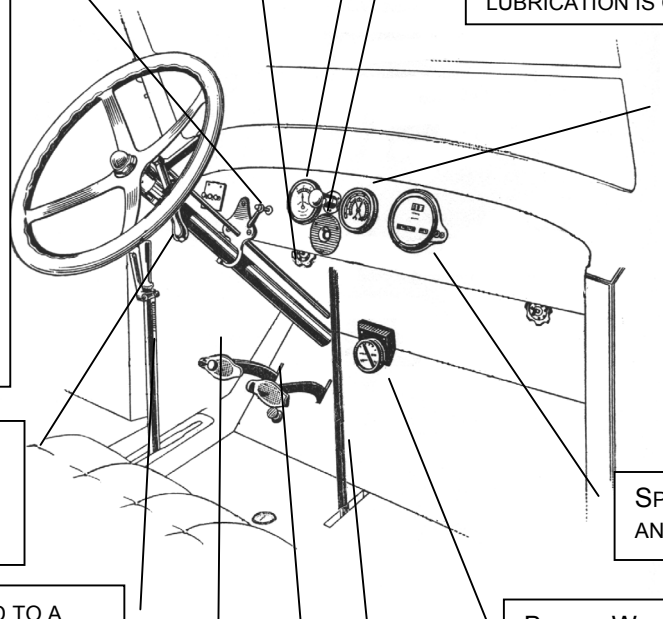
THE PILOT BURNS WHITE GAS THAT IS VERY EASY TO VAPORIZE. KEROSENE IS USED FOR THE MAIN BURNER AS IT HAS MORE HEAT ENERGY THAN GASOLINE BUT IT SUFFERS FROM BEING HARDER TO VAPORIZE. THEREFORE WHEN INITIALLY FIRING UP A STANLEY MAIN BURNER IT IS NECESSARY TO PROVIDE A SHOT OF PILOT FUEL TO THE MAIN BURNER TO INITIALLY LIGHT IT SO THAT ENOUGH HEAT MAY BE GENERATED TO START THE VAPORIZATION PROCESS OF THE KEROSENE.

THE STEAM GAUGE INDICATES THE CURRENT BOILER PRESSURE.

THIS SIGHTGLASS, CALLED A WINKER, INDICATES THAT SMALL SQUIRTS OF OIL ARE BEING DELIVERED TO THE ENGINE. WITH EACH STROKE OF THE LUBRICATING OIL PUMP THE GLASS EYE OF THE WINKER TURNS BROWN FOR AN INSTANT AND THEN BACK TO CLEAR. WHEN THE CAR IS IN MOTION THE ALTERNATING CLEAR-DARK-CLEAR-DARK-CLEAR ACTION OF THE GLASS APPEARS TO BE "WINKING" AT THE OBSERVER INDICATING PROPER ENGINE LUBRICATION IS OCCURRING.

THIS VALVE CONTROLS THE FLOW OF KEROSENE TO THE MAIN BURNER. WHEN STOPPING THE CAR FOR A PERIOD OF TIME THIS VALVE IS TURNED OFF ALLOWING STEAM PRESSURE TO BE MAINTAINED BY THE PILOT. WHEN THE CAR IS READY TO BE DRIVEN THIS VALVE IS OPENED SO THAT THE MAIN BURNER WILL LIGHT AND STEAM PRESSURE MAY BE RETURNED TO THE OPERATING PRESSURE.



THE DUAL GAUGES INDICATE FUEL SYSTEM PRESSURES. THE OUTER GAUGE (BLACK POINTER) INDICATES MAIN BURNER KEROSENE PRESSURE (140 PSI OPERATING). THE INNER GAUGE (RED POINTER) INDICATES PILOT BURNER PRESSURE (25 PSI OPERATING).

MOVING THE THROTTLE HANDLE CONTROLS THE AMOUNT OF STEAM SENT TO THE ENGINE.

SPEEDOMETER, ODOMETER, AND TRIP ODOMETER.

THE HAND BRAKE IS CONNECTED TO A SINGLE EXPANDING BRAKE SHOE WITHIN EACH REAR WHEEL BRAKE DRUM. SETTING THE HAND BRAKE EXPANDS THE BRAKE SHOE AGAINST THE BRAKE DRUM HOLDING THE CAR IN POSITION.

BOILER WATER LEVEL INDICATOR

THE STANLEY STEAM CAR'S PUMPS ARE DRIVEN FROM THE REAR AXLE. THIS MEANS THE CAR MUST BE IN MOTION TO PUMP WATER INTO THE BOILER AND KEROSENE TO THE MAIN BURNER. DURING INITIAL FIRING UP OF THE CAR IT IS NECESSARY TO MANUALLY MAINTAIN FUEL PRESSURE FOR THE MAIN BURNER. THIS HANDLE ALSO OPERATES A MANUAL WATER PUMP THAT IN AN EMERGENCY CAN SUPPLY A LIMITED VOLUME OF WATER TO THE BOILER.

WHEN FULLY RELEASED THE HOOK-UP PEDAL APPLIES BOILER STEAM TO 80% OF THE ENGINE'S 5" STROKE PROVIDING MAXIMUM ENGINE POWER. WHEN PRESSED ABOUT 2" AND LATCHED (IN THE HOOKED-UP POSITION) BOILER STEAM IS APPLIED TO 20% OF THE ENGINE'S 5" STROKE. THIS MAKES BETTER USE OF THE NATURAL EXPANSIVE POWER OF THE STEAM TO MOVE THE PISTON THE REMAINING STROKE OF THE CYLINDER. THE BUTTON IN THE PEDAL, WHEN DEPRESSED, RELEASES THE PEDAL FROM THE HOOK-UP (LATCHED) POSITION TO THE RELEASED POSITION. PUSHING AND HOLDING THE PEDAL ALL THE WAY TO THE FLOORBOARD ALLOWS THE ENGINE TO OPERATE IN REVERSE.

ALL STANLEY'S WERE DESIGNED WITH THE FOOT PEDAL OPERATING EXTERNAL CONTRACTING BRAKES ON THE REAR WHEEL BRAKE DRUMS. THESE BRAKES WERE INEFFICIENT AT BEST AND PROVIDED LITTLE BRAKING WHEN MOVING BACKWARDS.

DRIVER CONTROLS