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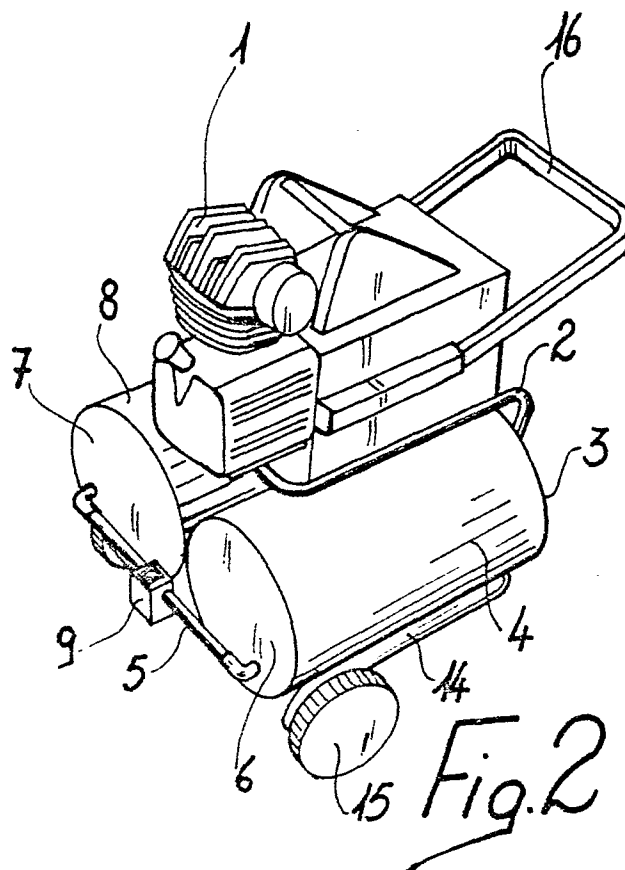
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⑮⑤ **Air compressor apparatus.**

⑮⑦ The air compressor apparatus comprises a compressor (1), a first tank (4) connected to the air compressor (1) by a delivery pipe (2), and a second tank (8) connected to the first tank (4) by a connection pipe (5). An air filter (9) is interposed on the connection pipe (5) for preventing humidity passing from the first tank (4) into the second tank (8). Manometers (12,13) and an air outlet connection are also provided on the second tank (8).



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AIR COMPRESSOR APPARATUS

The present invention relates to an air compressor apparatus.

It is known that all reciprocating compressors are equipped with a tank to which the air is sent before being delivered for use.

The presence of said tank allows an accumulation of air and a delivery thereof eliminating the irregularities in the motion of the compressor.

The size of said tank is restricted by various parameters, among which are the power of the compressor, the flow-rate of the air to be delivered for use, the various pressures involved, as well as the applicable safety norms.

A disadvantage observed in such compressors resides in the fact that the air, after undergoing compression, is warm and contains a certain percentage of humidity, so that if its delivery to the user is immediate one runs the risk of also distributing undesired amounts of water in the piping.

The main aim of the present invention is to provide an air compressor apparatus with air accumulation having considerable capacity and characterized by a remarkable degree of safety.

Within the above aim, an object of the invention is to provide an air compressor apparatus with air accumulation, wherein the danger of distributing humid air for use is eliminated.

Another object of the invention is to provide an air compressor apparatus with air accumulation, which is composed of simple and easily producible elements.

Still another object of the invention is to provide an air compressor apparatus with air accumulation which is equipped with means to facilitate its transport.

A not least object of the invention is to provide an air compressor apparatus with air accumulation, which is obtainable at low costs with ordinary manufacturing plant.

This aim, as well as these and other objects which will become apparent hereinafter, are achieved by an air compressor apparatus characterized in that it comprises at least one compressor, a plurality of tanks connected in series, and at least one air filter interposed between said tanks, said plurality of tanks comprising at least one first tank adapted for receiving air from said compressor, and at least one other tank adapted for distributing accumulated air for use.

