54 is the cover enclosing the heating element which cover is held in place by a screw 55 screwed into a center lug 56 integral with the pan base. The cover 54 is preferably hollowed out to provide a chamber in which fibrous asbestos 57 is disposed, such asbestos serving to resiliently support the heating element 52 and hold same firmly against the base 50 and also serving to insulate the cover 54 against direct heat transference from such heating element.

Diametrically disposed across the opening 31 in the top 14, is a bar 58 preferably triangular in cross section with one apex of the triangle directly upward. The ends 59 and 60 of this bar are disposed beneath the top 14 adjacent the edges of the opening and are secured to such top as by screws 61. The bar 58 carries a substantially rectangular gear case 62 having a central boss 63 therein which boss and the bar therebelow are drilled out to form a bearing for a stirrer rod 64. 65 are stirrer arms integral with and projecting outward from the lower end of this rod. The upper end of the rod 64 projects above the bearing in the hub 63 and carries thereon a spiral gear 66, which gear meshes with and is driven by a spiral pinion 67 likewise disposed within the gear case 62. 68 is the cover for the gear case which cover may be secured as by a screw 69. 70 is a horizontally disposed shaft extending substantially parallel to the bar 58 and having one end journalled at 71 in the case 62 and the other end journalled in a hub 73 integral with the flange 32. The pinion 67 is secured on one end of this shaft and on the opposite end a gear 74 is secured, which gear meshes with a pinion 75 on the shaft 76 of an electric motor 77. 78 are the current wires leading from this motor preferably downward through an opening 79 in the top 14. Electric motors of this type being purchasable in the open market, no detail need be shown. 80 is an electric light bulb disposed within the casing.

81 is a socket in the top 14 into which socket a complementary electric plug 82 may be connected in usual manner to provide power for actuating the motor 77 the light 80 and the heating element 52. 82 are current wires to said plug. The wiring from the socket 81 which is entirely within the case and is entirely of usual and customary form is not here shown, it however leads from the socket 81 to switches 84, 85 and 86 which respectively control the lighting, heating and power.

In using the machine the cover 34 is removed and a charge of corn to be popped,

is dropped into the popping pan 36, the current is then switched on, to the heating element 52 and the motor 77 and if desired to the light bulb 80 and is maintained on these parts until the charge of corn in the pan is popped. The progress of popping may be observed through the cover 44 provided it is of glass, or if of metal, such progress may be noted by removing the cover from time to time. When the charge is popped, the rod 44 is raised and the one edge of the pan swung downward to dump the entire charge, both of popped and unpopped corn into the case therebelow. The pan is then swung upward into place, the rod turned horizontally to latch the pan after which an additional charge may be put therein and popping be resumed. It will be especially noted that the removal of the cover and the swinging movement of the pan do not in any way interfere with the continued action of the stirrer so that while it may be desirable to stop the stirrer motor while the pan is being dumped there is no necessity of so doing as the stirrer parts have independently fixed bearings.

The charge dumped from the pan falls on the screen 22, which permits unpopped corn to pass, leaving only the white, fluffy popped corn for distribution to customers. Such popped corn lies in the lower portion of the casing and is entirely visible to prospective purchasers. The light 80 not only furnishes illumination, but together with the heat radiating from the exterior of the popping pan, furnishes heat to maintain the popped corn hot. In dispensing popped corn the door 15 is opened and the corn scooped up from the surface of the screen. Unpopped grains which pass through the screen are caught in the drawer therebelow and may be removed from time to time.

Having described my invention, what I claim is:

1. In a corn popper, a top having a circular opening therethrough, a removable cover disposed thereover, a popping pan hingedly secured to the underside of said top, and fixedly mounted stirring means, comprising a bar spanning said top opening and secured at each end to said top, a vertically disposed stirrer rod journalled in said bar, stirrer arms carried thereby adapted to coact with said pan, an end of said rod projecting above said bar, a gear thereon, a horizontal shaft disposed parallel with said bar, a gear on said arm meshing with said rod gear, a motor mounted on said top, and gearing connecting the shaft of said motor and said horizontal shaft for actuating said stirrer rod.

