Oct. 22, 1940. W. McK. BAIRD 2,218,632

REFRIGERATED DRAWER UNIT

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Fig. 1.

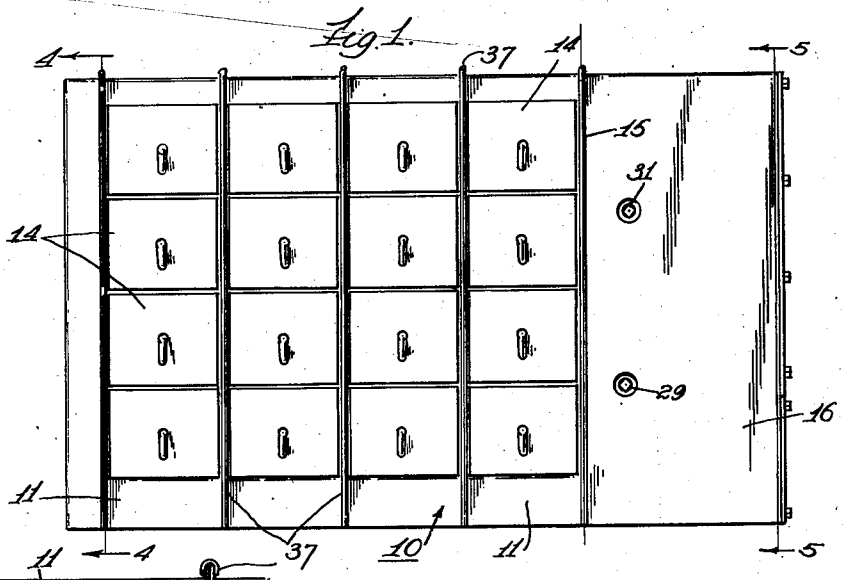


Fig 2.

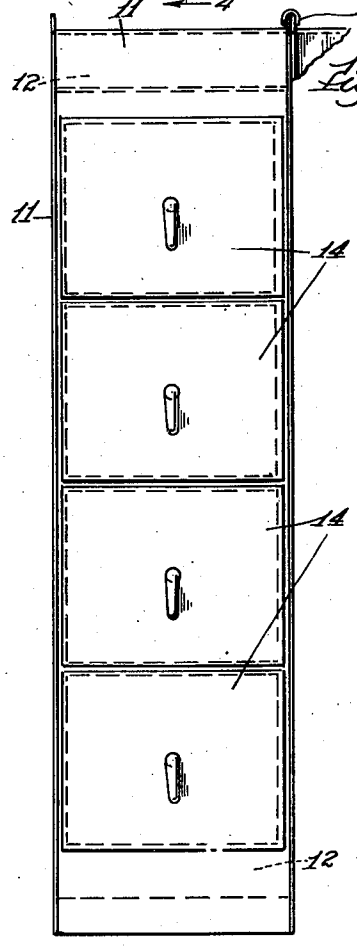
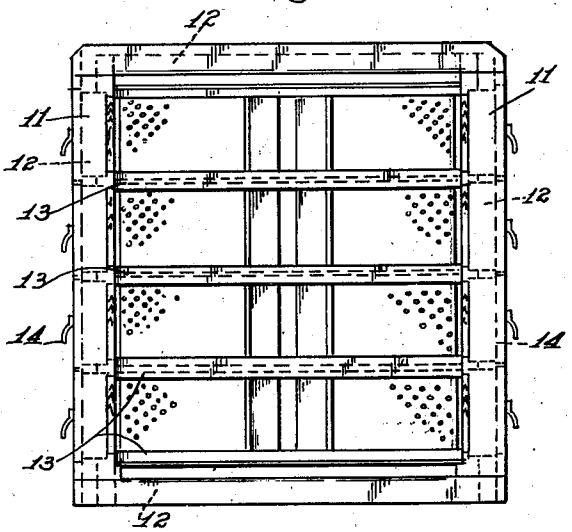


Fig 3.



