

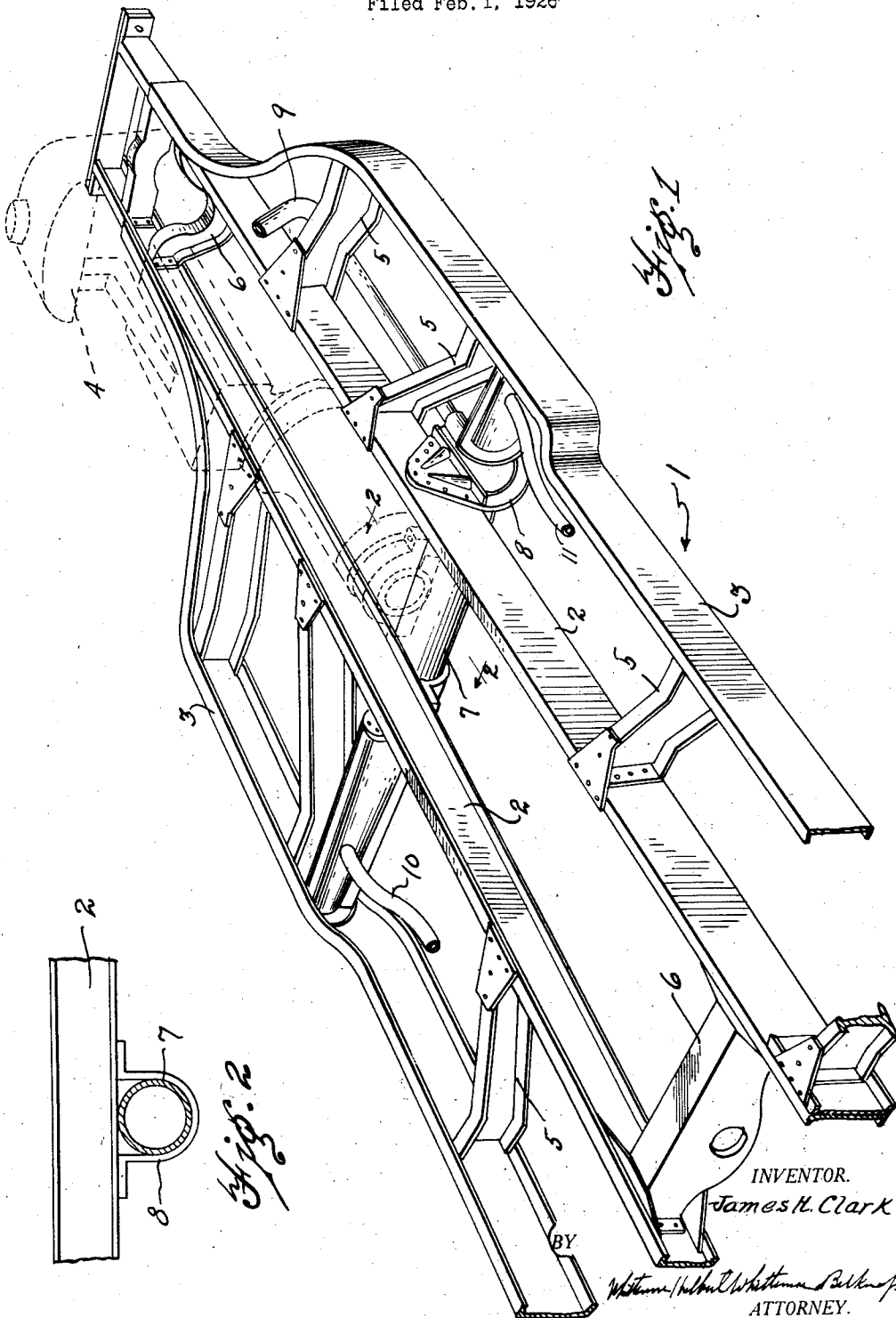
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FRAME CONSTRUCTION FOR MOTOR VEHICLES

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FRAME CONSTRUCTION FOR MOTOR VEHICLES.

