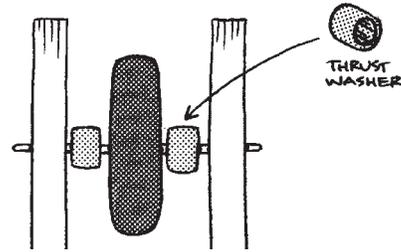


# Common problems with both Distance and Speed cars

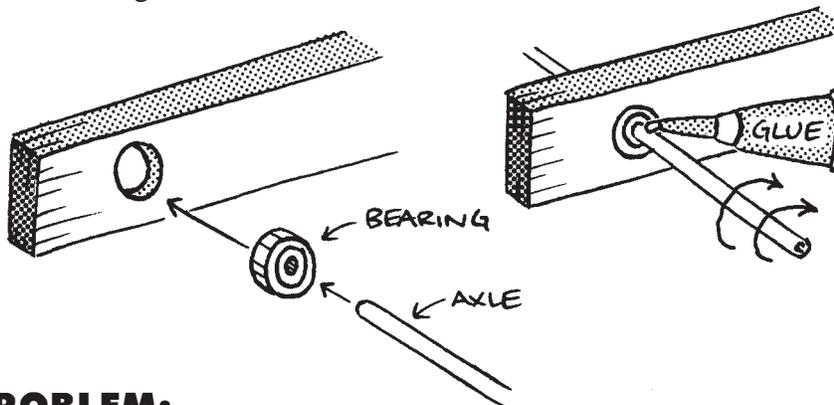
## PROBLEM:

*Axle slides back and forth causing wheels to rub against the frame of the car, slowing or stopping the car.*

1. Add thrust washer between wheels and the frame for a smoother rubbing surface with less friction.



2. Make spacers out of brass tubing to hold the wheels in place and limit the side-to-side play of the wheels or axles.
3. If you are using bearings, the axle may be moving side to side. Carefully glue the axles to the bearings without getting glue in the bearings.



## PROBLEM:

*Can't find an axle to fit the wheels or bearings.*

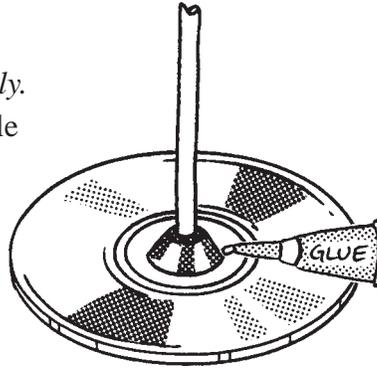
1. Re-size the axle or change the wheel's hole size with a spacer.



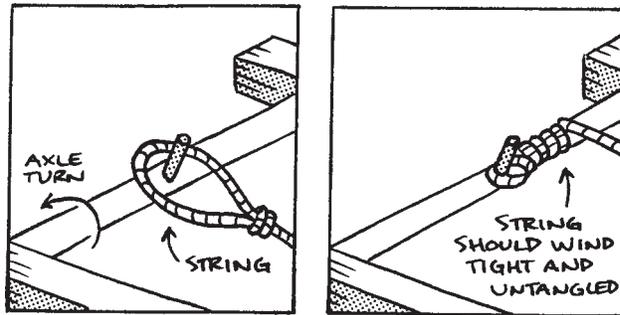
**PROBLEM:**

*Mouse trap falls quickly but car moves slowly.*

1. Drive wheels are not glued to the axle and the axle is spinning inside the wheels. Glue wheels to axle.



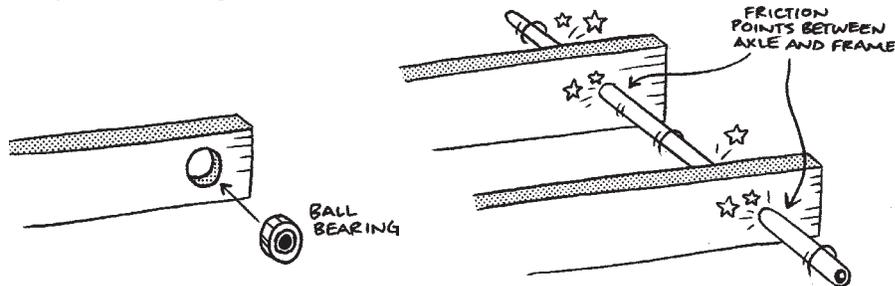
2. There is no hook on the axle for attaching the string and/or the string is slipping off the axle without pulling. The hook may not be glued to the axle and is slipping under the tension of the string.



