

(19)



Europäisches Patentamt
European Patent Office
Office européen des brevets



(11) Publication number:

0 463 527 A2

(12)

EUROPEAN PATENT APPLICATION

(21) Application number: **91109873.9**

(51) Int. Cl.⁵: **A47F 3/04**, F25D 23/08

(22) Date of filing: **17.06.91**

(30) Priority: **27.06.90 IT 2141490 U**

(43) Date of publication of application:
02.01.92 Bulletin 92/01

(84) Designated Contracting States:
AT BE CH DE DK ES FR GB GR IT LI LU NL SE

(71) Applicant: **TECNOMET PESCARA S.p.A.**
Via degli Oleandri
I-Città S.Angelo (Pescara)(IT)

(72) Inventor: **Ouadrio, Dario**
Via Nazzario Sauro, 40/E
I-20047 Brugherio (Milan)(IT)

(74) Representative: **Gervasi, Gemma, Dr. et al**
NOTARBARTOLO & GERVASI Srl 33, Viale
Bianca Maria
I-20122 Milano(IT)

(54) **Automatic drink dispenser.**

(57) The drink dispenser according to the invention comprises a refrigerated cabinet (10) formed with

integral walls (12, 13) of plastic material, such as high-density polyurethane of selected porosity.

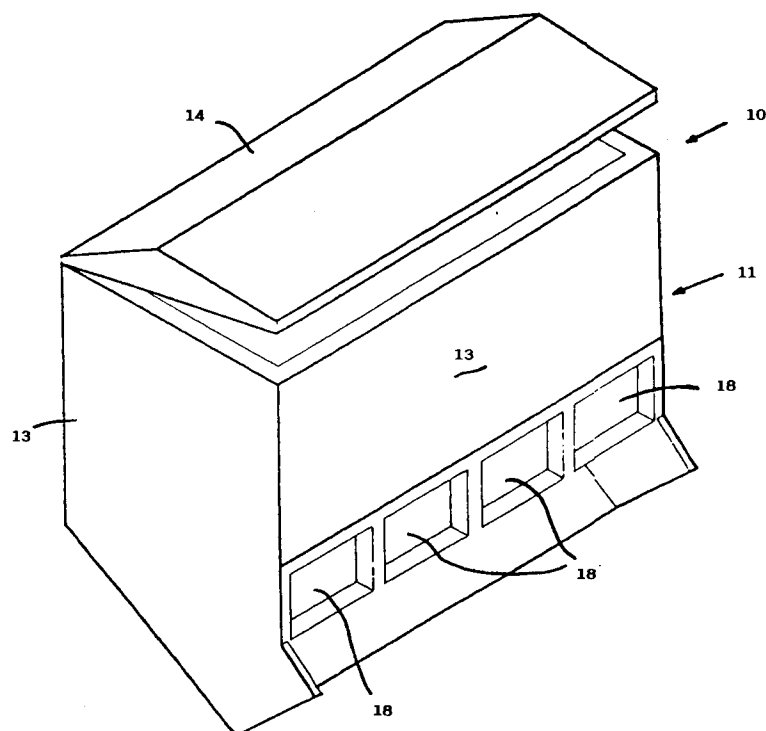


FIG. 1

EP 0 463 527 A2

Field of the invention

This invention relates to an automatic dispenser for drinks stored in containers, and particularly in cans, comprising a refrigerated cabinet containing suitable holders for said containers and controlled dispensing devices for these containers.

Prior art

Automatic dispensers for drinks in containers are available, of which the smaller ones are mainly suitable for dispensing drinks in cans and include a refrigerated cabinet containing holders formed from spiral channels, into which the cans are loaded in line to be fed by gravity to the dispensing devices consisting of star-shaped wheels or rotary drums.

The refrigerated cabinet is formed from box sheet metal walls filled with a foamed polyurethane sponge material. The box sheet metal walls have a structural function, whereas the foamed polyurethane serves as acoustic and thermal insulation.

A structure of this type is relatively complicated and involves laborious construction which negatively affects the dispenser production cost.

Summary of the invention

The object of the present invention is to provide a refrigerated cabinet with a structure of simplified design and construction, and having an efficiency at least equal to that of known types.

This is attained according to the invention by a drink dispenser characterised by comprising a refrigerated cabinet formed with integral walls constructed of a suitable plastic material with selected strength and thermal insulation characteristics.

Preferably said cabinet also comprises a lid with integral walls constructed of suitable plastic material with selected strength and thermal insulation characteristics, and is advantageously formed from a one-piece structure plus a lid, their walls being of high-density polyurethane of selected porosity, such as that known commercially as "BAYDUR No. 1681", into which the necessary inserts are incorporated for connecting determined components.

