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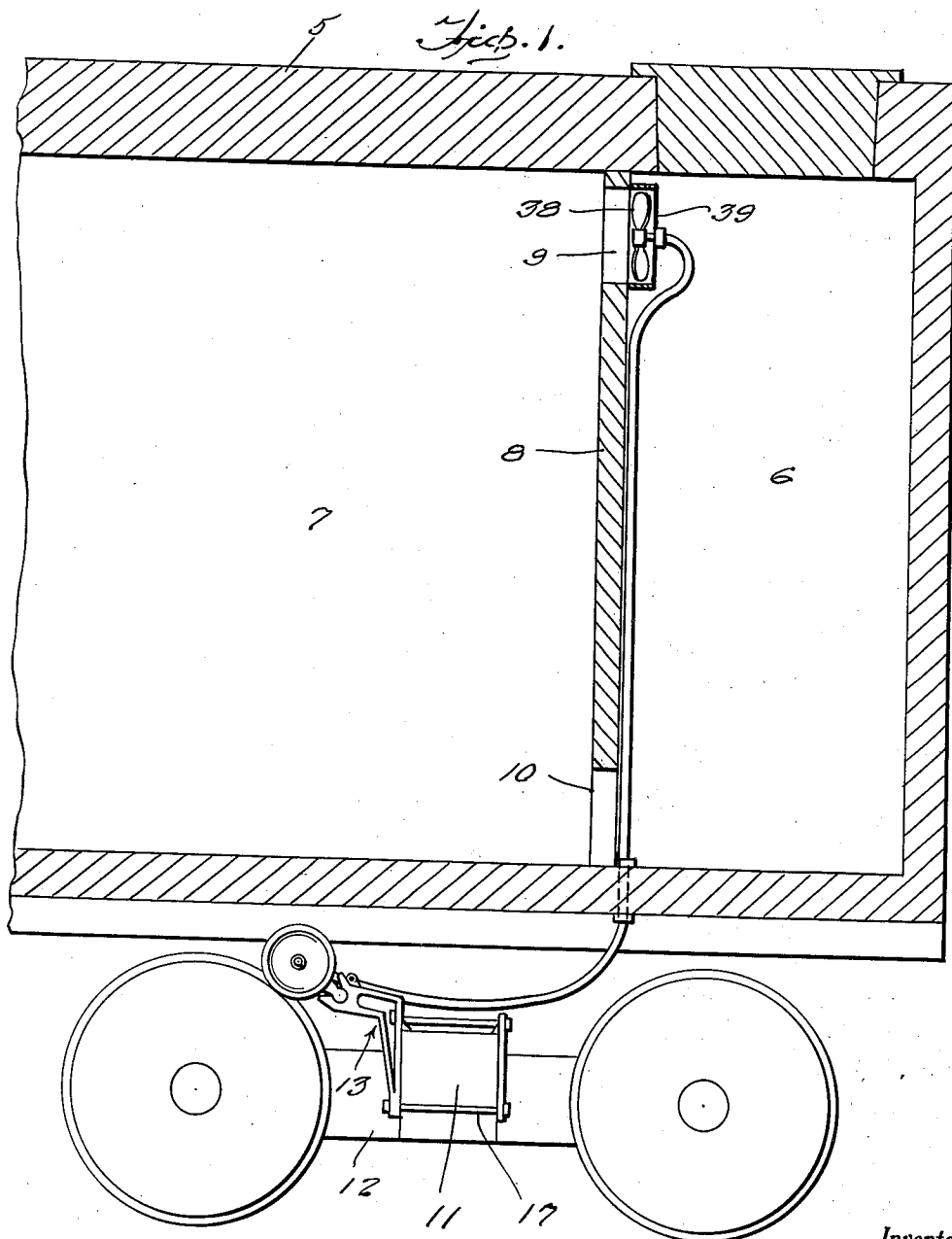
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2,184,488

