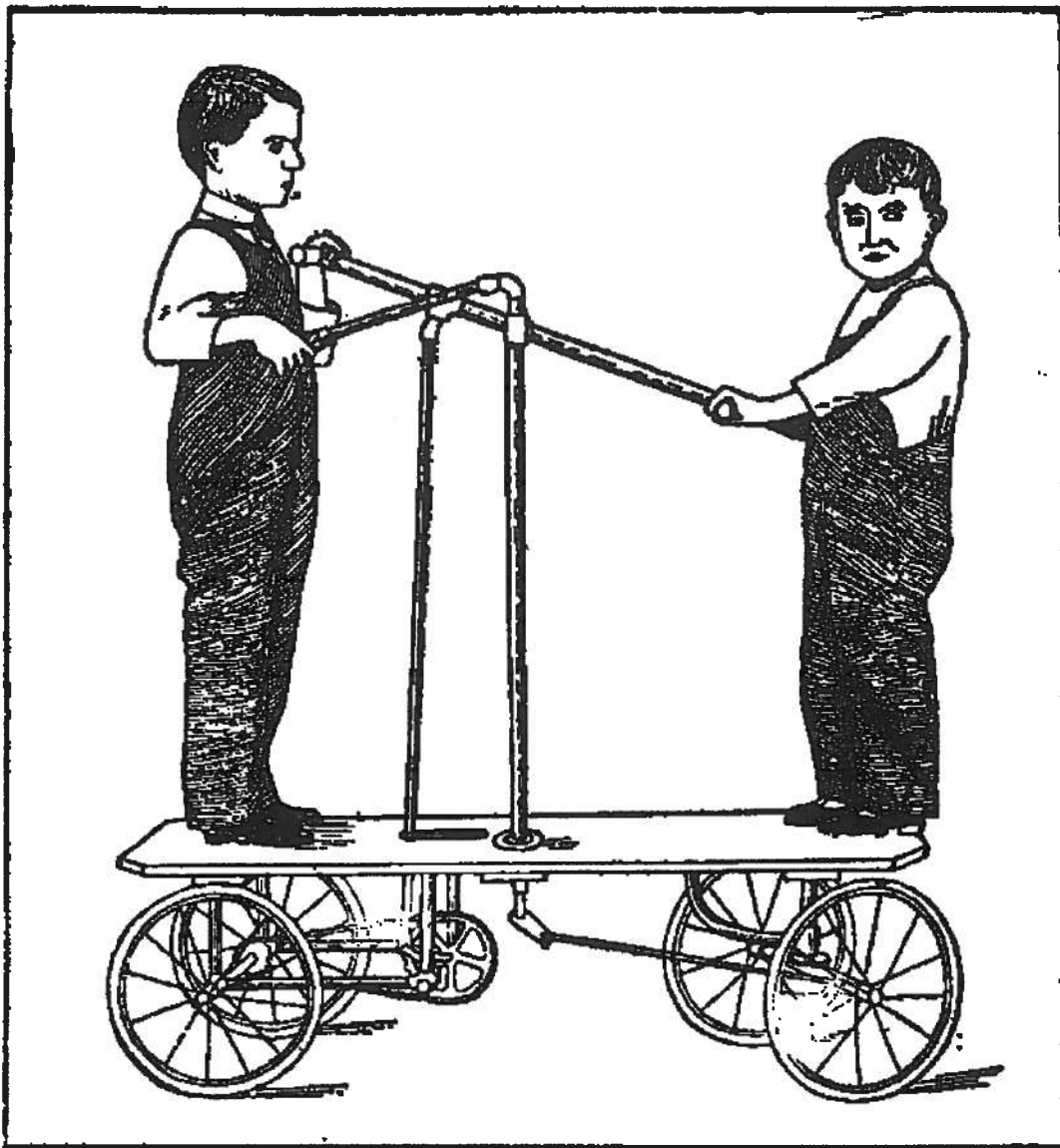


Hand Car Made of Pipe and Fittings [440]

Although apparently complicated, the construction of the miniature hand car shown in the accompanying illustration is very simple. With a few exceptions all the parts are short lengths of pipe and common tees, elbows and nipples. The wheels were manufactured for use on a baby carriage. The sprocket wheel and chain were taken from a discarded bicycle, which was also drawn upon for the cork handle used on the steering lever. The floor is made of 1-in. white pine, 14 in. wide and 48 in. long, to which are bolted ordinary flanges to hold the framing and the propelling and steering apparatus together. The axles were made from 3/8 in. shafting. The fifth wheel consists of two small flanges working on the face surfaces. These flanges and the auxiliary steering rod are connected to the axles by means of holes stamped in the piece of sheet iron which encases the axle. The sheet iron was first properly stamped and then bent around the axle.

The levers for propelling and steering the car work in fulcrums made for use in lever valves. The turned wooden handles by which these levers are operated were inserted through holes drilled in the connecting tees. The working joint for the steering and hand levers consists of a 1/2 by 3/8 by 3/8 in. tee, a 1/2 by 3/8 in. cross and a piece of rod threaded on both ends and screwed into the tee. The cross is reamed and, with the rod, forms a bearing.



Boy's Hand Car

The operation of this little hand car is very similar in principle to that of the ordinary tricycle, says Domestic Engineering. The machine can be propelled as fast as a boy can run. It responds readily to the slightest movement of the steering lever.