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Fig. 4

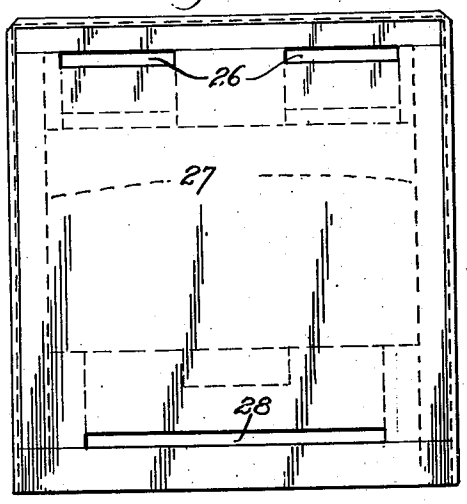


Fig. 5.

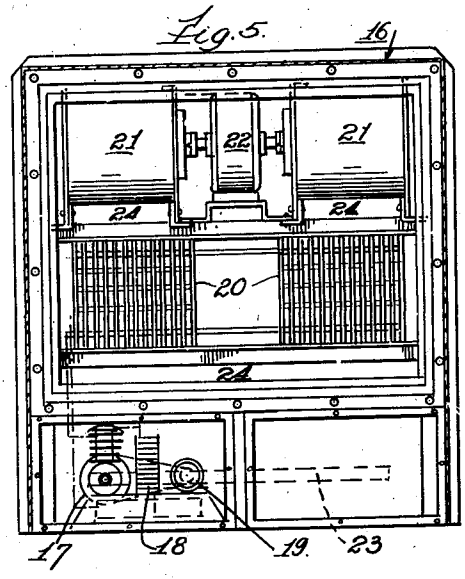


Fig. 6

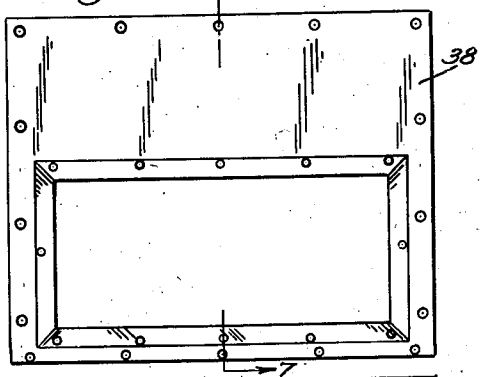
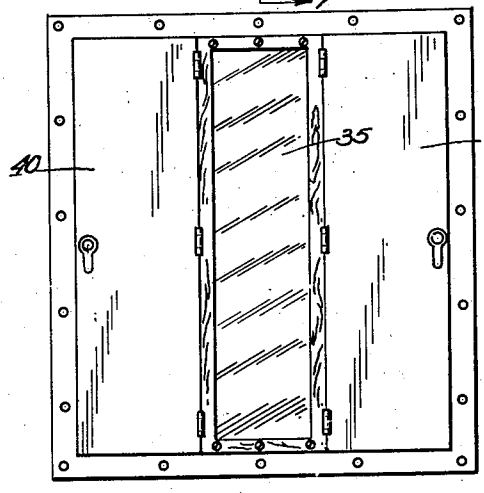


Fig. 7.



