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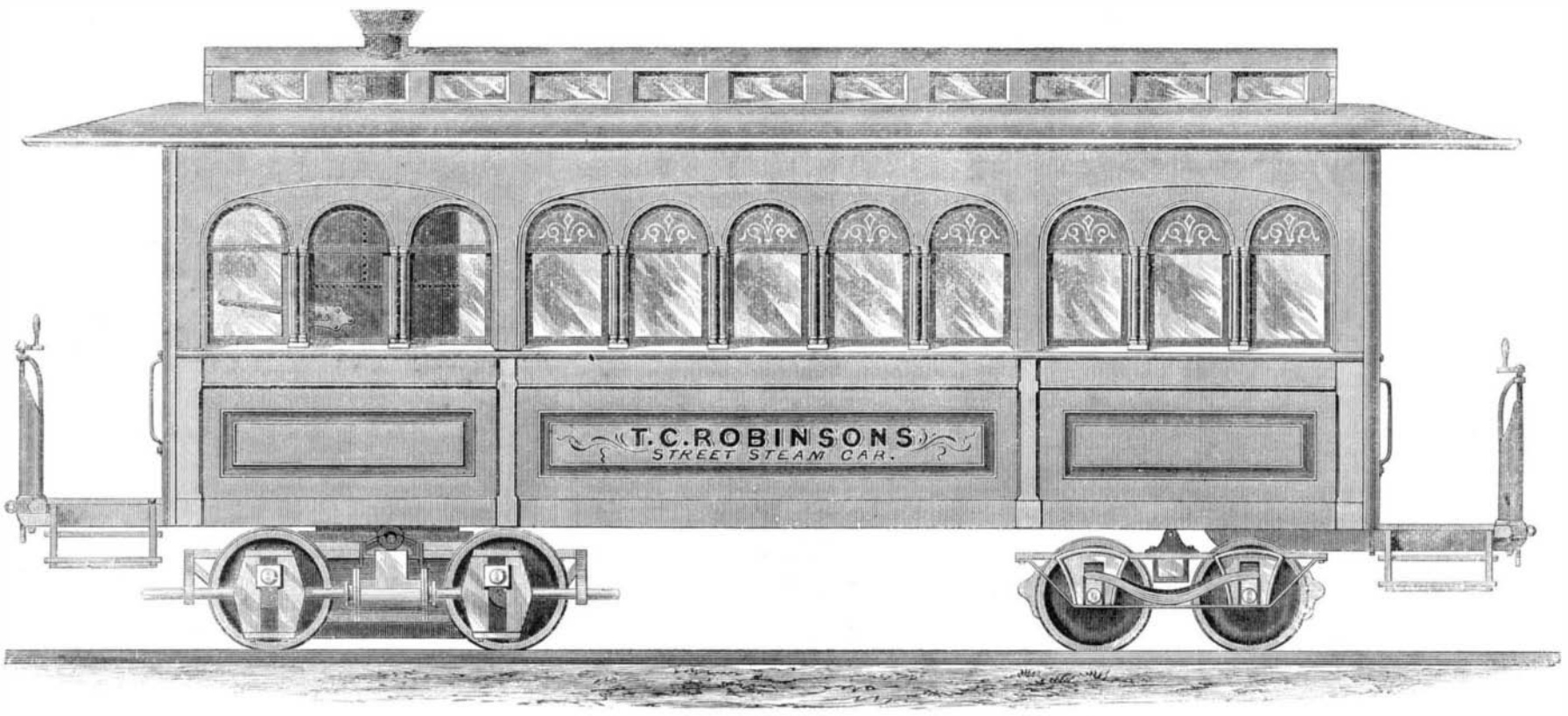
IMPROVED STEAM STREET CARS.