On this basis a refrigerated cabinet with the desired structural strength and thermal insulation characteristics can be constructed by an injection moulding process at atmospheric pressure, with considerable manufacturing simplification.

Detailed description of the invention

Characteristics and advantages of the invention are described hereinafter with reference to the accompanying Figures 1 to 3, which show a preferred

embodiment of the invention by way of non-limiting example.

Figure 1 is a perspective view of a refrigerated cabinet of a drink dispenser, constructed in accordance with the invention;

Figure 2 is a section view through a component of the cabinet of Figure 1, taken on a transverse central plane;

Figure 3 is a section view through a further component of the cabinet of Figure 1, taken on a transverse central plane.

In Figure 1 the reference numeral 10 indicates overall a refrigerated cabinet for a drink dispenser, the drinks being preferably contained in cans.

The refrigeration system for the cabinet 10 and the spiral holders contained in its interior, into which the cans are loaded, are not shown as they are of known type.

The cabinet 10 comprises a one-piece structure 11 with integral base wall 12 and perimetral walls 13, and a lid 14 also with integral walls 15, as shown in Figures 2 and 3.

Inserts such as 16 for connecting determined components of the drink dispenser are incorporated into the walls 12, 13, 15.

The exit ports 18 for the cans are formed in the front wall 13 of the cabinet 10.

The walls of the one-piece structure 11 and lid 14 are formed of a suitable plastic material with selected strength and thermal insulation characteristics, and in this particular case high-density polyurethane of selected porosity, such as that known commercially as "BAYDUR No. 1681".

The one-piece structure 11 and lid 14 of the cabinet 10 are formed by an injection moulding process at atmospheric pressure, with the inserts cast-in. This process enables walls to be obtained which are formed of a sufficiently porous material to ensure the desired strength and thermal insulation characteristics.

The walls of the one-piece structure 11 and lid 14 are formed with their outer surfaces covered with a compact smooth film, suitable for painting.

The refrigerated cabinet 10 has the advantage of a substantial reduction in construction and assembly time and cost compared with conventional devices of the same performance.

Claims

1. An automatic dispenser for drinks stored in containers, particularly in cans, characterised by comprising a refrigerated cabinet (10) formed with integral walls (12, 13) constructed of a suitable plastic material with selected strength and thermal insulation characteristics.
2. A dispenser as claimed in claim 1, charac-

terised in that said cabinet (10) also comprises a lid (14) with integral walls (15) constructed of suitable plastic material with selected strength and thermal insulation characteristics.

- 5
3. A dispenser as claimed in claims 1 and 2, characterised in that said cabinet (10) is in the form of a one-piece structure (11) plus a lid (14), their walls (12, 13, 15) being of high-density polyurethane of selected porosity. 10
4. A dispenser as claimed in claims 1 and 2, characterised in that said cabinet (10) comprises a one-piece structure (11) plus a lid (14), their walls (12, 13, 15) being of that polyurethane known commercially as "BAYDUR No. 1681". 15
5. A dispenser as claimed in claims 1 and 2, characterised in that inserts (16) for connecting determined components are incorporated into said walls. 20