Fig 6a



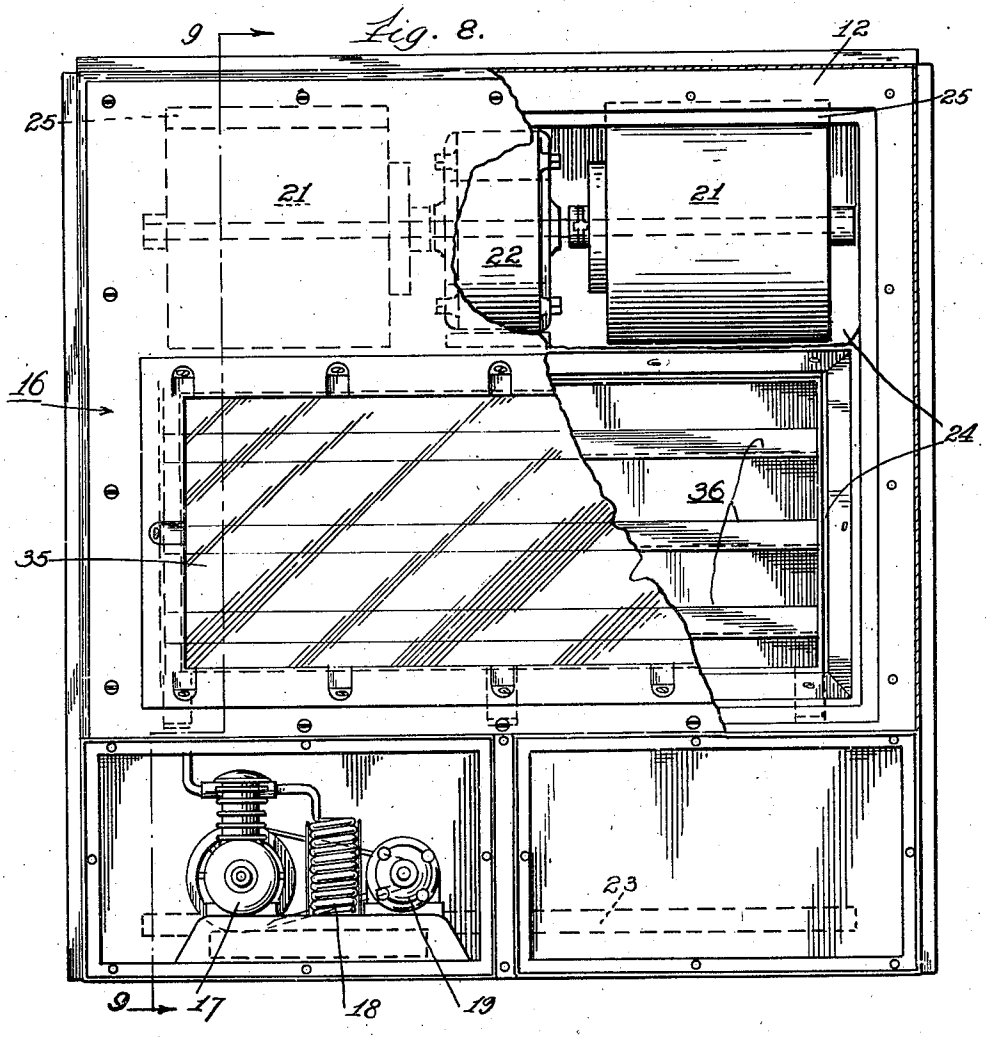
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Fig. 8.



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Fig. 9.

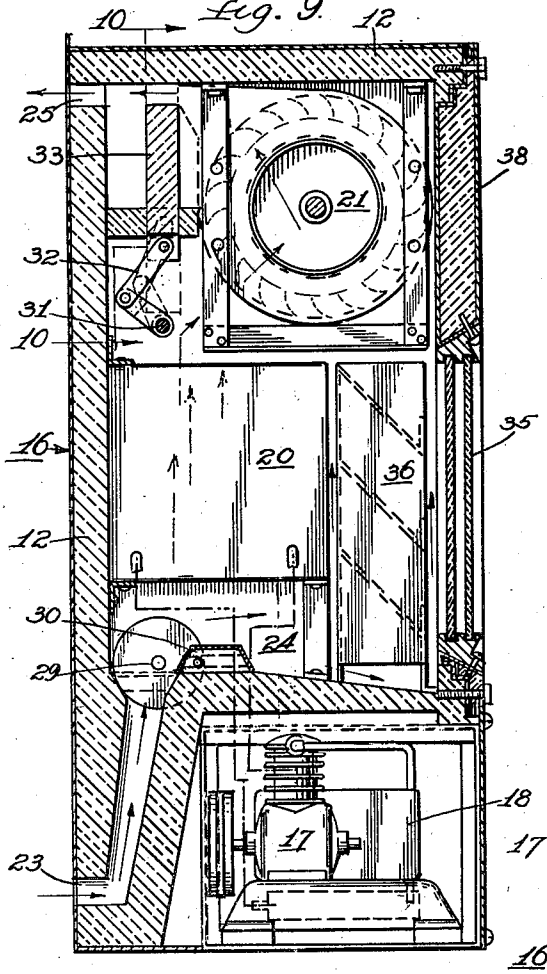


Fig. 11.

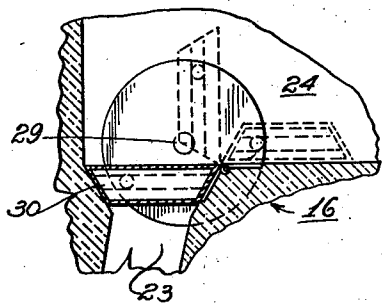


Fig. 12.

