



**DECLARATION IN SUPPORT OF A CONVENTION  
APPLICATION FOR A PATENT**

In support of the Convention application made for a patent for an invention entitled:

FIRE EXTINGUISHER

We, E. Landsberg and C. Compes

of Total Walther Feuerschutz GmbH, 5000 Köln 80, Waltherstr. 51  
do solemnly and sincerely declare as follows:

~~1. I am the applicant for the patent~~

*(or, in the case of an application by a body corporate)*

1. I am authorized by TOTAL WALTHER FEUERSCHUTZ GmbH, the applicant  
for the patent to make this declaration on its behalf.

2. The basic application as defined by section 141 of the Act was made in GERMANY on the  
18th day of March, 1987, by TOTAL WALTHER FEUERSCHUTZ GmbH

day of , 19 , by

~~3. I am the actual inventor of the invention referred to in the basic application.~~

*(or, where a person other than the inventor is the applicant)*

3. Erich SCHWEINFURTH

Mozartstr. 32, 6905 Schriesheim, Germany

is the actual inventor of the invention and the facts upon which I am entitled  
is entitled to make the application are as follows: the applicant

The Applicant is the assignee of the actual inventor

4. The basic application referred to in paragraph 2 of this Declaration was the first application made in a  
Convention country in respect of the invention the subject of the application.

*(or where a request is made under section 142AA of the Patents Act 1952, for  
an earlier application made in a Convention country to be disregarded)*

~~4. (1.) The basic application referred to in paragraph 2 of this Declaration was not the first application made in  
a Convention country in respect of the invention the subject of the application.~~

~~(2.) An earlier application in respect of the invention the subject of the application was made in  
on~~

~~(3.) A request has been made to you under section 142AA of the Patents Act 1952 to disregard that earlier  
application.~~

~~(Here set out in succeeding sub-paragraphs the facts that show that section 142AA is applicable)~~

Except as stated in this paragraph, the basic application referred to in paragraph 2 of this Declaration was the first  
application made in a Convention country in respect of the invention the subject of the application.

Declared at Cologne this 27th day of January, 19 88  
Germany

TO:

THE COMMISSIONER OF PATENTS.

*(Signature of Declarant)*  
(ppa. E. Landsberg) (ppa. Chr. Compes)

(IMPORTANT - Cross out inapplicable words in above Form.)

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**(12) PATENT ABRIDGMENT (11) Document No. AU-B-11994/88**  
**(19) AUSTRALIAN PATENT OFFICE (10) Acceptance No. 598103**

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(54) Title  
**FIRE EXTINGUISHER**

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(71) Applicant(s)  
**TOTAL WALTHER FEUERSCHUTZ GMBH**

(72) Inventor(s)  
**ERICH SCHWEINFURTH**

(74) Attorney or Agent  
**COLLISON & CO.**

(56) Prior Art Documents  
**GB 2096299**  
**GB 1285027**  
**GB 1072404**

(57) Claim

1. A fire extinguisher comprising a container for the holding of the extinguishing material such as powder, water, a mixture of water and a foaming agent, Halon or similar materials; said container having a volume greater than 1 litre and operating with a pressure of 5 to 25 bars on the extinguishing material, and a valve for the discharge of the extinguishing material; characterised in that the container is blow moulded from a block of PEPT, Polyacrylonitrile, or similar material, the volume of the mould block being 1:6 to 1:12 of the volume of the container, with the volume of the container being between 1 litre and 15 litres.

598103

COMMONWEALTH OF AUSTRALIA

Form 10

Patents Act 1952-1969

# COMPLETE SPECIFICATION

(ORIGINAL)

FOR OFFICE USE:

Class

Int. Class

Application Number :  
Lodged :

Complete Application No. :  
Specification Lodged :  
Published :

Priority:

This document contains the  
amendments made under  
Section 49 and is correct for  
printing.

Related art:

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TO BE COMPLETED BY APPLICANT

Name of Applicant: TOTAL WALTHER FEUERSCHUTZ GmbH

Address of Applicant: Waltherstr. 51, D-5000 Cologne 80, Germany

Actual Inventor: Erich SCHWEINFURTH

Address for Service: COLLISON & CO., Patent Attorneys, 117 King William Street, Adelaide, South Australia, 5000.

Complete Specification for the invention entitled: FIRE EXTINGUISHER

The following statement is a full description of this invention, including the best method of performing it known to us:

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FIRE EXTINGUISHER

The present invention concerns a fire extinguisher with a container for containing fire extinguishing substances such as fire extinguishing powder, water, a water/foam mixture, Halon, etc., having a volume between 1 and 15 litres, with a pressure between 5 and 25 bar acting on the first extinguishing substance, and with a valve for discharging the fire extinguishing substance.

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Such fire extinguishers are used as mobile or semi-stationary extinguishers, with the container fabricated from steel sheet or aluminium sheet.

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The object of the present invention is to provide a container for fire extinguishers which would be easier to handle, corrosion resistant, and cheaper to manufacture.

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This object is achieved by making the container of a synthetic material and by manufacturing the wall of the container from a moulding by means of the stretch blow forming method. The moulding of PETP, polyacrylonitrile, or a similar material may be produced by injection moulding.