The long continuance of the pestilence which has made such sad havoc among the horses has demonstrated conclusively that inventions are needed for public conveyances, by the use of which we may become independent of equine labor. Among the difficulties, to be overcome in the application of steam to street car traction, is the propulsion of the vehicle around the sharp curves necessarily incident to the narrow streets of large cities; it is more particularly this obstacle which is claimed to be surmounted by the peculiar arrangement of machinery in the device herewith illustrated.



ROBINSON'S IMPROVED STEAM STREET CAR.

Briefly, the invention consists in making the boiler act as a transient bolt and, with the engine, to turn with the truck as the latter adapts itself to bends of the rails, so that the power is always applied in the most effective manner.

Fig. 1 shows a general view of the completed car, and by referring to the elevation and horizontal plan, Figs. 2 and 3, the following detailed description will be readily understood: A is the upright boiler, constructed so as to have a large heating surface, resting on and firmly secured to the truck frame, B. Above the lower portion of the boiler, and above the fire box, is affixed an inner transient ring, C, shown more

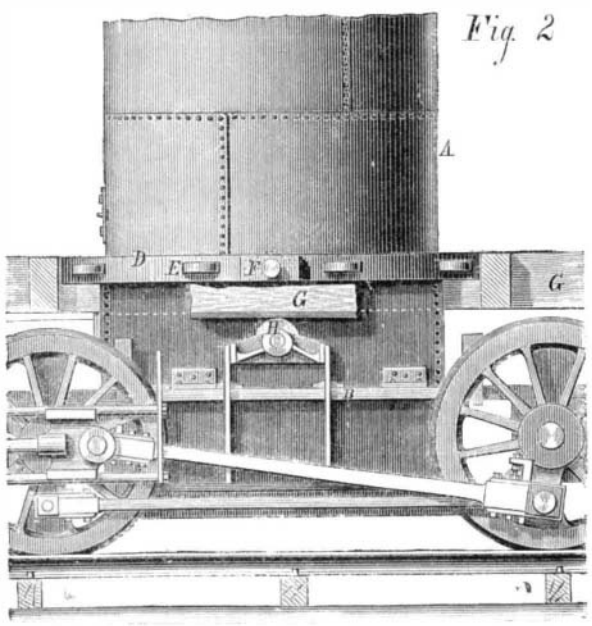


Fig. 2

clearly in Fig. 3. D is the outer transient ring in which are placed eight metallic cylindrical rollers, E E, held with their axes vertical. These project beyond the inner surface of the ring, D, and impinge upon the inner transient ring, C, so as to admit of the rotation of the former around the latter. Two trunnions, F F, on either side serve to support the ring, D, and at the same time allow it to freely oscillate in the bearings on the car frame, G. H, Fig. 2, is one of the ordinary car rolls, secured to the truck frame and sustaining the car frame, the latter being reinforced at the points of contact by a metal wear plate. The steam cylinder is not shown, but the piston rod is seen at the left of the engraving, communicating, by means of the crosshead in the guides, with the connecting rod which, with the parallel rod, actuates the driving wheels in the usual manner. It is clear from the above that the truck, and with it the boiler and engine, can freely turn, with the friction rollers of the outer transient ring, while the trunnions, F F, permit of the adaptation of the machinery to any angle of grade.

In Fig. 1, a somewhat different form of engine is exhibited, designed to present fewer working parts, and consequently to be less costly. The horizontal cylinders are placed almost centrally between the driving wheels, their piston rods connecting with the la-ter directly by mean s of the slotted guide pieces. The driving wheels communicate with the guide pieces by their crank pins, which are receivd and work in the longitudinal slots. At the rear of the supporting frame is placed a condensing apparatus, which is used in connection with the engine.

The cars may be constructed of any dimensions to accommodate a required number of passengers. The advantages claimed are simplicity, compactness, strength, utility, and cheapness. Hard coal, it is stated, may be used as fuel at an expense of one third less than that of employing horses.