Further characteristics and advantages of the invention will become apparent from the detailed description of a preferred embodiment thereof, illustrated only by way of non-limitative example in the accompanying drawings, wherein:

figure 1 is a perspective front view of the air compressor apparatus according to the invention;

figure 2 is a perspective side view of the air compressor apparatus of figure 1;

figure 3 is a perspective rear view of the air compressor apparatus of figure 1.

With reference to the above described figures, the reference numeral 1 indicates a reciprocating compressor which, through a delivery pipe 2, is connected to a first curved end 3 of a first cylindrical tank 4. The compressor may have one or more cylinders or one or more compression stages.

A connection pipe 5 connects a second curved end 6 of the first tank 4 to a corresponding first curved end portion 7 of a second tank 8, advantageously identical and parallel to said first tank.

Said connection pipe 5, in its middle position, is provided with an air filter 9.

A second curved end portion 10 opposite to said first curved end portion 7 of the second tank 8 is provided with a delivery connection 11 and manometers 12 and 13 for pressure control.

The entire assembly is advantageously mounted on a frame 14 downwardly comprising wheels 15 and a handle 16, the whole assembly being adapted to facilitate transport.

As is apparent from the above description, the two tanks, which individually have small dimensions but have a considerable total capacity, are mutually connected in series with the interposition of an air filter, so that the warm air arriving from the reciprocating compressor 1, before being delivered, undergoes a first condensation in the tank 4, a filtering, and then a second condensation in the tank 8, while it undergoes cooling at the same time.

It is therefore evident that the air delivered to the user is free from humidity and therefore free from undesired condensation of water.

A further advantage deriving from the adoption of two tanks resides in an increased degree of safety with respect to accumulation capacity.

In practice, the materials employed, as well as the dimensions, may be any according to the requirements.

Where technical features mentioned in any claim are followed by reference signs, those reference signs have been included for the sole purpose of increasing the intelligibility of the claims and accordingly, such reference signs do not have any limiting effect on the scope of each element identified by way of example by such reference signs.

Claims

1. Air compressor apparatus, characterized in that it comprises at least one compressor (1), a plurality of tanks (4,8) connected in series and at least one air filter (9) interposed between said tanks (4,8), said plurality of tanks comprising at least one first tank (4) adapted for receiving air from said compressor (1), and at least one other tank (8), adapted for distributing accumulated air for use.

2. Air compressor apparatus according to claim 1, characterized in that said compressor (1) is a reciprocating compressor, with one or more cylinders or with one or more compression stages.

3. Air compressor apparatus according to claim 1, characterized in that said plurality of tanks comprises two identical tanks (4,8).

4. Air compressor apparatus according to the preceding claims, characterized in that said compressor (1), said plurality of tanks (4,8) and said air filter (9) are all supported by a frame (14) having wheel means (15) and grip means (16) adapted to permit transportation of said air compressor structure.

5. Air compressor apparatus according to the preceding claims, characterized in that said two tanks (4,8) are arranged side by side.

