MOTORING

By "SPANNER"

The Risk of Aviation

Ask anyone whether aviation is a dangerous game and he will reply "Yes—very." He bases his conclusions on the many newspaper reports of the accidents which befall airmen. Yet from the statistics the risk is not nearly so great at it appears to be. True, a year or so ago the betting was about 5 to 1 against the aviator being killed, judging by the insurance rates charged, but these, be it noted, are always based on an estimate sufficiently conservative to safeguard the interests of the shareholders in the insurance concerns.

That the flying game is becoming safer every month can be gauged from the fact that unusual premium rates are in the ratio of 5 per cent. of the sum assured—or 20 to 1 to put it in the language of the racecourse.

When one compares these odds with the 33,000,000 to 1 in regard to being killed in a railway train, or the odds of over a million to one in a motor car accident, which are the statistical ratios, it becomes apparent that flying is still a most perilous enterprise. But it is a tribute to the daring and courage of the young men of the present day that so many take up flying with complete disregard of the risks it entails.

The Motor as a Brake

In using the motor for a brake with the gears in first or second speed, more braking effect is secured by having the ignition off. Besides this, backfiring and muffler explosions are to a large extent avoided, and the motor is more completely cooled at the same time that it is working as a brake. When the spark is on, there is an occasional impulse given to the motor by an explosion occuring in the cylinders, even though the motor may not fire at all regularly. In working through country, hilly enough to require the services of the motor in low gear as a brake, it is a good opportunity to cool off the motor by cutting off the ignition. The cool air which is drawn into the cylinders will quickly reduce the temperature of the cylinder walls.

The Choice of a Spanner

A common fault with the novice is to employ a spanner that is too large; that is, the nut or bolt is smaller than the opening of the jaws of the tool. This results in damage to the nut by rounding off corners. The jaws should be fitted snugly so that there is no play. Sometimes it is neceessary to give the free end of the spanner a sharp blow with a hammer to start a refractory nut. When this is employed care should be taken to fit the tool so that the impact of the hammer will tend to drive the hammer on the nut, not off it. If placed incorrectly, the blow will cause slipping, or even damage.

Magnetic Notes

There are four main defects which may occur at the make-and-break mechanism on the end of the magneto: (1) When a machine is new the fibre bush supporting the right-angled piece may swell up, due to moisture, and so cause the points to remain permanently open; (2) When the machine has been running for some time the same bush may become slack, and cause a short circuit in the primary; (3) The heel or rubbing piece of this same right-angled lever may be worn and require renewal; (4) The platinum points at which the primary is broken may require adjustment, through wear, or they may require squaring up with a very fine file. After filing they should be again set so that the maximum opening is not more than one-fiftieth of an inch.

THE WASTAGE OF WAR

The upper picture shows a German transport column of 4-ton Lorries and Trailers captured and destroyed by the Allies. The other picture shows the effect of Guncotton judiciously applied by French Engineers to German motors.