25

30

35

40

45

50

55

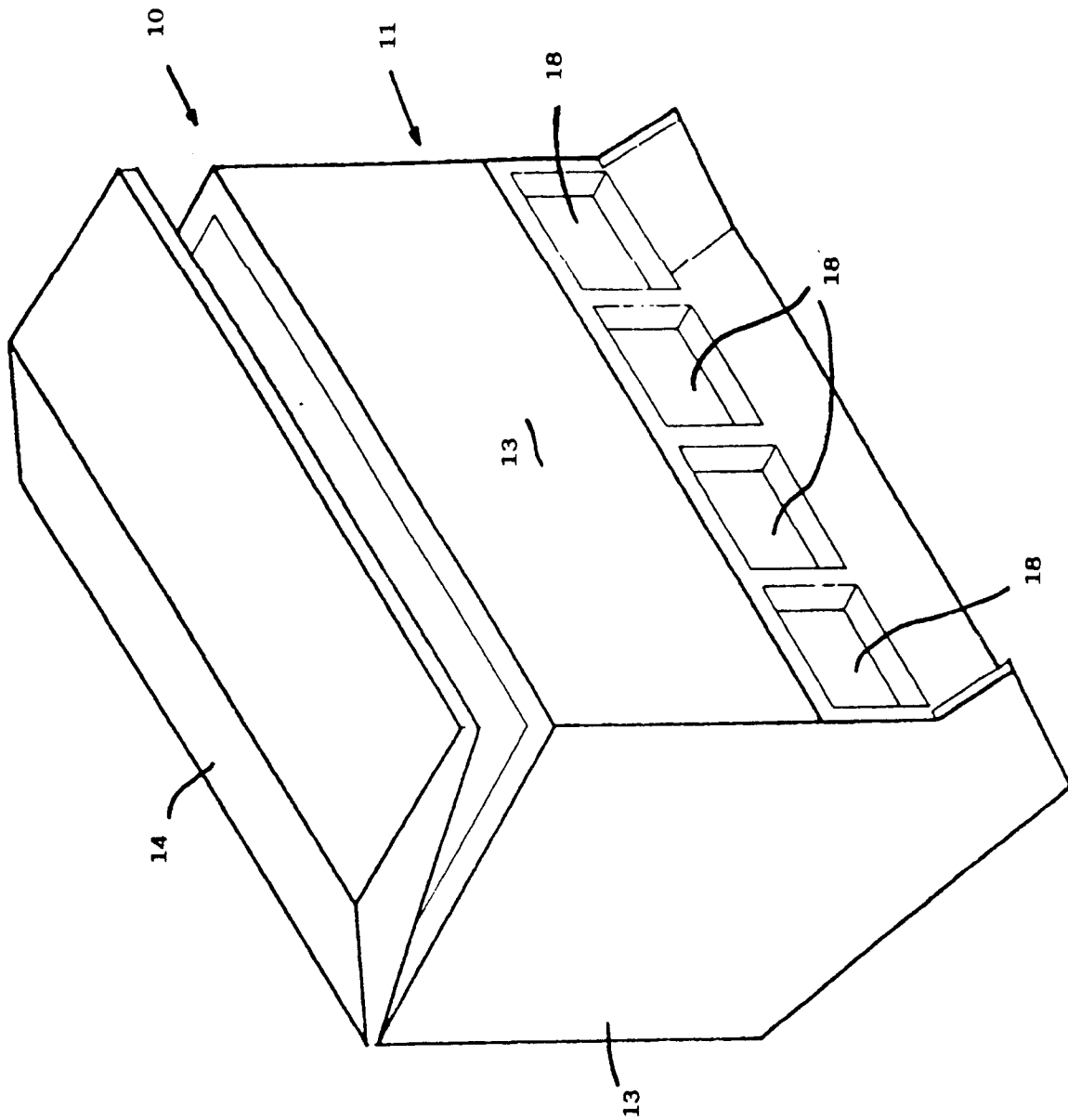


FIG. 1

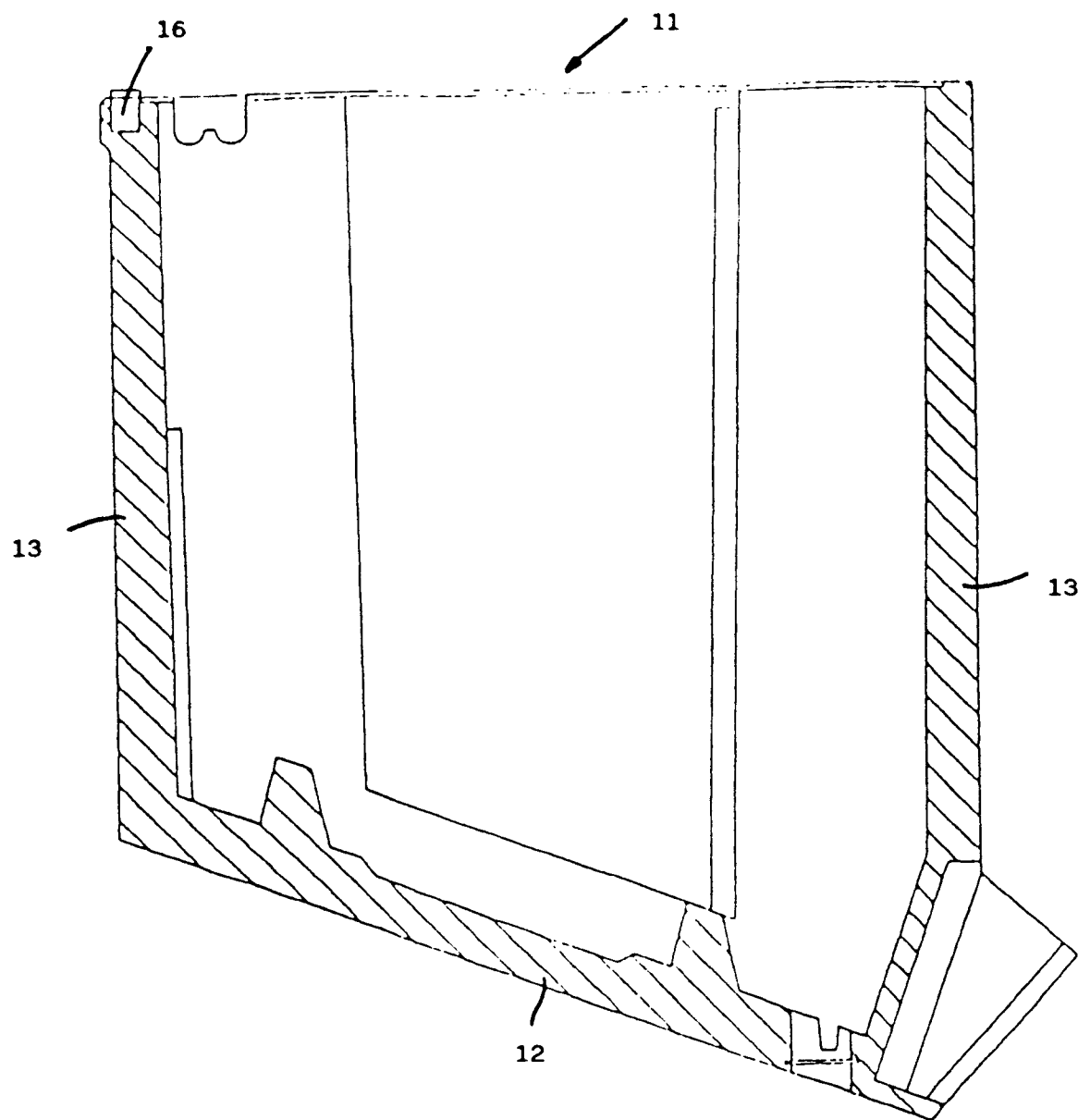


FIG. 2

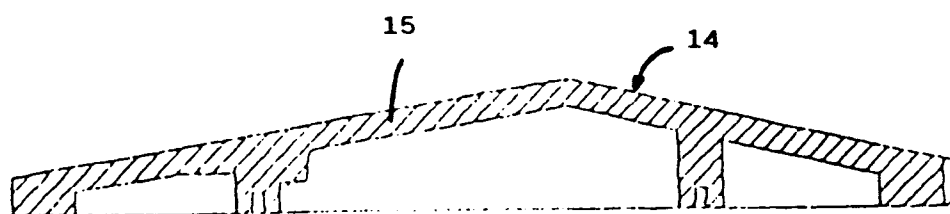


FIG. 3



Europäisches
Patentamt

EUROPÄISCHER RECHERCHENBERICHT

Nummer der Anmeldung

EP 91 10 9893

EINSCHLÄGIGE DOKUMENTE			
Kategorie	Kennzeichnung des Dokuments mit Angabe, soweit erforderlich, der maßgeblichen Teile	Betrifft Anspruch	KLASSIFIKATION DER ANMELDUNG (Int. Cl.5)
A	US-A-4 793 141 (YANAI) * Spalte 4, Zeile 24 - Zeile 48; Abbildungen *	1	F01K9/00 F01D11/04
A	DE-A-3 333 530 (HITACHI) * Zusammenfassung; Abbildungen *	1	
A	US-A-3 705 494 (BOW) * Spalte 1, Zeile 66 - Spalte 2, Zeile 53; Abbildungen *	1	
A	GB-A-781 505 (THE ENGLISH ELECTRIC COMPANY) * Seite 2, Zeile 14 - Zeile 31; Abbildungen *	1	
A	CH-A-143 107 (OERLIKON)		
			RECHERCHIERTE SACHGEBIETE (Int. Cl.5)
			F01K F01D F28B F01D
Der vorliegende Recherchenbericht wurde für alle Patentansprüche erstellt			
Recherchenort	Abschlußdatum der Recherche		Prüfer
DEN HAAG	30 SEPTEMBER 1991		VAN GHEEL J. U. M.
KATEGORIE DER GENANNTEN DOKUMENTE			
X : von besonderer Bedeutung allein betrachtet Y : von besonderer Bedeutung in Verbindung mit einer anderen Veröffentlichung derselben Kategorie A : technologischer Hintergrund O : mündliche Offenbarung P : Zwischenliteratur			
T : der Erfindung zugrunde liegende Theorien oder Grundsätze E : älteres Patentdokument, das jedoch erst am oder nach dem Anmeldedatum veröffentlicht worden ist D : in der Anmeldung angeführtes Dokument L : aus andern Gründen angeführtes Dokument & : Mitglied der gleichen Patentfamilie, übereinstimmendes Dokument			