AIR CIRCULATING ATTACHMENT FOR REFRIGERATOR CARS

Filed Dec. 3, 1938

4 Sheets-Sheet 1



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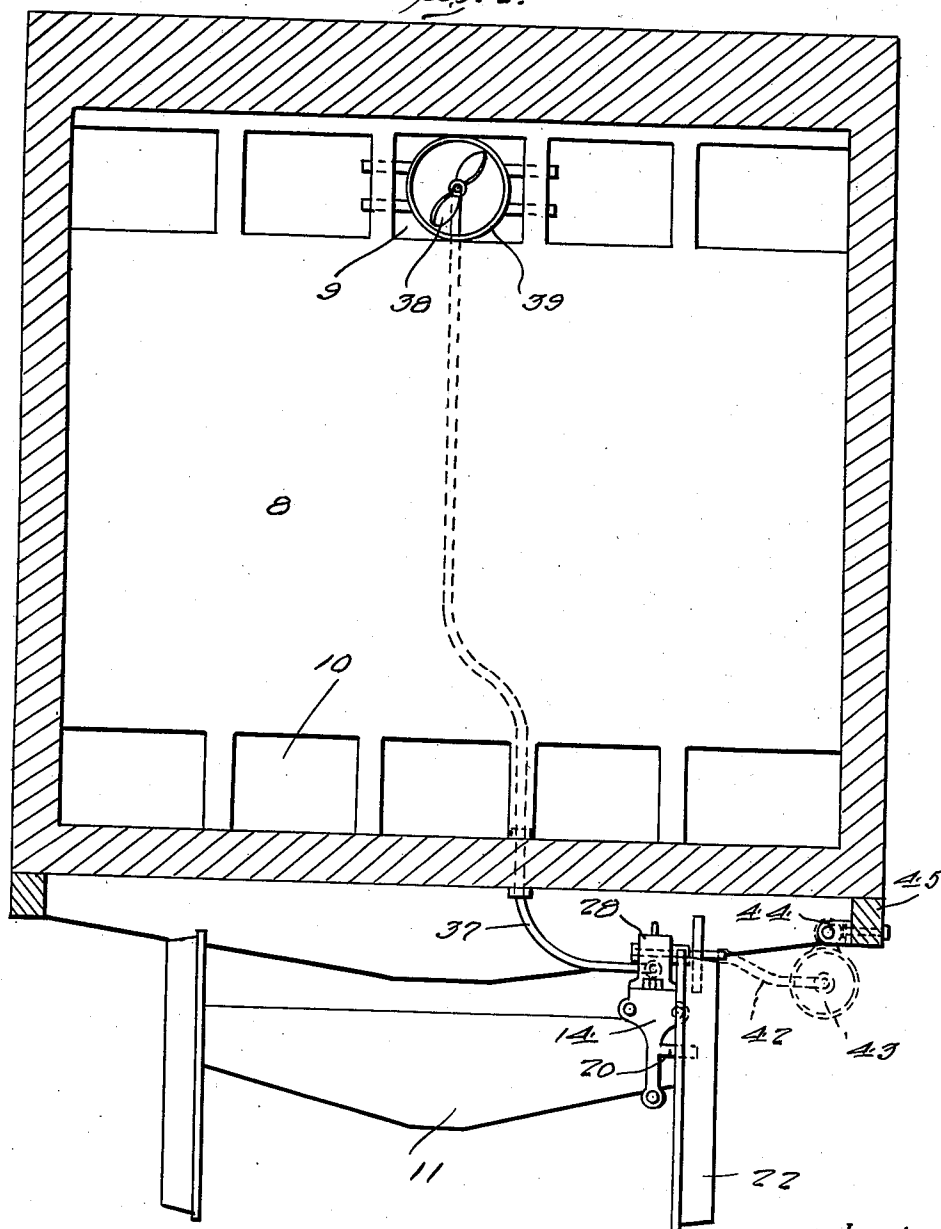
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Fig. 2.