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This invention relates generally to frame construction and refers more particularly to the frames of buses and the like.

The invention contemplates a chassis or frame construction involving main and auxiliary sill or rail members spaced laterally from each other and connected together by suitable cross members including a tubular member extending beneath the main frame and terminally secured to the auxiliary frame in such a manner as to effectively take up torsional strains and stresses to which the frame may be subjected.

The invention also contemplates the provision of means for heating a bus which consists of expelling the exhaust gases into the tubular member and through suitable tubes to registers which may be located at convenient points along the frame.

The several objects, advantages and novel details of construction of this invention will be made more apparent as this description proceeds, especially when considered in connection with the accompanying drawings wherein:

Figure 1 is a fragmentary perspective view of a frame embodying my invention.

Figure 2 is a sectional view taken on the line 2-2 of Figure 1.

Referring now to the drawing, the numeral 1 designates the base frame of a motor bus having inner and outer sill members 2 and 3 respectively. As shown, the inner sill members 2 constitute the main frame members and are spaced a sufficient distance apart to accommodate the motor 4 of the vehicle, while the outer or auxiliary sill members 3 are preferably spaced laterally of the main sill members and are designed to carry the body (not shown) of the vehicle. Both the inner and outer sill members are preferably channel-shape and are braced and reinforced by suitable channel-shaped cross members 5 and 6 respectively.

In addition to the braces just referred to, the frame 1 is reinforced by a tubular member 7 that preferably extends beneath the main sill members 2 and is terminally secured to the outer sill members 3. As shown, this tubular member 7 is supported from the main sill members 2 by suitable brackets or hangers 8 and carries the rear end of the motor 4. In fact this tubular member 7 actually supports the outer sill members 3 at the forward end of the frame and is con-

nected thereto and to the hangers 8 in such a way that it will effectively take up torsional strains and stresses to which the frame may be subjected. This tube 7 also serves as a conductor for the exhaust gases of the motor 4. As shown, the exhaust conduit 9 of the motor extends beside one of the main sill members 2 and leads into the torsional tube 7, preferably adjacent to one of the hangers 8, while suitable tubes 10 and 11 respectively preferably lead from the tubular member 7, preferably one at each side of the frame, to suitable registers (not shown) which may be located at convenient points along the frame. Thus, the tubular member 7 constitutes an essential part of the heating apparatus of the bus.

While it is believed that from the foregoing description, the nature and advantage of my invention will be readily apparent, I desire to have it understood that I do not limit myself to what is herein shown and described and that such changes may be resorted to when desired as fall within the scope of what is claimed.

What I claim as my invention is:

1. In a vehicle, a supporting frame for a motor including a tubular cross member, means for discharging exhaust gases from the motor directly into said cross member, and means for conveying the exhaust gases from said cross member to a suitable register.

2. A vehicle frame including spaced inner and outer sill members, said inner sill members located above and adapted to extend the full length of the outer sill members, and a transversely extending cross member constituting a support for a motor, said cross member being carried by the inner sill members and terminally secured to the outer sill members.

3. In a vehicle, a frame including spaced inner and outer sill members, said inner sill members located above said outer frame members, a tubular member extending beneath and carried by the inner sill members constituting a support for a motor, and means for conveying the exhaust gases of the motor to said tubular member.

4. In a vehicle, a frame including inner and outer sill members, said inner sill members located above and adapted to extend the full length of the outer sill members, a cross member extending beneath and connected to the inner sill members and terminally se-

cured to the outer sill members constituting a support for a motor, and a conduit for conveying exhaust gases from the motor to said cross member. full length thereof, a tubular cross member suspended from said main frame and terminally secured to said auxiliary frame, and means for discharging exhaust gases from a motor into said tubular frame. 10

5. In a vehicle, a frame comprising a main frame and an auxiliary frame spaced from the main frame and adapted to extend the

In testimony whereof I affix my signature.

JAMES H. CLARK.