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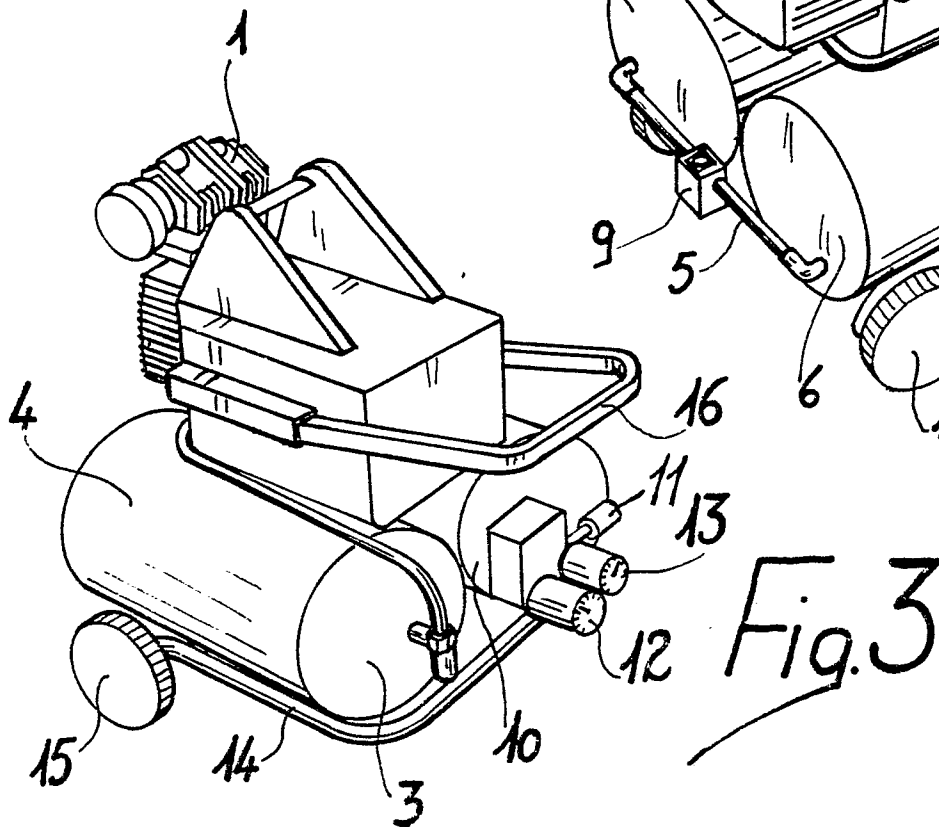
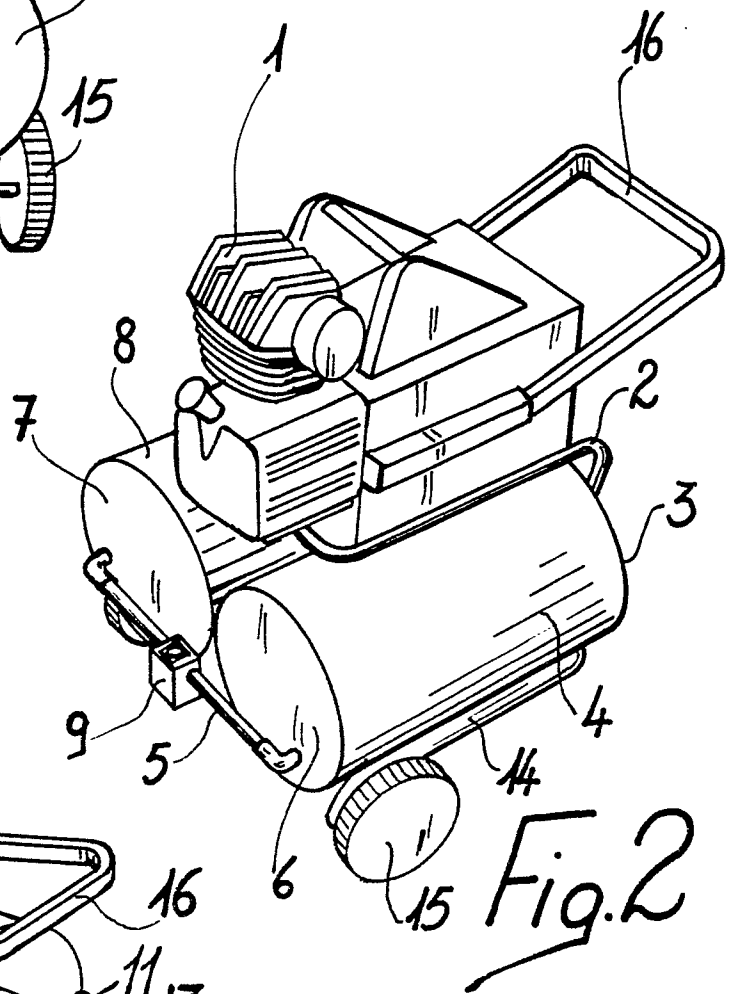
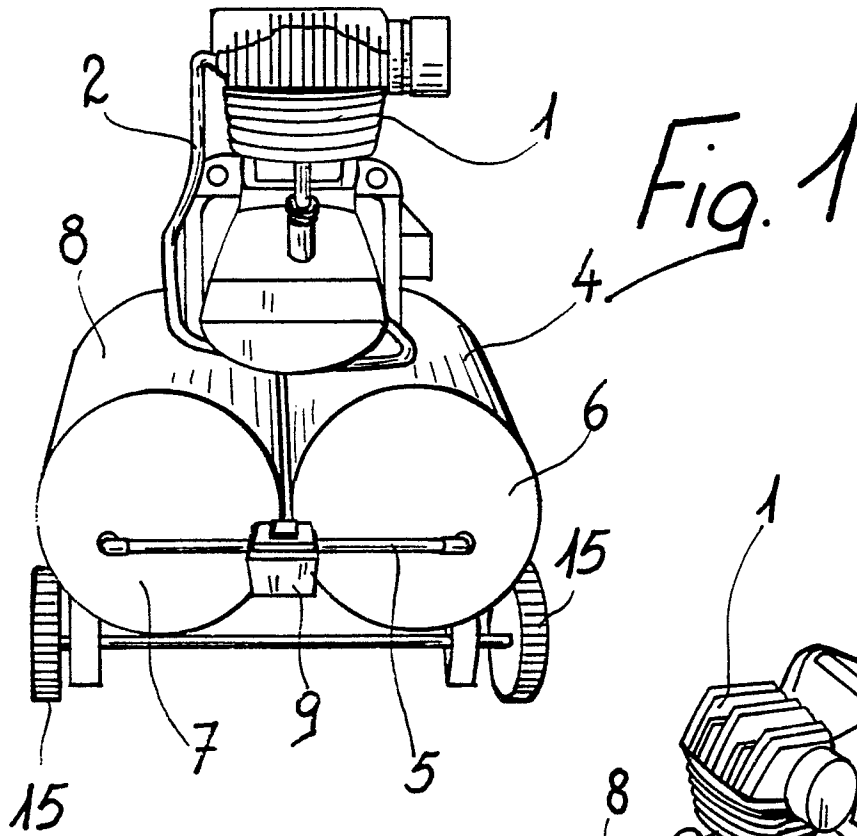
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DOCUMENTS CONSIDERED TO BE RELEVANT			EP 88115560.0
Category	Citation of document with indication, where appropriate, of relevant passages	Relevant to claim	CLASSIFICATION OF THE APPLICATION (Int. Cl. 4)
X	DE - B - 1 053 711 (WIEDERHOLZ) * Totality; especially column 1, line 19 - column 2, line 36; claims; fig. *	1,2	F 04 B 41/02 F 04 B 35/06
A	--	3	
A	DE - C - 559 358 (FIAT S.A.) * Totality; especially page 1, lines 44-57 *	1-3,5	
A	DE - A - 2 230 205 (SCHENK) * Totality; especially page 1, lines 1-6 *	1,4	
A	CH - A - 152 975 (SCHWEIZ. LOKO-MOTIV- & MASCHINENFABRIK) * Totality; especially fig.; claims *	1,2	TECHNICAL FIELDS SEARCHED (Int. Cl. 4) B 60 S 5/00 F C4 B 23/00 F C4 B 35/00 F C4 B 39/00 F C4 B 41/00
The present search report has been drawn up for all claims			
Place of search VIENNA		Date of completion of the search 30-03-1989	Examiner WERDECKER

EPO Form 1503 03 82

CATEGORY OF CITED DOCUMENTS

- X : particularly relevant if taken alone
- Y : particularly relevant if combined with another document of the same category
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- T : theory or principle underlying the invention
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- D : document cited in the application
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- & : member of the same patent family corresponding document