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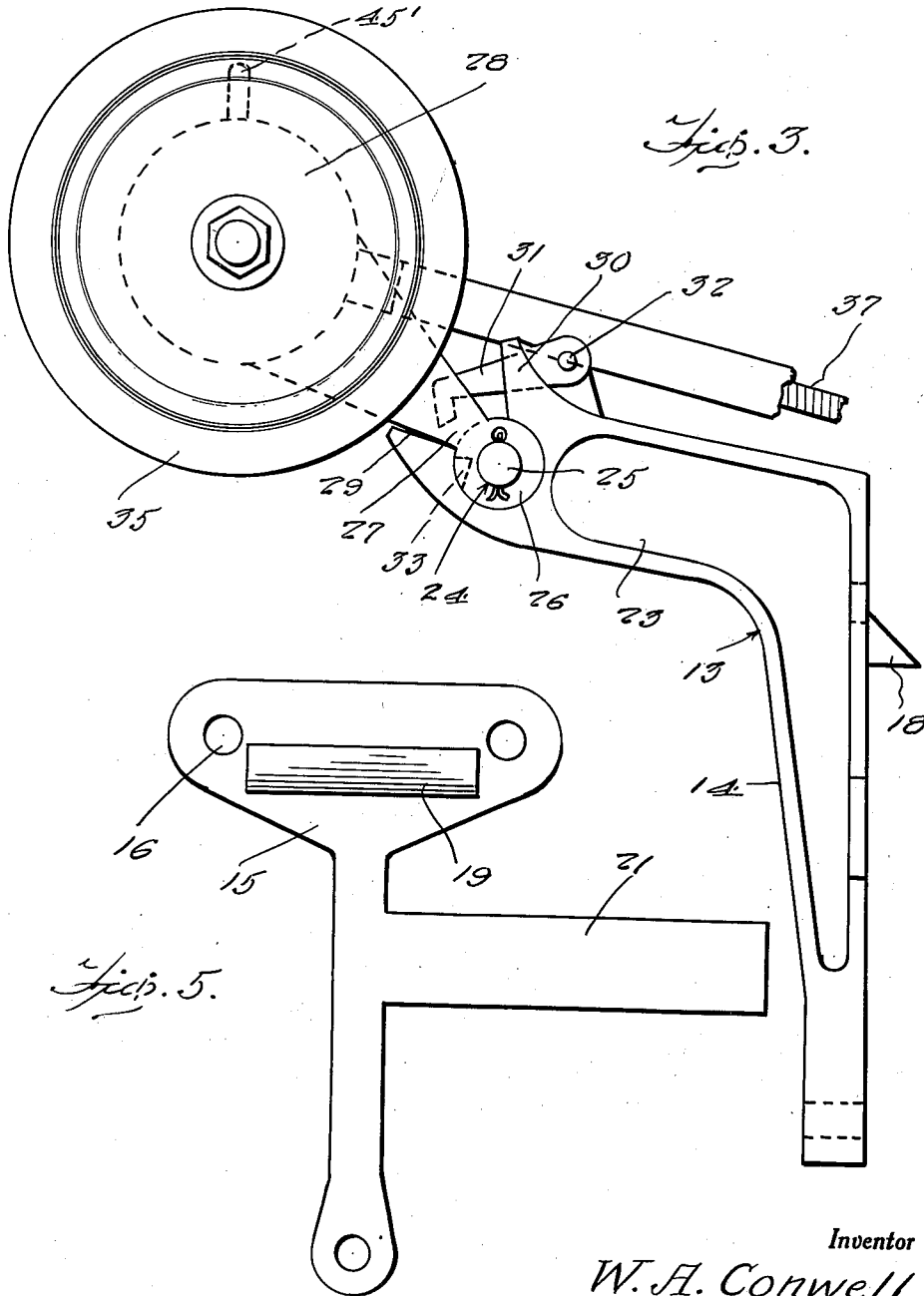
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Fig. 4.