We are informed that the invention has been in successful operation on the Portland and Gorham Railroad for some time past. It is covered by three distinct patents. Further information may be obtained by addressing T. C. Robinson, & Co., care of the Sanborn Machine Company, No. 78 Duane street, New York city.

The Metropolitan Museum of Art.

There at last is a fair prospect of the permanent establishment in this city of a museum similar to the South Kensington museum in London: a collection of works of art, original and copies, free to the study and inspection of the public. A site for the building has been obtained, on the corner of 79th street and Fifth avenue. In addition to the fine paintings which have been placed in the present temporary gallery, duplicates of the best specimens of the splendid collection in the above mentioned English museum are to be added. We also learn that the celebrated collection of antiquities made by General Di Cesnola, our late consul at Cyprus, has been purchased. It is believed that these Phœnician relics are the first that have been discovered of that early maritime people, and the various specimens will materially aid specialists and antiquaries in furnishing clearer pictures of Eastern life and manners, three thousand years ago.

A central building will first be erected, to which additions will be made as they are required. In the main part there will be four galleries, each ninety-five feet long and lighted from above. The ground floor will be an open court, surrounded by gardens and fountains and affording ample room for the statuary vases and monuments.

We note with much pleasure the enterprise with which this plan has been advanced Museums such as this go far toward the education of popular taste, besides affording to artists and all workers in decorative art the most faultless models for imitation.

How to Clear Muddy Water.

Experiments have been made in Australia with the view of finding means of clearing the muddy waters of reservoirs. The purest waters are, as a rule, those in which mud and organic matter remain longest in suspension. Water stood in a bottle in the laboratory for more than six months without depositing the clay held in suspension. The soluble matter was chiefly chloride and carbonate of sodium, and was present in only small quantity. Another water stood for three months with like results. Both waters contained more clayey than organic matter, and were rendered clear by an addition of chloride of calcium. One part of this salt in 1,000 of water cleared it in less than an hour; 1 part in 2,500 of water, in five hours; 1 part in 5,000, in six hours; 1 part in 10,000, in twenty-four hours. When, however, the water contained more organic matter than inorganic or clayey matter in suspension, the calcium salt did not act so readily, but was aided by an addition of lime; as little as two grains of quick lime cleared a gallon of water in twelve hours. Three or four

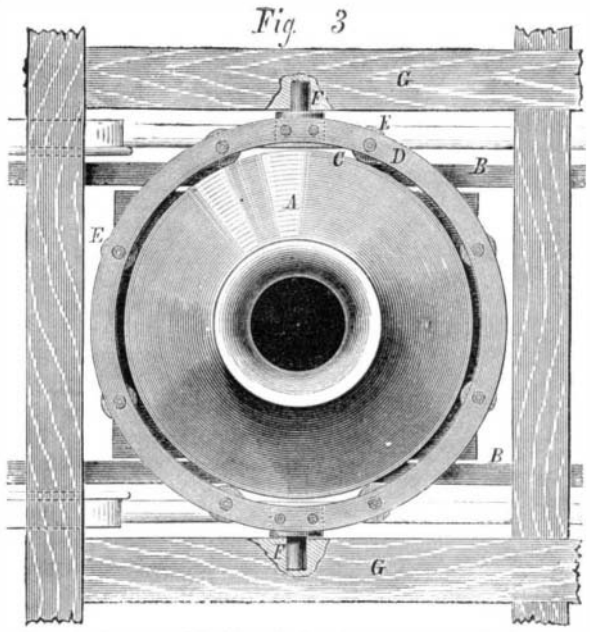


Fig. 3

grains of alum or chloride of aluminum answered the same purpose; but there are many objections to the use of alumina salts.

LOOK TO YOUR JOURNAL BOXES.—A block of grain warehouses, including a large elevator, were destroyed by fire in Brooklyn, N. Y., November 20 The fire is supposed to have been caused by the over-heating of a journal box from friction. Loss, half a million of dollars.