June 9, 1925. 1,541,776

W. D. MERCER

COMPRESSOR UNIT

Filed June 23, 1924

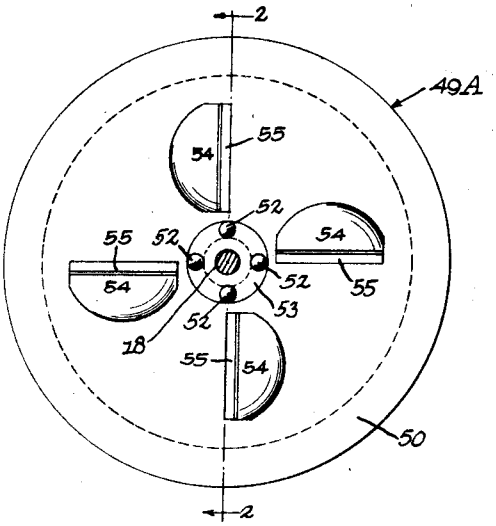


Fig. 1

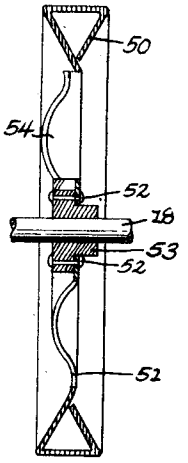


Fig. 2

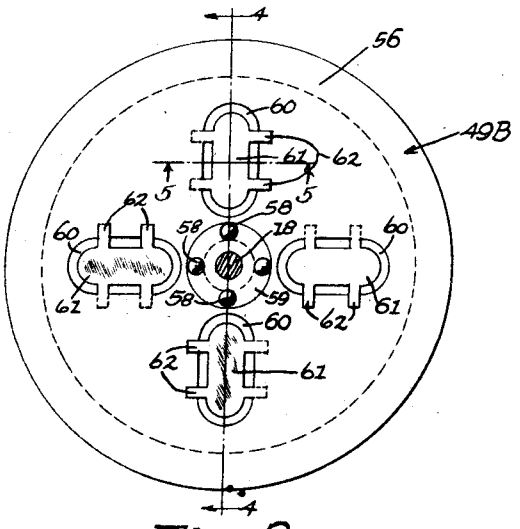


Fig. 3

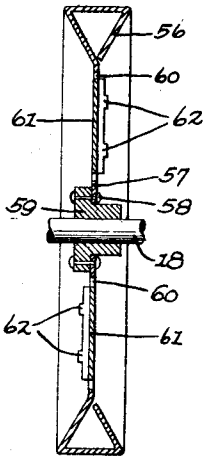


Fig. 4



Fig. 5.

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UNITED STATES PATENT OFFICE.

WILLIAM D. MERCER, OF DETROIT, MICHIGAN, ASSIGNOR, BY MESNE ASSIGNMENTS, TO KELVINATOR CORPORATION, OF DETROIT, MICHIGAN, A CORPORATION OF MICHIGAN.

COMPRESSOR UNIT.

Application filed June 23, 1924. Serial No. 721,711.

To all whom it may concern:

Be it known that I, WILLIAM D. MERCER, a citizen of the United States of America, and a resident of Detroit, in the county of Wayne and State of Michigan, have invented certain new and useful Improvements in Compressor Units, of which the following is a full, clear, and exact description.

The adaptation of mechanical refrigerating systems to small units suitable for installation in stores and houses has necessitated the introduction into the systems heretofore used of a large number of improvements particularly designed to decrease the attention required by the refrigerating system and to facilitate maintenance and operation thereof. My invention provides a fly-wheel fan particularly suitable for use on the compressor unit of such an installation and effective to equalize the load demand on the prime mover and also set up a current of air to increase the capacity of the condenser. In the drawings accompanying this specification and forming a part thereof I have shown, for purposes of illustration, certain forms which my invention may assume. In these drawings:

Figure 1 is an end elevation of one form of my invention,

Figure 2 is a sectional view taken on the line 2—2 of Figure 1,

Figures 3 and 4 are similar views showing a second embodiment, while

Figure 5 is a section on the line 5—5 of Figure 4.

In order to equalize the load imposed upon the prime mover by the compressor it is desirable to provide upon the prime moyer a suitable fly-wheel and in order to increase the circulation of air through the condenser coil of the compressor unit this fly-wheel is preferably provided with means adapted to act as a fan to force air against the condenser coil.

In the construction shown in Figures 1 and 2 the flywheel 49^{A} comprises a rim 50 and a web 51 formed from a single piece of sheet metal and secured by means of suitable rivets 52 to a hub 53 secured in any suitable manner to the prime mover shaft 18. This web 51 is provided with a plurality of upstanding plates 54 struck therefrom and leaving in the web 51 corresponding apertures 55 through which the air engaged by the plates 54 is forced into contact with the condenser coil.

In the fly-wheel 49^{B} shown in Figures 3 and 4 the rim 56 and web 57 are again formed from a single piece of metal and again secured by means of suitable rivets 58 to a hub 59 secured in any suitable manner to the prime mover shaft 18 but in this construction the web 57 is provided with a plurality of apertures 60 in each of which is mounted a plate 61 standing at an angle to the plane of the web 57 and secured in position by means of a plurality of lugs 62 formed integral with the plate 61, bent to contact the web 57 when the plate 61 is in the desired position with the two edges of the plate 61 projecting on opposite faces of the web 57, and secured to the web 57 in any suitable manner as by spot welding.

From the above description it will be apparent that I have provided an improved means for equalizing the load upon the prime mover and simultaneously causing circulation of air. At the same time, it will be obvious to those skilled in the art that the particular embodiments of my invention herein shown and described may be variously changed and modified without departing from the scope of my invention or sacrificing the advantages thereof and it will therefore be understood that this disclosure is illustrative only and that my invention is not limited thereto.

I claim:

A flywheel fan comprising a rim, a hub, a web connecting said rim and said hub and provided with a plurality of apertures therethrough, and a plurality of blades each positioned within said apertures and extending at an angle to the plane of said web with its two lateral edges projecting on opposite sides of said web, and means securing each such lateral edge to said web.

In testimony whereof, I hereunto affix my signature.

WILLIAM D. MERCER.