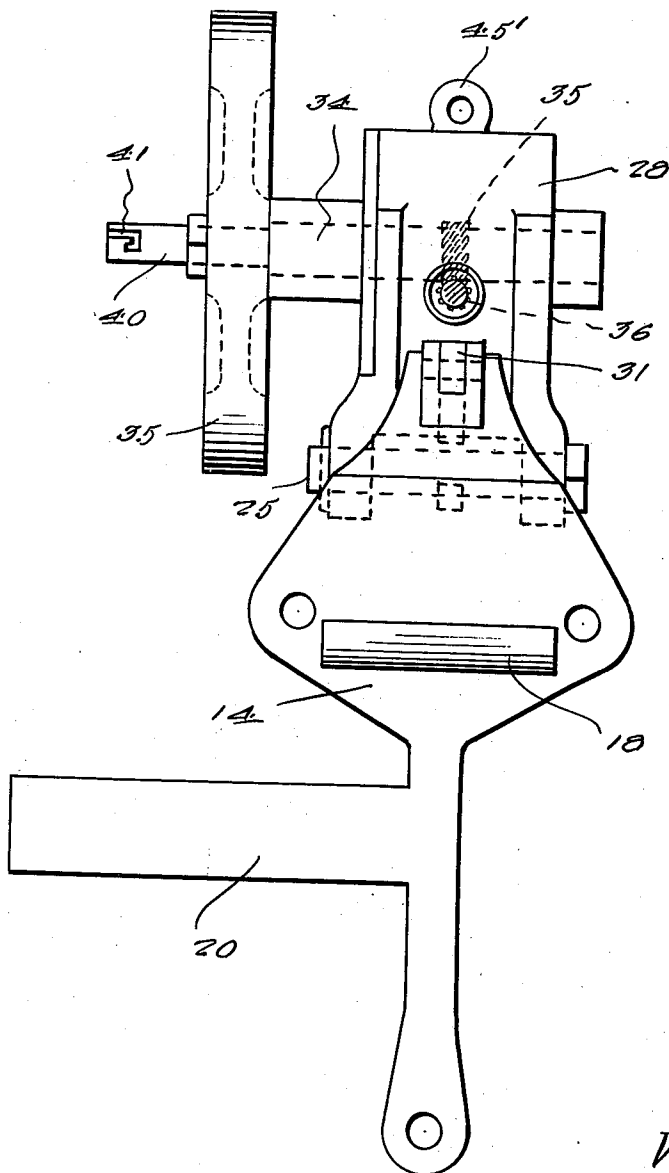
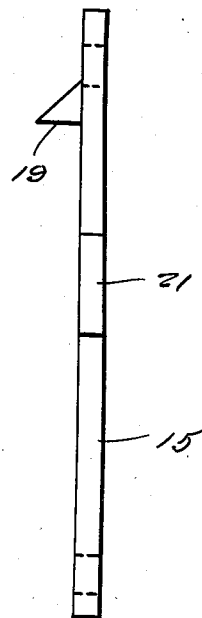


Fig. 6.



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UNITED STATES PATENT OFFICE

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AIR CIRCULATING ATTACHMENT FOR REFRIGERATOR CARS

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Application December 3, 1938, Serial No. 243,868

1 Claim. (Cl. 98—6)

The present invention relates to improvements in refrigerator cars and has for its primary object to provide an air circulating apparatus for circulating the air from the ice bunker of the car to the storage compartment thereof.

More specifically, the invention comprises an attachment adapted to be driven by the wheels of the car for operating an air circulating fan mounted in the partition between the ice bunker and the storage compartment of the car.

A further object of the invention is to provide an apparatus of this character arranged for mounting in operative engagement with the wheels of the car while the car is moving and also embodying means for attaching an electric motor for operating the fan when the car is motionless.

An additional object is to provide an apparatus of this character of simple and practical construction, which may be installed in operative position on the car without necessitating any changes or alterations in the construction thereof, which is efficient and reliable in performance, relatively inexpensive to manufacture and otherwise well adapted for the purposes for which the same is intended.

Other objects and advantages reside in the details of construction and operation as more fully hereinafter described and claimed, reference being had to the accompanying drawings forming part hereof, wherein like numerals refer to like parts throughout, and in which—

Figure 1 is a fragmentary vertical sectional view through a refrigerator car showing the air circulating attachment mounted in position thereon.

Figure 2 is a transverse sectional view.

Figure 3 is a side elevational view of the friction drive wheel and supporting bracket therefor.

Figure 4 is an end elevational view thereof.

Figure 5 is a plan view for one of the clamping members for the bracket, and

Figure 6 is an edge elevational view thereof.

Referring now to the drawings in detail, wherein for the purpose of illustration I have disclosed a preferred embodiment of the invention, the numeral 5 designates a refrigerator car which includes an ice bunker 6 and storage compartment 7 separated by a vertical transversely extending partition 8. The partition is provided with ventilating openings 9 and 10 in the top and bottom portions respectively, thereof.

