

July 8, 1924.

E. E. SUPINGER

1,500,966

PNEUMATIC LOADING AND UNLOADING APPARATUS

Filed Aug. 10, 1923

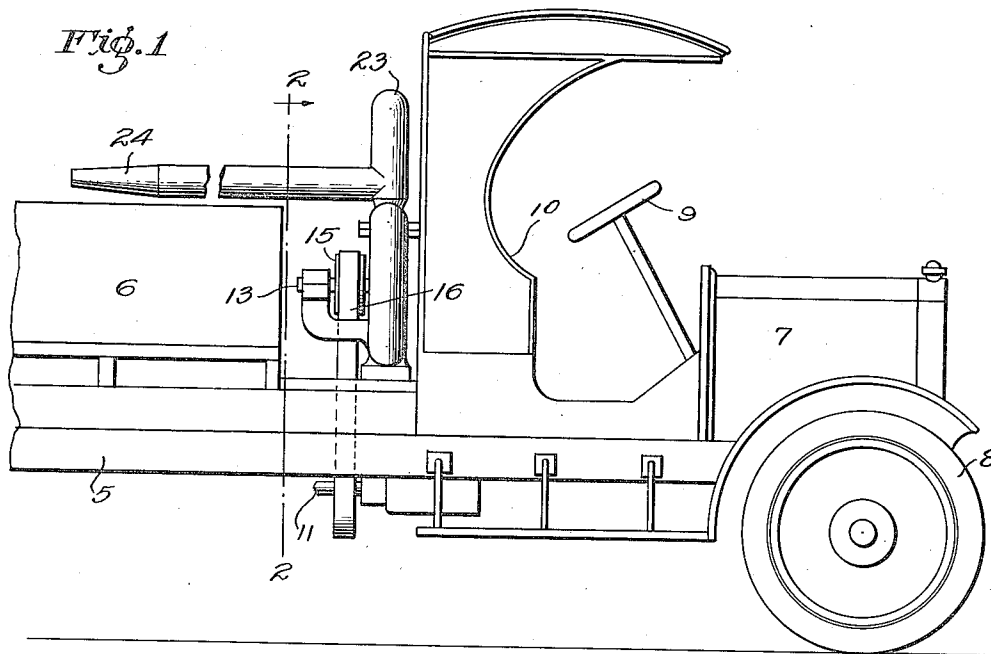


Fig. 2.

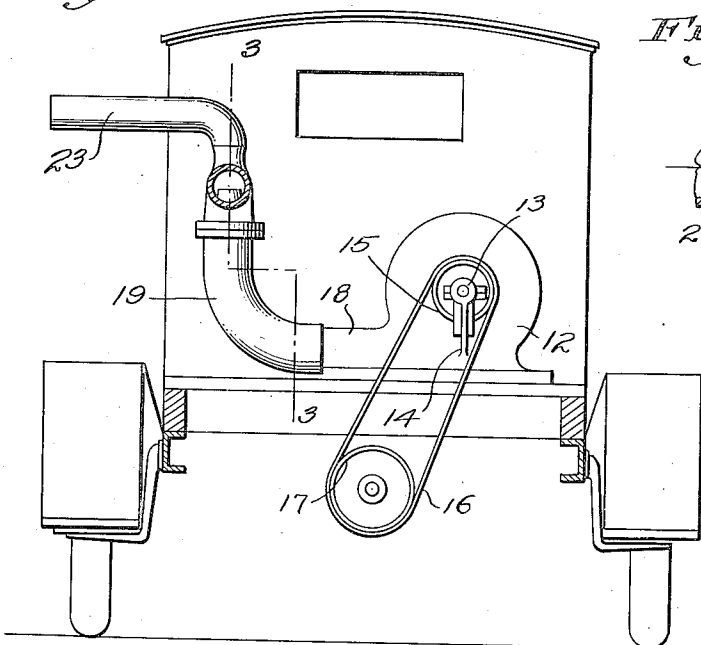
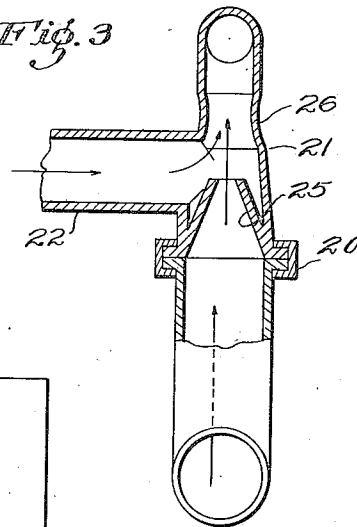


Fig. 3



ETTA E. SUPINGER
Inventor.

By *Clarence A. Ben*
Attorney.

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UNITED STATES PATENT OFFICE.

ETTA E. SUPINGER, OF RICHMOND, VIRGINIA.

PNEUMATIC LOADING AND UNLOADING APPARATUS.

Application filed August 10, 1923. Serial No. 656,757.

To all whom it may concern:

Be it known that I, ETTA E. SUPINGER, citizen of the United States, residing at Richmond, in the county of Henrico and State of Virginia, have invented certain new and useful Improvements in Pneumatic Loading and Unloading Apparatus, of which the following is a specification.

This invention relates to improvements in pneumatic loading and unloading apparatus, and has particular reference to an attachment for motor trucks, by means of which grain may be readily loaded from the body of a truck into a railway car, or loaded from the railway car into the body of the truck, at will.

