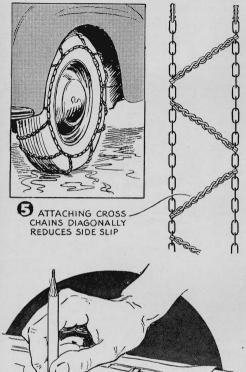
## FOR CAR OWNERS



MARKS

CLOCK

WHEEL

COG

PIN

5 ZIGZAG CHAIN CROSS LINKS, I believe, offer greater resistance to side skidding on ice than straight-across links. An easy way to fix up conventional chains is shown in the accompanying illustrations. First unhook the cross chain at one side nearest one end, and attach it near the second cross chain. Then unhook the second cross chain from the opposite side and move it near the third cross chain. When you've come to the end, you may find that a few extra side links may be needed to make the redesigned chains fit the wheels.—H. W.

6 A MILEAGE ESTIMATOR for road maps can be made from a heavy drawing pencil, a cogwheel from an old clock, and a pin. Cut a slot in one end of the pencil, insert the cogwheel from which the shaft has been driven out, and insert the pin through a hole drilled through the pencil. Make a mark on the edge of the cog as shown. Now run the wheel over a planned route on the road map and count the wheel turns. Find out how many miles each turn represents on the map's scale, and multiply this by the wheel's turns.—F. G.

**7** BLACKENED LIGHT BULBS SHOW UP QUICKLY if they are held against a white card in a good light. The entire bulb appears smoky if it has begun to age beyond the point of reasonably good efficiency. Oddly, the same bulb simply held up to the light may not show its condition at all.—W. A.

8 AN EXTENSION TAIL LIGHT for tow trucks, fitted with a strong spring-jawed clamp to hold it on the rear bumper of a towed car at night, can be assembled from old parts. A three-line cord at least 25 feet long should be used.—M. K.



ROLL COGWHEEL

ALONG INTENDED ROUTE, COUNTING

ITS REVOLUTIONS

