

# How To Make A Flymobile

By EDWARD SIEJA

The boy owning a pushmobile, or even a power-driven auto car, is often very much disappointed because motion soon stops when the power is not applied. The car illustrated is of a little different type, being equipped with a flywheel that will propel the car and carry the rider a considerable distance after stopping the pedaling. The flywheel also aids the operator, as it will steady the motion and help him over a rough place or a bump in the road.

The main frame of the flymobile is made up of a few pieces of 2 by 4-in. timbers. The pieces A are 6 ft. 4 in. long, and the end crosspieces B, 24 in. long. These are jointed, glued and screwed together, as shown in Fig. 1. The frame that supports the driving parts consists of a piece, C, 6 ft. 2 in. long, and a piece D, 2 ft. 11 in. long. These are fitted in the main frame and securely fastened to the end crosspieces B. Two other crosspieces, E and F, are used to strengthen the driving-parts frame.

The entire hanger G, with its bearings, cranks and pedals, can be procured from a discarded bicycle and fastened to the piece C ; the barrel holding the bearings being snugly fitted into a hole bored in the piece with an expansive bit. The location will depend on the builder and should be marked as follows: Place the hanger on top of the piece C, then put a box or board on the frame where the seat is to be and set the hanger where it will be in a comfortable position for pedaling. Mark this location and bore the hole.

The transmission H consists of a bicycle coaster-brake hub, shown in detail in Fig. 2. A split pulley, J, 6 in. in diameter, is bored out to fit over the center of the hub between the spoke flanges. The halves of the pulley are then clamped on the hub with two bolts, run through the holes in opposite directions. Their heads and nuts are let into countersunk holes so that no part will extend above the surface of the pulley. The supports for the hub axle consist of two pieces of bar iron, 1 in. long, drilled to admit the axle ends, and screws for fastening them to the frame pieces C and D. This construction is clearly shown in Fig. 2.



## III: The Flymobile is a Miniature Automobile in Appearance and is Propelled by Foot Power

The arrangement of the coaster-brake hub produces the same effect as a coaster brake on a bicycle. The one propelling the flymobile may stop the foot-power work without interfering with the travel of the machine, and, besides, a little back pressure on the pedals will apply the brake in the same manner.

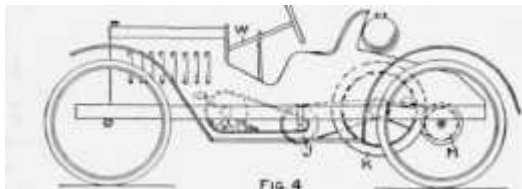
The flywheel K should be about 18 in. in diameter with a 2-in. rim, or face. Such a wheel can be purchased cheaply from any junk dealer. The flywheel is set on a shaft, turning between the pieces C and D and back of the coaster-brake wheel H. Two pulleys, L, about 3 in. in diameter, are fastened to turn with the flywheel on the shaft and are fitted with flanges to separate the belts. The ends of the shaft should run in good bearings, well oiled.

Another pulley, M, 6 in. in diameter, is made of wood and fastened to the rear axle. An idler wheel, shown in Fig. 3, is constructed of a small pulley, or a large spool, attached to an Lshaped piece of metal, which in turn is fastened on the end of a shaft controlled by the lever N. The function of this

idler is to tighten up the belt or release it, thus changing the speed in the same manner as on a motorcycle.

The elevation of the flymobile is given in Fig. i, which shows the arrangement of the belting. The size of the pulleys on the flywheel shaft causes it to turn rapidly, and, for this reason, the weight of the wheel will run the car a considerable distance when the coaster hub is released.

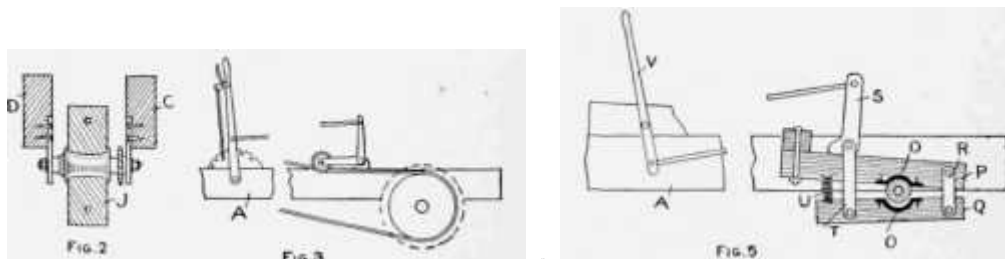
The rear axle revolves in bearings, half of which is recessed in the under edges of the pieces A while the other half is fastened to a block, screwed on over the axle. A simple brake is made as shown in Fig. 5. Two metal pieces, O, preferably brass, are shaped to fit over the shaft with extending ends for fastening them to the pieces P and Q, as shown. These pieces are hinged with strap iron, R, at one end, the other end of the piece P being fastened to the crosspiece F, Fig. 1, of the main frame. The lower piece Q is worked by the lever S and side bars, T. A small spring, U, keeps the ends of the pieces apart and allows the free turning of the axle until the brake lever is drawn. The lever S is connected by a long bar to the hand lever V.



III: Plan and Elevation of the Flymobile, Showing the Location of the Working Parts, to Which, with a Few Changes, a Motorcycle Engine can be Attached to Make It a Cyclecar; Also Details of the Brakes, Belt Tightener and Coaster-Brake Hub

The steering apparatus W, Figs. 1 and 4, is constructed of a piece of gas pipe, 3 ft. 4in. long, with a wheel at one end and a cord, X, at the other. The center part of the cord is wound several times around the pipe and the ends are passed through screweyes in the main frame pieces A and attached to the front axle, which is pivoted in the center under the block Y. The lower end of the pipe turns in a hole bored slanting in the block. A turn of the steering wheel causes one end of the cord to wind and the other to unwind, which turns the axle on the center pivot.

The wheels are bicycle wheels, and the ends of the front axle are turned to receive the cones and nuts, instead of using the regular hub axles. The ends of the rear axle are turned to closely fit the hubs after the ball cups have been removed. A large washer and nut clamp each wheel to the axle so that it will turn with it.



The body can be made up as desired, from sheet metal, wood, or cloth stretched over ribs of wood, and painted in the manner of an automobile. A tank and tires can be placed on the back to add to the appearance. Fenders and a running board can be attached to the main frame.

With the addition of some cross-pieces in the main frame at the front and a motorcycle engine fastened to them so that the driving sprocket will be in line with the sprocket on the coaster hub, the builder will have a real cyclecar.

