

shaped longitudinal main frames supported by the trucks, and three or more engines mounted in and projecting through the openings in the frames at an angle to each other, and connected to a double-throw crank-shaft, the said engines having the eccentrics of the necessary valve-gear located at one side of the double crank, substantially as described.

8. In a locomotive, the combination of longitudinal diamond-shaped main frames, a truck at each end thereof, a centrally-located longitudinal shaft connecting the trucks, motor-engines mounted in and projecting through the openings in the frames at an angle to each other, and connected to a double-crank shaft, and a tumbling-shaft common to all the engines, arranged within the angle formed by the engines, substantially as described.

9. In a locomotive, the combination of longitudinal diamond-shaped main frames, a truck at each end thereof, a centrally-located longitudinal shaft connecting the trucks, motor-engines mounted in and projecting through the openings in the frames at an angle to each other, and connected to a double-crank shaft, the eccentrics connected to the shaft at one side of the double crank, and the tumbling-shaft common to all the engines arranged within the angle formed by the engines, substantially as described.

10. In a locomotive, mounted upon trucks and having a centrally-located longitudinal shaft connecting the trucks, the combination of engines arranged at an angle to each other, a rocking lever connected to the valve-movement of one cylinder, and actuating the valve of the adjacent cylinder, substantially as described.

11. In a locomotive, mounted upon trucks and having a centrally-located longitudinal shaft connecting the trucks, the combination of engines arranged at an angle to each other, a rocking lever connected to the valve-movement of one cylinder, and actuating the valve of the adjacent cylinder, and the eccentrics of the entire valve-gear located at one side of the cranks, substantially as described.

12. In a locomotive, the combination of a truck at each end of a main frame, a centrally-located longitudinal shaft connecting the trucks, engines arranged at an angle to each other and connected to the central shaft, a pair of eccentrics, the straps of each having two rods, making an angle to each other, one pivotally attached to the strap, and the other rigidly fixed to said strap, and each connected with its corresponding link, substantially as described.

13. In a locomotive, the combination of a truck at each end of the main frame, a centrally-located longitudinal shaft connecting the trucks; a boiler supported by the main frame, and having a fire-box projecting below the cylindrical shell thereof; motor-engines mounted upon the main frame, and making an angle with each other, and connected to

the central motor-shaft, and placed under the cylindrical shell and between the projecting fire-box and forward truck, substantially as described.

14. In a locomotive, mounted upon trucks, and having a centrally-located longitudinal shaft connecting the trucks, the combination with the truck, of a metallic side frame, made in one piece, fitted with recesses at the ends for receiving the axle-brasses, a housing at the middle, springs resting within the housing and supporting one end of a cross-bolster slidingly fitted between the end walls of the housing, substantially as described.

15. In a locomotive, mounted upon trucks and having a centrally-located longitudinal shaft connecting the trucks, the combination with the truck, of a metallic side frame made in one piece, the semicircular recesses at each end of the frame, the lower edge of said frame being in line with the center of the recesses, substantially as described. www.gearedsteam.com

16. In a locomotive mounted upon trucks, and having a centrally-located longitudinal driving-shaft connecting the trucks, the combination with the truck, of a side frame made in one piece, axle-brasses in the ends thereof, a cross-bolster mounted upon springs, a thin flexible bottom plate connecting the pair of frames, diagonal braces fastened to the thin flexible bottom and side frames, and cross-struts at the top, substantially as described.

17. In a locomotive, mounted upon trucks and having a centrally-located longitudinal driving-shaft, connecting the trucks, the combination with the truck of a gear-frame hinged upon the axle, and one end resting upon the bottom truck-plate, and fastened thereto by suitable means, substantially as described.

18. In a locomotive, the combination of longitudinal diamond-shaped main frames, a pivoted truck at each end thereof, motor-engines mounted in and projecting through the openings in the frames at an angle to each other, a centrally-located longitudinal driving-shaft connecting the trucks, universal couplings joining the shaft-sections, and gears having a beveled face and removably clamped to the truck-axes, substantially as described. Geared Steam Locomotive Works

19. In a locomotive, the combination of longitudinal diamond-shaped main frames, a pivoted truck at each end thereof, motor-engines mounted in and projecting through the openings in the frames at an angle to each other, a centrally-located longitudinal driving-shaft connecting the trucks, universal couplings joining the shaft-sections, gears having a beveled face, and removably clamped to the truck-axes, and a self-contained inclosing gear-frame for maintaining alinement of said gears, substantially as described.

20. In a locomotive, the combination of longitudinal diamond-shaped main frames, a pivoted frame at each end thereof, motor-engines mounted in and projecting through the openings in the frames at an angle to each