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The injection moulded hollow moulding is closed at one end, while its other end is provided with a bottleneck. The latter is clamped in a blowing machine, and the remaining part of the moulding is blown into a mould, thus forming the wall of the container. In this method the material is stretched in the ratio 1:6 to 1:12, while being strengthened at the same time, which makes it possible to use the

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plastic container as fire extinguisher with a high operating pressure acting on the fire extinguishing substance. A high operating pressure is necessary to rapidly and reliably discharge the fire extinguishing substance from the container in the case of a fire. The opinion was held until now that fire extinguishers of plastic material could not be

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economically manufactured for the required range of pressures and temperatures.

A fire extinguisher made of plastic material offers the advantage over fire extinguishers of metal in that it is of lighter weight and therefore easier to handle. This is of advantage in particular in the case of mobile fire extinguishers. In addition the plastic fire extinguisher has a longer service life because it is more highly corrosion resistant than the metallic fire extinguishers used until now. A further advantage of the fire extinguisher according to the present invention is that its manufacturing costs are significantly lower than those of conventional fire extinguishers. This lower price makes it possible to use the fire extinguisher as a disposable extinguisher under certain circumstances. This means that the inspections, checks of content, and replenishments required by law are replaced by replacement of the fire extinguisher.

In addition, the container of the fire extinguisher according to the present invention offers an optical advantage: The wall of the container can be formed into any desired shape without any difficulties and by the simplest means. Typical shaping of metal containers of fire extinguishers is possible only under certain circumstances because of the high manufacturing costs.

The stretch blow forming method permits using a moulding provided with a threaded bottle neck to which can be attached a plastic valve, such that the complete fire extinguisher can be made of a plastic material offering the abovementioned advantages.

The lower part of many metallic fire extinguishers has hemispherical shape to which a bottom part is attached to achieve stability. The present invention makes it possible to mould the wall and bottom part of the container in one piece. This also lowers the costs of manufacture and assembly.

The stretch blow forming method permits making parts of a transparent material, which permits checking by simplest means the level of fire extinguishing substance in the container.

A fire extinguisher is either charged with pressure only when required or pressure is applied continuously. In the latter case the fire extinguishing substance is overlaid by a pressurized gas which expels the fire extinguishing substance when the valve is opened.

5. Accordingly the fire extinguisher is continuously under pressure, while in the former case a separate source of pressurized gas is provided within or outside the container, which applies pressure and thereby expels the fire extinguishing substance only in the case of a fire. The fire extinguisher being pressurized only when required offers the advantage that pressure drop cannot occur as a result of possible permeability.
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A fire extinguisher being charged with pressure from an internal pressure source is shown, by way of example, as an embodiment of the present invention, and is described in greater detail in the following drawing.

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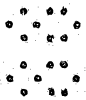
The fire extinguisher 1 consists of a container 2 and a valve 3. The container 2 is manufactured by the stretch blow forming method from a moulding (not shown here). The moulding is provided with a bottle neck 4 on which a threaded socket 5 is moulded on. The bottle neck 4 is clamped in the stretch blow forming machine producing the wall 6 of the container by the stretch blow forming method. The resulting thickness of the wall 6 of the container is considerably smaller than the original thickness of the moulding. The strength of the wall 6 of the container is sufficiently increased by the stretching process to permit the operating pressure that is required for correct operation being withstood by wall 6. In the embodiment shown by way of example, the bottom part 7 of the container is manufactured simultaneously with the wall 6 of the container by the stretch blow forming method. Accordingly, parts 6 and 7 consist of one piece.

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30. Valve 3 is preferable equipped with an internally threaded valve socket 8 being screwed onto the external thread of socket 5. A valve lifter 12 is operated by a valve handle 9 and opens a pressure bottle 11, thereby expelling the fire extinguishing substance contained in

wall 6 of the container through outlet nozzle 10. A valve inset 14 is connected with valve socket 8, guides the valve lifter 12, and carries the pressure bottle 11 and a riser pipe 13.



THE CLAIMS DEFINING THE INVENTION ARE AS FOLLOWS:-

1. A fire extinguisher comprising a container for the holding of the extinguishing material such as powder, water, a mixture of water and a foaming agent, Halon or similar materials; said container having a volume greater than 1 litre and operating with a pressure of 5 to 25 bars on the extinguishing material, and a valve for the discharge of the extinguishing material; characterised in that the container is blow moulded from a block of PEPT, Polyacrylonitrile, or similar material, the volume of the mould block being 1:6 to 1:12 of the volume of the container, with the volume of the container being between 1 litre and 15 litres.
2. A fire extinguisher as defined in claim 1 characterised in that a thread for the attachment of the valve is formed during the moulding operation.
3. A fire extinguisher as defined in claim 2 characterised in that the valve is formed of a synthetic material.
4. A fire extinguisher as defined in any one of the preceding claims characterised in that the bottom and the side wall of the container are formed by blow moulding in one operation.
5. A fire extinguisher as defined in any one of claims 1 to 3 characterised in that the side wall of the container is formed by blow moulding and the bottom of the container is formed as a separate piece and attached to a hemispherical bottom part of the wall of the container.

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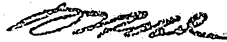


6. A fire extinguisher as defined in any one of the preceding claims characterised in that the upper part of the wall of the container is formed of a transparent material whereby the level of the contents in the container can be checked.

7. A fire extinguisher substantially as hereinbefore described with reference to the accompanying drawings.

DATED this 23rd day of February 1990.

TOTAL WALTHER FEUERSCHUTZ  
GMBH,  
By their Patent Attorneys,  
COLLISON & CO.



11994/88