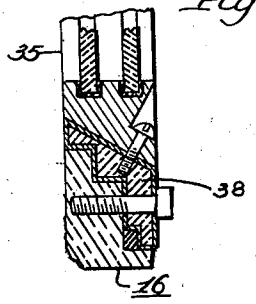
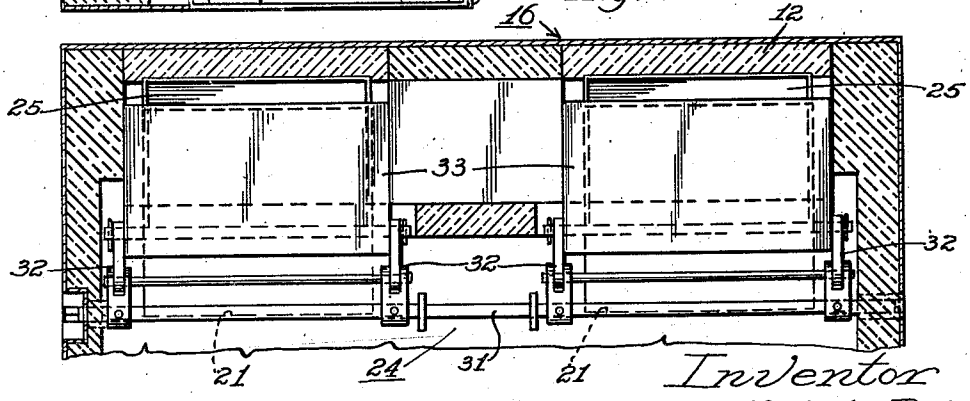


Fig. 10



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UNITED STATES PATENT OFFICE

2,218,632

REFRIGERATED DRAWER UNIT

William McKinley Baird, Chicago, Ill.

Application November 24, 1939, Serial No. 305,815

2 Claims. (Cl. 62—89)

My invention relates to a refrigerated drawer unit in which the freezing section is a part of the unit.

Among the objects of my invention is to provide a refrigerated drawer unit which is compact, easily transportable, simple to assemble for prompt operation, economical in original cost and maintenance, and such other objects, advantages and capabilities as will later more fully appear and which are inherently possessed by my invention.

While I have shown in the accompanying drawings a preferred form of my invention, yet I wish it understood that the same is susceptible of modification and change without departing from the spirit of my invention.

Referring to the drawings, Fig. 1 is a front elevation of the outer face of my refrigerated drawer unit; Fig. 2 is an enlarged front view of a tier of the drawers; Fig. 3 is a side elevation of the tier shown in Fig. 2; Fig. 4 is drawn on line 4—4 of Fig. 1 and shows an elevational view of an end of the unit with the inlet and outlet ducts and the circulating ducts in dotted lines; Fig. 5 is drawn on line 5—5 of Fig. 1 and shows an inside view from the end of the freezing section with the panel removed; Fig. 6 and Fig. 6a are detail views of the panel; Fig. 7 is a detail view of the panel on line 7—7 of Fig. 6; Fig. 8 is an enlarged view of the freezing section with parts broken away to show details; Fig. 9 is a vertical sectional view of the freezing section on line 9—9 of Fig. 8; Fig. 10 is a detailed view on line 10—10 of Fig. 9; Fig. 11 is an enlarged sectional view of the duct with closure block and operating crank, and Fig. 12 is a detailed view of the double window shown in Fig. 9.

The embodiment selected to illustrate my invention comprises a unit 10 having a shell 11 of metal and wood, or any other suitable materials, having suitable insulation 12, and tracks 13 attached to the shell 11 upon which side drawers 14. At one end of the unit 10 and attached thereto by vertically extending strips 15 suitably crimped together is a freezing section 16. The freezing section 16 has therein a compressor 17 with a coil 18, motor 19, fins 20 and circulating fans 21 driven by a motor 22.

In operation air comes into freezing section 16 through duct 23 and passes upwardly into chamber 24, through fins 20 into blowers 21, whence it is expelled through ducts 25 into unit 10 by way of duct 26 into circulating ducts 27 to outlet duct 28. The air then circulates through and around the open portions of the drawers 14 and finally passes into duct 23 to complete the cycle of circulation.

When ice has been built up around the freezing sections 16 and it is desirable to defrost the same, this may be done by turning off motors 19 and 22 to stop the freezing action. I then turn operating rod 29 of hinge block 30 to swing hinge block 30 across duct 23 to thereby close the same. By operating rod 31 linkage 32 is moved to slide sliding panels 33 to close ducts 25. Chamber 24 is opened to the atmosphere by the removal of screws to permit the opening of double window 35.