Secured to the bolster 11 of the wheel trucks 12 is a bracket member indicated generally at 13 and which includes a plate 14 positioned ver-

tically at one side of the bolster and a plate 15 positioned at the opposite side of the bolster, each of the plates having openings 16 therein for receiving bolts 17 extending crosswise at the top and bottom of the bolster for clamping the plates in position thereto. The inner face of the plate 14 is provided with a horizontally extending lug 18 and the inner face of the plate 15 is provided with a horizontally extending lug 19 adapted to overlie and rest upon the upper surface of the bolster to support the plates in position thereon. Likewise the plate 14 is formed with a lateral extension 20 and the plate 15 is formed with a lateral extension 21 extending in a direction toward one of the wheels 22 of the truck to prevent lateral shifting movement of the plates in one direction, the inclined lower surface of the bolster, as illustrated in Figure 2 of the drawings preventing lateral shifting movement of the plates in the opposite direction.

The plate 14 of the bracket 13, has at its upper portion an upwardly extending arm 23 having a transversely extending bore 24 through which a bolt 25 is inserted for pivotally supporting a pair of spaced ears 26 formed on the supporting extension 27 of a gear housing 28.

The ends of the arm 23, outwardly of the bolt 25, are provided with a pair of diverging lugs 29 and 30 between which the extension 27 is swingably positioned, the lugs constituting stops limiting opposite swinging movement of said extension, as will be apparent from an inspection of Figure 3 of the drawings. The extension 27 normally gravitates and rests upon the stop 29 and a dog 31 is pivoted at 32 to the lug 30 for engagement with a recess 33 carried by the extension for securing the latter in a raised position.

Journalled in and extending transversely of the housing 28 is a shaft 34 having one end provided with a friction wheel 35 positioned in engagement with the wheel 22 of the car when the extension 27 is in its lower position, as shown in Figure 3 of the drawings, the shaft 34 having a gear 35 positioned in the housing for driving a gear 36 on one end of a flexible shaft 37, said flexible shaft extending to a fan blade 38 mounted in a bracket 39 secured to the partition 8 adjacent the upper ventilating opening 9 thereof.

The shaft 34 is also provided with an extension 40 having a bayonet slot socket 41 in its extremity for connection with a flexible shaft 42 driven by an electric motor 43 or other drive mechanism attached to a bracket 44 of one of the beams 45 of the car, as shown by the dotted

line in Figure 2 of the drawings, whereby to operate the fan independently of the friction drive wheel 35.

5 In the operation of the device it will be apparent that with the friction wheel 35 in driving engagement with the wheel 22 that the fan will be operated when the car is moving to circulate air from the ice bunker 6 to the storage compartment 7.

10 When the car is idle the friction wheel 35 may be secured in a raised position by the dog 31 and the electric motor 43 attached to the bracket 44 for driving the fan blade. Should it be necessary to remove the wheel truck for repair purposes, 15 the fan operating mechanism may be suspended from the car body by means of the eye 45'.

It is believed the details of construction and manner of operation of the device will be readily understood from the foregoing without further 20 detailed explanation.

Having thus described the invention, what I claim is:

An air circulating apparatus for cars compris-

ing a fan mounted in the car, a bracket secured to a part of the car adjacent a wheel thereof, said bracket having a bearing therein, a pivot member supported by the bearing and said bracket having flaring prongs thereon, the space between said prongs extending to the pivot member, a gear housing, an arm extending therefrom, said arm passing through the space between the prongs and pivotally connected with the bracket by said pivot member, said arm normally resting on the lower prong under the action of gravity, 5 latch means carried by the bracket and engaging a part of the arm for holding the arm in raised position adjacent the upper prong, a first shaft journaled in the housing and passing there- 10 through, a friction wheel carried by the shaft for engaging a car wheel when the arm is adjacent the lower prong, a second shaft arranged at right angles to the first shaft and journaled in the housing, gears connecting the two shafts together, 15 a flexible shaft connected with the second shaft and leading to the fan. 20

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