The primary object of the invention is to provide a device of the above kind which embraces the desired qualities, of simplicity, durability and efficiency in operation.

A further object of the invention is to provide a device by means of which ordinary motor trucks may be equipped for the loading or unloading of grain thereon or therefrom.

Other objects will appear as the nature of the invention is better understood, and the same consists in the novel form, combination and arrangement of parts, herein after more fully described, shown in the accompanying drawings, and claimed.

In the drawings, wherein like reference characters indicate corresponding parts throughout the several views:

Figure 1 is a fragmentary side elevational view of a motor truck equipped with a grain loading and unloading device constructed in accordance with the present invention.

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

Figure 3 is a fragmentary sectional view, taken substantially upon the line 3—3 of Figure 2.

Referring more in detail to the drawings, I have shown a conventional form of motor truck embodying a frame or chassis 5, upon the rear end portion of which is mounted an open top body 6, the usual engine enclosing hood 7 being provided at the forward end of the chassis, and the usual front supporting wheels 8 being controlled by the steering wheel 9 from the driver's seat at 10 positioned forwardly of the body 6 in spaced relation to the latter and behind the engine hood 7.

Trucks of the above nature are usually

provided with driven rear supporting wheels operated through a mechanism including a longitudinally arranged propeller shaft 11, operatively connected to the engine under the hood 7. In accordance with the present invention, a fan blower 12 is rigidly mounted upon the frame 5 between the body 6 and the driver's seat 10, and this fan blower embodies a well known construction including a rotatable impeller mounted upon a shaft 13, which may be supported by a bearing arm 14 at one end, a suitable pulley 15 being fixed upon the shaft between the bearing arm 14 and the casing of the fan blower.

The fan blower 12 is operated by means of a belt 16 passing around the pulley 15 and also around a pulley 17 that is fastened upon the propeller shaft 11 directly between the pulley 15 and the casing of the fan blower is provided with a peripheral outlet 18 as clearly shown in Figure 2.

The outlet 18 extends transversely of the truck and has an outlet pipe 19 attached thereto which extends outwardly and upwardly as shown.

A device of special design is mounted upon the upper end of the pipe 19 by means of a swivel connection generally indicated at 20, and this structure embodies a vertical pipe 21, from the lower portion of which extends a lateral branch 22, and from the upper end of which extends a further lateral branch 23 that is at right angles to the branch 22. As shown in Figure 1, the branch 22 is supported directly above the top of the body 6 and is tapered at its free end as at 24, so that a flexible conduit may be coupled thereto and moved over the grain within the body 6, when unloading the truck for insuring entrance of the grain into said branch 22 as will presently become apparent.

The lower portion of the pipe 21 is provided with an internal contracted nozzle which opens at a point substantially centrally of the passage in the branch 22 as shown in Figure 3, and said pipe 21 is further provided with a contracted portion directly above the branch 22, so that as the air is blown through the pipe 19 and nozzle 25, a great suction is produced in the branch 22 for drawing the grain into the latter and causing the same to follow the air upwardly and out through the branch 23.

As the branches 22 and 23 are located at right angles to each other, it is apparent that the members of which these branches form a rigid part may be rotated about the swivel joint 20 so as to dispose the desired one of the branches over the body 6 extending longitudinally of the latter while the other branch extends transversely beyond one side of the truck. Thus, the device may be readily utilized for either loading material from the truck into a railway car positioned beside the truck, or for loading grain or similar material from the railway car into the truck body beside which the railway car is disposed or positioned. If found necessary or desirable, a flexible conduit may also be coupled with the discharge end of the branch 23 for securing a uniform loading of the material into the car body or truck body as the case may be.

From the foregoing description it is believed that the construction and operation as well as the advantages of the present invention will be readily understood and appreciated by those skilled in the art.

Minor changes may be made without departing from the spirit and scope of the invention as claimed.

What I claim as new is:

1. In combination with a motor truck, having a longitudinal propeller shaft, and provided with a frame or chassis upon which are mounted a front driver's seat and a rear open top body arranged in spaced relation to each other, a fan blower mounted upon the frame or chassis between said seat and said body, operative connections between said propeller shaft and said fan blower, and means associated with the outlet of said blower for utilizing the air

currents from the latter for selectively loading grain from the said body into a receptacle or car positioned beside the truck, or for loading the same from said receptacle or car into said truck body, at will, said last named means comprising a vertical pipe having a lower lateral branch, and an upper lateral branch extending at right angles to each other, and a swivelled connection between the outlet of said blower and said vertical pipe.

2. In combination with a motor truck, having a longitudinal propeller shaft, and provided with a frame or chassis upon which are mounted a front driver's seat and a rear open top body arranged in spaced relation to each other, a fan blower mounted upon the frame or chassis between said seat and said body, operative connections between said propeller shaft and said fan blower, and means associated with the outlet of said blower for utilizing the air currents from the latter for selectively loading grain from the said body into a receptacle or car positioned beside the truck, or for loading the same from said receptacle or car into said truck body at will, said last named means comprising a vertical pipe having a lower lateral branch, and an upper lateral branch extending at right angles to each other, said vertical pipe having a contracted nozzle in the lower end portion thereof and being formed with a contracted portion above the lower branch, the outlet of the fan blower terminating in an upturned pipe upon which the vertical pipe is swivelled.

In testimony whereof I affix my signature.

ETTA E. SUPINGER.