(No Model.)

A. T. SIMON.

FIRE ENGINE.

No. 346,872. Patented Aug. 3, 1886.

Fig. 1.

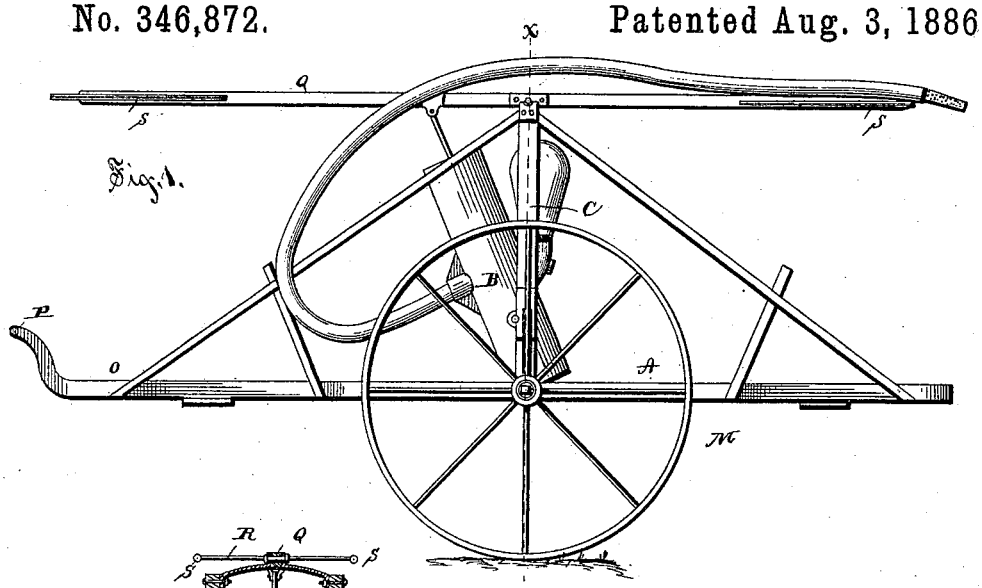


Fig. 2.

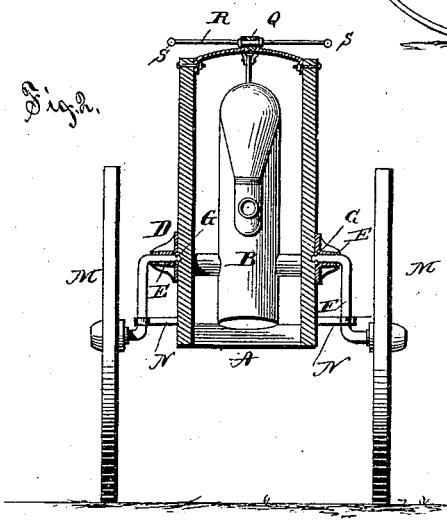


Fig. 3.

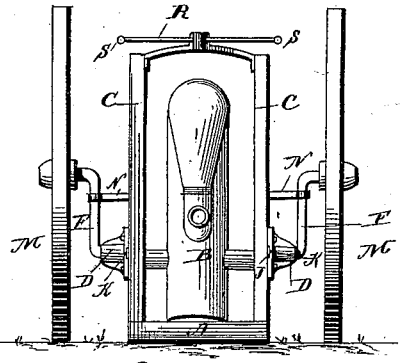
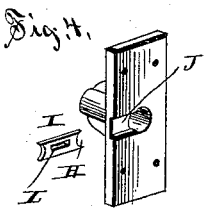
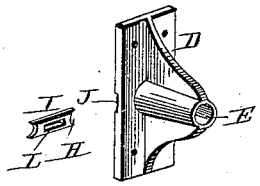


Fig. 4.





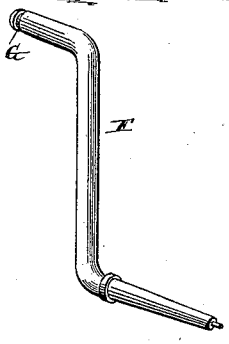


Fig. 5.

WITNESSES

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UNITED STATES PATENT OFFICE.

AUGUST THEODORE SIMON, OF BLOOMINGTON, ASSIGNOR TO MANLY R. VANDERVOORT, OF CLINTON, ILLINOIS.

FIRE-ENGINE.

SPECIFICATION forming part of Letters Patent No. 346,872, dated August 3, 1886.

Application filed June 1, 1886. Serial No. 203,800. (No model.)

To all whom it may concern:

Be it known that I, AUGUST THEODORE SIMON, a citizen of the United States, and a resident of Bloomington, in the county of McLean and State of Illinois, have invented certain new and useful Improvements in Fire-Engines; and I do hereby declare that the following is a full, clear, and exact description of the invention, which will enable others skilled in the art to which it appertains to make and use the same, reference being had to the accompanying drawings, which form a part of this specification, and in which—

Figure 1 is a side view of my improved fire-engine, showing it in position for transportation. Fig. 2 is a transverse sectional view on line *x x*, Fig. 1. Fig. 3 is a rear view showing the body of the engine resting upon the ground. Fig. 4 is an inside view of the bearing for one of the crank-axles, and Fig. 5 is a perspective view of one of the crank-axles and its bearing separated.

