Sept. 24, 1935. J. W. JONES ET AL 2,015,525

PORTABLE COMPRESSOR

Filed May 11, 1934

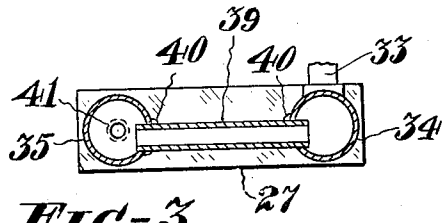


FIG.-3.

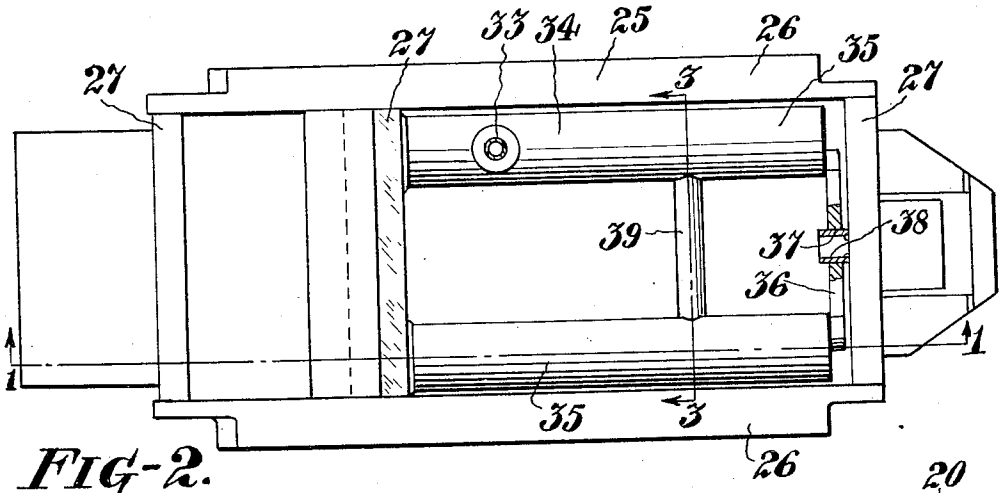


FIG-2.

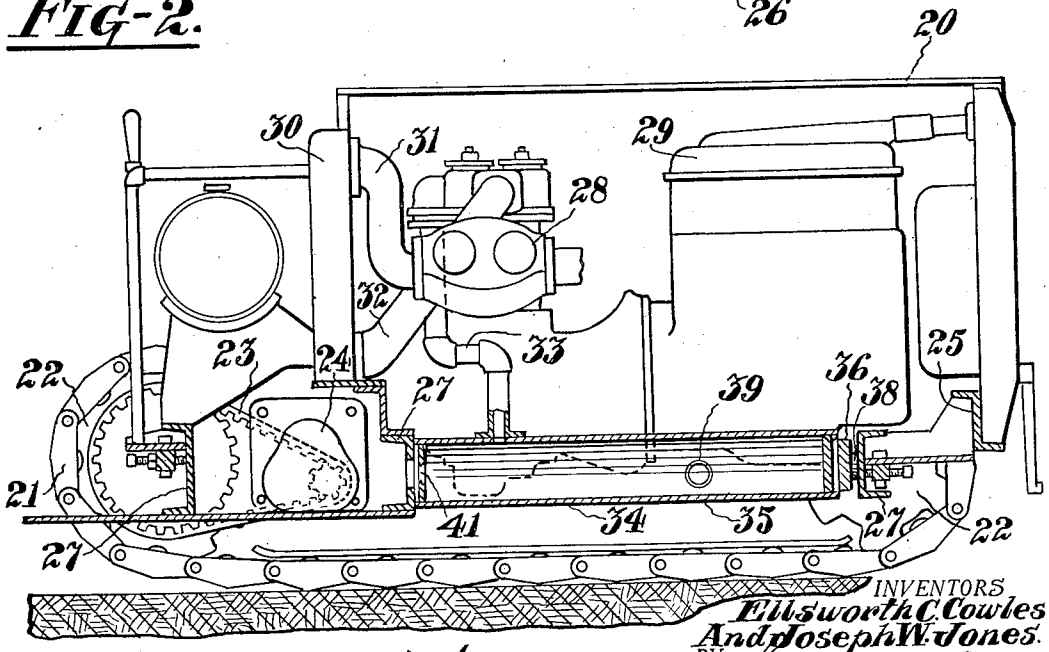


FIG.-1.

INVENTORS
Ellsworth C. Cowles
And Joseph W. Jones.
BY
THEIR ATTORNEY.

Patented Sept. 24, 1935

2,015,525

UNITED STATES PATENT OFFICE

2,015,525

PORTABLE COMPRESSOR

Joseph W. Jones and Ellsworth C. Cowles, Corning, N. Y., assignors to Ingersoll-Rand Company, Jersey City, N. J., a corporation of New Jersey

Application May 11, 1934, Serial No. 725,053

5 Claims. (Cl. 230—33)

This invention relates to compressors, and more particularly to a portable compressor outfit.