A display shelf 36 is positioned behind window 35 to hold vegetables, fruits, biologicals or the like so that the same may be viewed from the exterior of the unit for display and demonstration purposes.

In Figs. 6 and 8 the window 35 is shown as in the end panel 38 of the freezing section 16. It is within the contemplation of my invention to have the window 35 on either the front or back faces of my freezing section 16.

In Fig. 1 I have shown a unit 10 formed of four tiers of drawers in combination with a freezing section 16, each tier having four drawers as illustrated in Fig. 2. It is of course within the spirit of my invention that my unit 10 may be smaller or larger and that it may be formed of one or any plurality of tiers of drawers together with a freezing section. The tiers of drawers are of course not limited to four drawers but may be of any desirable number of lockers. The tiers may be joined together to form the unit 10 by a connecting strip 37 as shown in Fig. 1.

I may provide that the end of my freezing section 16 have a pair of hinged doors 40 between a double window 35. This will afford convenient access to the interior for defrosting or attention to the parts of the freezing section, as shown in Fig. 6a.

Having thus described my invention, I claim:

1. A refrigerated drawer unit comprising an insulated shell, a plurality of tracks attached to the inner walls of said shell, a plurality of drawers of substantial length, breadth and height slidable on said tracks, said drawers having imperforate front walls, said shell having a plurality of spaced openings to receive said front walls, said front walls have handles to permit any of said drawers to be withdrawn from the shell to allow access thereto, said drawers having open air receiving portions, a freezing section having an outer casing attached to one end of said shell and forming a part of the unit, said freezing section having therein a chamber, a compressor, a coil, a plural-

ity of fins, a pair of blowers, a motor for actuating the compressor for refrigerating the air in the chamber, air exit ducts leading from the upper portion of the chamber, and a motor for actuating said blowers for expelling cold air from the chamber out said exit ducts, said shell having air inlet ducts at its upper portion communicating with the air exit ducts of the freezing section to receive cold air blown therefrom, said shell having a plurality of circulating ducts communicating with said inlet ducts for passing the cold air in and around the open portions of the drawers for refrigerating the contents thereof, said shell having an air exit duct at its lower portion communicating with said circulating ducts for receiving the air therefrom, said freezing section having an air inlet duct at its lower portion communicating with the exit duct of the shell for receiving air therefrom and completing the cycle of air circulation, a rod having one end extending through the lower portion of the outer casing of the freezing section to the exterior thereof, a hinge block attached to the other end of said rod adjacent the air inlet duct of the freezing section, said block adapted upon turning of said rod to swing across said air inlet duct for closing the same, a second rod having one end extending through the upper portion of the outer casing of the freezing section to the exterior thereof, sliding panels attached through linkage to the other end of said second rod adjacent the air exit ducts of the freezing section, said panels adapted upon turning of said second rod to slide across said air exit ducts for closing the same, and a window in one of the walls of the freezing section for access to the interior of the freezing section.

2. A refrigerated drawer unit comprising a shell, a plurality of tracks attached to and within said shell, a plurality of drawers of substantial length, breadth and height slidable on said tracks, each drawer independently withdrawable from the exterior of said shell, said shell having cold air receiving ducts, circulating ducts leading from said cold air receiving ducts, and a warm air exit duct leading from said circulating ducts, a freezing section having an outer casing attached at one end to said shell and forming a part of the unit, said freezing section having means for refrigerating and blowing cold air, said freezing section having cold air exit ducts communicating with the cold air receiving ducts of the shell for supplying cold air thereto, said freezing section also having a warm air receiving duct communicating with the warm air exit duct of the shell, a rod having one end extending through the lower portion of the outer casing of the freezing section to the exterior thereof, a hinge block attached to the other end of said rod adjacent the warm air inlet duct of the freezing section, said block adapted upon turning of said rod to swing across said warm air inlet duct for closing the same, a second rod having one end extending through the upper portion of the outer casing of the freezing section to the exterior thereof, sliding panels attached through linkage to the other end of said second rod adjacent the cold air exit ducts of the freezing section, said panels adapted upon turning of said second rod to slide across said air exit ducts for closing the same, and a window in one of the walls of the freezing section for access to the interior of the freezing section.

WILLIAM McKINLEY BAIRD.