**PROBLEM:**

*Mouse trap car does not start or moves slowly.*

1. Too much friction in the rolling points. Re-do the rolling points or try ball bearings.

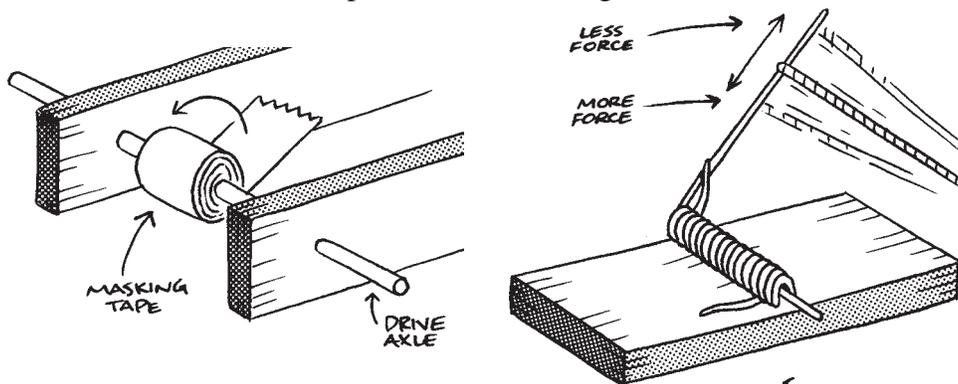


**Technical Help**

**PROBLEM:**

*Mouse trap car does not start or moves slowly. (Continued)*

2. Not enough tension in the pulling string. Move the trap closer to the drive axle and adjust the string attachment point on the lever arm accordingly *or* try to build up the drive axle with tape. Lastly, test different mouse traps and use the strongest one.

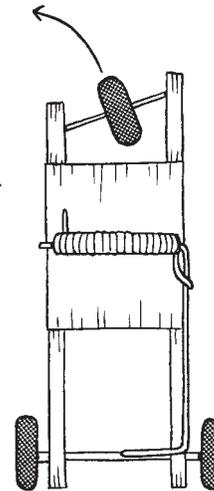
**PROBLEM:**

*Mouse trap car does not travel straight.*

1. Wheels are not pointing in the same direction.

The solution is to bring the wheels into alignment. If the vehicle is a three-wheeled vehicle you need to focus your efforts on the single wheel. Try to align it with the other two. This is not easy!

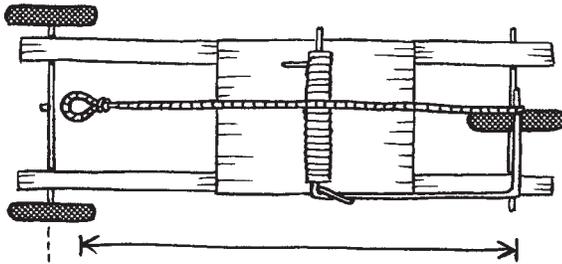
2. This only applies to long distance cars that use one large wheel as the drive wheel. If the car travels straight when you push it without the tension of the lever arm, but turns once under the pulling tension of the trap, there is too much frame flex or the trap is pulling too hard on one side of the axle. Strengthen the frame or prevent the pulling side of the axle from giving too much at its holding points.

**Technical Help**

## PROBLEM:

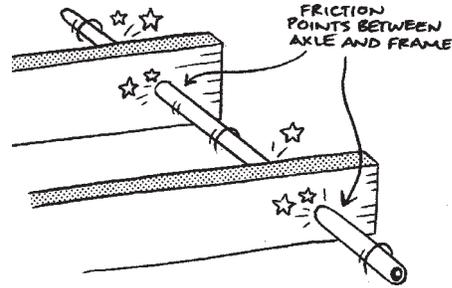
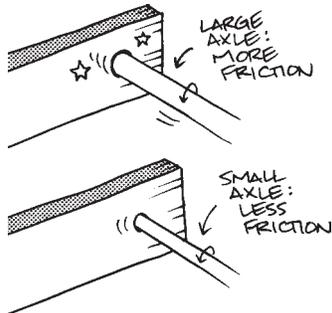
*Mouse-trap car suddenly stops or slows quickly.*

1. The string is not releasing from the drive axle because it is either glued to the axle or it is too long *or* the hook is too long and catching the string causing it to rewind.

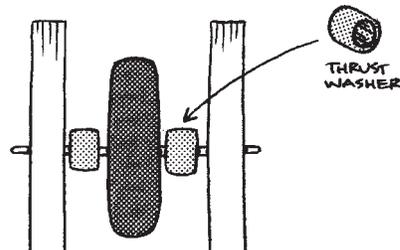


*Cut string a little bit shorter than what is needed in order to insure a proper release.*

2. There is too much friction at the rolling points. Re-work the bearings to reduce friction or try ball bearings. Try a small diameter axle.



3. Wheels are rubbing on the frame. Prevent wheels from rubbing with spacers or thrust washers.



## Technical Help