One object of the invention is to avoid the occurrence of leaks in the compressed air storage system of the compressor outfit.

Another object is to minimize the overall dimensions of the compressor outfit.

Other objects will be in part obvious and in part pointed out hereinafter.

In the drawing accompanying this specification and in which similar reference numerals refer to similar parts,

Figure 1 is a longitudinal elevation, partly in section, of a compressor outfit equipped with a storage receiver constructed and arranged in accordance with the practice of the invention,

Figure 2 is a plan view, partly broken away, of the main frame and the storage receiver, and

Figure 3 is a transverse view taken through Figure 2 on the line 3—3.

Referring more particularly to the drawing, 20 designates, in general, a compressor outfit including in its organization suitable power actuated traction devices for propelling the outfit. The traction devices are shown as consisting of tread belts 21 arranged in the usual manner on opposite sides of the structure.

The tread belts are trained over sprocket wheels 22 arranged at or near the ends of the structure and one of said sprocket wheels 22 may be suitably connected as by means of a chain drive 23 to a motor 24 whereby the tread belts are driven and which may be actuated by pressure fluid.

The main frame, which consists of the usual side members 26 and transverse members 27, serves as a support for a compressor 28 and a motor 29, for example an internal combustion engine, which drives the compressor. The compressor is illustrated as being of the multi-stage type of which the low and succeeding stages are connected to an inter-cooler 30 by conduits 31 and 32, respectively, and the final discharge output is conveyed from the compressor by a discharge conduit 33.

In accordance with the practice of the invention, a storage receiver designated 34 and into which the final discharge output of the compressor passes, is disposed in the transverse plane of the main frame 25. In order to minimize the overall dimensions of the compressor outfit the storage receiver 34 is constructed of a plurality, in this instance two, of tubular vessels 35 which are disposed between the side members 26 and between a pair of transverse members 27.

One end of each vessel is connected rigidly, as by welding, to an intermediate transverse member and the opposite ends of the vessels 35 are fixedly secured to a bar 36 having an aperture 37 into which extends a lug 38, carried by the front transverse member 27, to serve as a pivot for the bar 36.

Free communication is provided between the members 35 by a pipe 39 which preferably extends with its ends into the vessels 35 and is secured thereto by welding, as indicated at 40. A suitable outlet opening is provided for the storage receiver by an aperture 41 in one of the vessels and to which a conduit (not shown) may be connected for conveying pressure fluid to the point of application. The other vessel 35 is connected directly to the discharge conduit 33 of the compressor to receive its discharge output.

From the foregoing description it will be apparent that, by constructing the storage receiver and arranging it between the members of the main frame in the manner described, the outside dimensions of the compressor outfit need not be increased over those necessitated by the compressor and the motor and the adjuncts necessary for the operation of the latter. Moreover, by securing and supporting the storage receiver in such wise as to render it, in a degree, flexible it may adjust itself in accordance with the movements of the compressor incident to the weaving or twisting movement of the frame during the movement of the outfit over irregular surfaces. The joints of the elements constituting the storage system may, therefore, remain leak-proof indefinitely.

We claim:

1. A portable compressor outfit, comprising a main frame having side members and transverse members, a compressor supported by the main frame, a storage receiver affixed with one end to one of the members, means for pivotally connecting the other end of the storage receiver to another member, and means for conveying the discharge output of the compressor to the storage receiver.

2. A portable compressor outfit, comprising a main frame having side members and transverse members, a compressor supported by the main frame, a storage receiver affixed with one end to one of the transverse members, means for pivotally connecting the other end of the storage receiver to another transverse member, and means for conveying the discharge output of the compressor to the storage receiver.

3. A portable compressor outfit, comprising a

main frame having side members and transverse members, a compressor supported by the frame, a plurality of storage receivers interposed between the members to receive the discharge output of the compressor and having one end affixed to a transverse member, and a brace affixed to the other ends of the storage receivers and being pivotally connected intermediate its ends to another transverse member.

4. A portable compressor outfit, comprising a main frame having side members and transverse members, a compressor supported by the frame, a plurality of vessels interposed between the members to form a storage receiver and having an end affixed to a transverse member, a brace affixed to the other end of the vessels, means on another transverse member extending into the aperture to serve as a pivot for the brace, and means affording free communication between the vessels.

5. A portable compressor outfit, comprising a main frame having a plurality of side and transverse members, a compressor supported by the frame, a plurality of storage receivers rigidly secured with one end to one transverse member and being pivotally supported at their other ends by another transverse member, and means affording communication between the storage receivers.

JOSEPH W. JONES.
ELLSWORTH C. COWLES.