2. In a corn popper, a top having a circular opening therethrough, a removable cover disposed thereover, a popping pan hingedly secured to the underside of said top, and fixedly mounted stirring means, comprising a bar of triangular cross section, disposed with an apex upward, said bar spanning said top opening and secured at each end to said top, a vertically disposed stirrer rod journalled in said bar, stirrer arms carried thereby adapted to coact with said pan, an end of said rod projecting above said bar, a gear thereon, a horizontal shaft disposed parallel with said bar, a gear on said arm meshing with said rod gear, a motor mounted on said top, and gearing connecting the shaft of said motor and said horizontal shaft for actuating said stirrer rod.

3. In a corn popper, a rectangular base, comprising elongated side and end members surrounding a rectangular opening, said side members each having an inwardly projecting horizontal ledge adjacent the lower edge thereof, a rectangular drawer disposable on said ledges and adapted to complete a bottom, a rectangular screen disposed on and supported by said bottom, said screen overlying said pan, and a show case disposed on and secured to said side members and extending thereabove.

4. A corn popper including a rectangular base, a top of similar shape, grooved corner posts, each extending upward from said base to said top at a corner thereof, bolts each disposed in a grooved post and securing said top and base, rectangular glass panels forming sides and a rear end, each disposed between a pair of posts and between said base and top, said posts each comprising an L shaped member having an exterior bolt groove at the junction of the legs of said L and a truncated triangular securing strip, between which strip and the interior of the L legs said panel edges are secured and screws securing said strips and L members together.

5. A corn popper including a rectangular base, a top of similar shape, grooved corner posts, each extending upward from said base to said top at a corner thereof, bolts each disposed in a grooved post and securing said top and base, rectangular glass panels forming sides and a rear end, each disposed between a pair of posts and between said base and top, said posts each comprising an L shaped member having an exterior bolt groove at the exterior junction of the legs and an integral triangular fillet; and a truncated triangular securing strip, between which strip and the interior of the L legs said panels are secured and against which fillets said panel edges abut, and screws securing said strips and L members together.

6. A corn popper including a base, a display section disposed thereon, a top resting on said display section, and means securing said parts together, said top having a circular opening therethrough, an annular flange surrounding said opening and above said top, a substantially hemispherically shaped cover removably disposed on said flange, a substantially hemispherical popper pan, hinges se-

curing said pan to the underside of said top, said top having a hole therethrough opposite said hinges and exterior to said flange, a lug projecting from the upper edge of said pan opposite said hinges and extending upward through said hole, an extensible rod hinged to said lug, securing said pan in raised position and alignable with said hole to lower said pan edge, whereby the contents of said pan may be dumped, said pan having a heating element in the base thereof.

7. A corn popper including a base, a display section disposed thereon, a top resting on said display section and means securing said parts together, said top having a circular opening therethrough, an annular flange surrounding said opening and above said top, a hemispherically shaped cover, removably disposed on said flange, a substantially hemispherical popper pan, hinges securing an edge of said pan to the underside of said top, means for lowering, or raising, and securing the opposite edge of said pan, and lugs depending from said top to limit upward movement of said pan.

8. A corn popper including a base, a display section disposed thereon, a top resting on said display section and means securing said parts together, said top having a circular opening therethrough, an annular flange surrounding said opening and above said top, a substantially hemispherically shaped cover removably disposed on said flange, a substantially hemispherical popper pan, hinges securing said pan to the underside of said top having a hole therethrough opposite said hinges and exterior to said flange, a lug projecting from the upper edge of said pan opposite said hinges and extending upward through said hole, means for raising the free edge of said pan and securing said pan in raised position.

In testimony whereof I hereunto affix my signature.

TITUS S. WALKER.