Similar letters of reference indicate corresponding parts in all the figures.

My invention has relation to that class of hand fire-engines in which the frame of the engine is supported upon wheels journaled upon the ends of crank-axles, having means for tilting them up or down, lowering the frame so as to rest upon the ground, or raising it from the ground; and it consists in the improved construction and combination of parts of such an engine, as hereinafter more fully described and claimed.

In fire-engines of this class the frame has usually been supported upon a U-shaped axle journaled in suitable bearings upon the frame of the engine below the pump, the wheels being journaled upon the outwardly-projecting ends or spindles of the axle; but in constructing the axle in this manner the wheels have had to be rather low, as by making the wheels high the frame would be elevated too far above the ground to allow the machine to be drawn with speed and safety over the ground; and for the purpose of obviating this drawback, and allowing the machine to be supported upon high wheels, I journal the wheels upon the ends of two short crank-axles journaled in bearings upon the sides of the upright frame supporting the pump, as I shall now proceed to describe.

In the accompanying drawings, the letter A indicates the rectangular frame upon which the pump is supported, the said pump B being journaled with its trunnions in uprights C C, projecting from the frame. Boxes or castings D D are secured to the outer sides of these uprights at a distance from their lower ends, the said distance depending upon the diameter of the wheels used, and these boxes are formed with perforations E or bearings extending through the boxes from the outer ends to the inner sides, which are secured to the uprights by bolts or screws or similar fastening means. The inner arms of the crank-axles F are journaled in these perforations or bearings, and the inner ends of these arms are formed with annular grooves G near the ends, into which grooves the inner concavely-rounded ends, H, of slides or stops I may project, the said slides or stops being inserted from one side of each box through recesses J, and projecting into the perforations or bearings, being held in position engaging the grooves by means of pins K, entering slots or perforations L in the sliding stop-plates. The wheels M M are journaled upon the outer arms of the crank-axles, and each crank-axle has the inner end of an arm, N, journaled to the outer end of its central portion, the said arms having fastenings at their outer ends, by means of which they may be secured to the frame. The frame is provided at one end with a tongue, O, the outer end of which is bent upward and again outward, and provided with a transverse handle, P, by means of which it may be held when the machine is transported. The lever or walking-beam Q is fulcrumed between the upper ends of the uprights, and the ends of the beam have transverse bars R R secured to them, and connected at their outer ends by means of bars or handles S S, to which the power may be applied when the engine is operated.

It will be seen that by having each wheel journaled upon the outer arm of a crank-axle journaled with its inner arm in bearings upon

the sides of the uprights the wheels may be made of any desired diameter, the bearings being moved farther up upon the uprights as the diameter increases, and the hubs of the wheels will in all cases be level with the frame of the machine when the frame is raised for transportation.

The axles are operated and tilted in the same manner as the U-shaped axle in the engines above referred to, each axle having an arm, instead of one arm sufficing for the entire axle, and the pumping mechanism may be of any desired construction, all the novelty in this invention resting in the support for the frame.

The stop-plates may be slid out and the axles removed whenever desired, and the axles will be held firmly in place by these stop-plates, which in their turn are held by the pins.

Having thus described my invention, I claim and desire to secure by Letters Patent of the United States—

1. In a hand-fire-engine, the combination of a frame having uprights at its sides, provided with transverse bearings above the frame, with crank-axles having wheels journaled upon their outer arms, and having their inner arms journaled in the bearings, as and for the purpose shown and set forth.

2. In a hand fire-engine, the combination of a frame having uprights at its sides, provided with transverse bearings above the lower ends of the uprights, crank-axles having the wheels journaled upon the outer arms, and having the inner arms journaled in the bearings of the uprights, and arms journaled at their inner end to the axles, and having means for holding their outer ends to the sides of the frame, as and for the purpose shown and set forth.

3. In a hand fire-engine, the combination of a frame having uprights at its sides, boxes having horizontal bearings formed with transverse recesses near the inner sides and secured with the inner sides to the outer sides of the uprights above the lower ends of the same, crank-axles having the wheels journaled upon their outer arms, and having the inner arms journaled in the bearings of the boxes, and formed with annular grooves near the inner ends, and stop-plates sliding in the recesses of the bearings and engaging the grooves of the axles with their inner concavely-rounded ends, and having pins for retaining them in the recesses, as and for the purpose shown and set forth.

In testimony that I claim the foregoing as my own I have hereunto affixed my signature in presence of two witnesses.

AUGUST THEODORE SIMON.

Witnesses:
MANLY R. VANDERVOORT,
J. K. NOBLE.