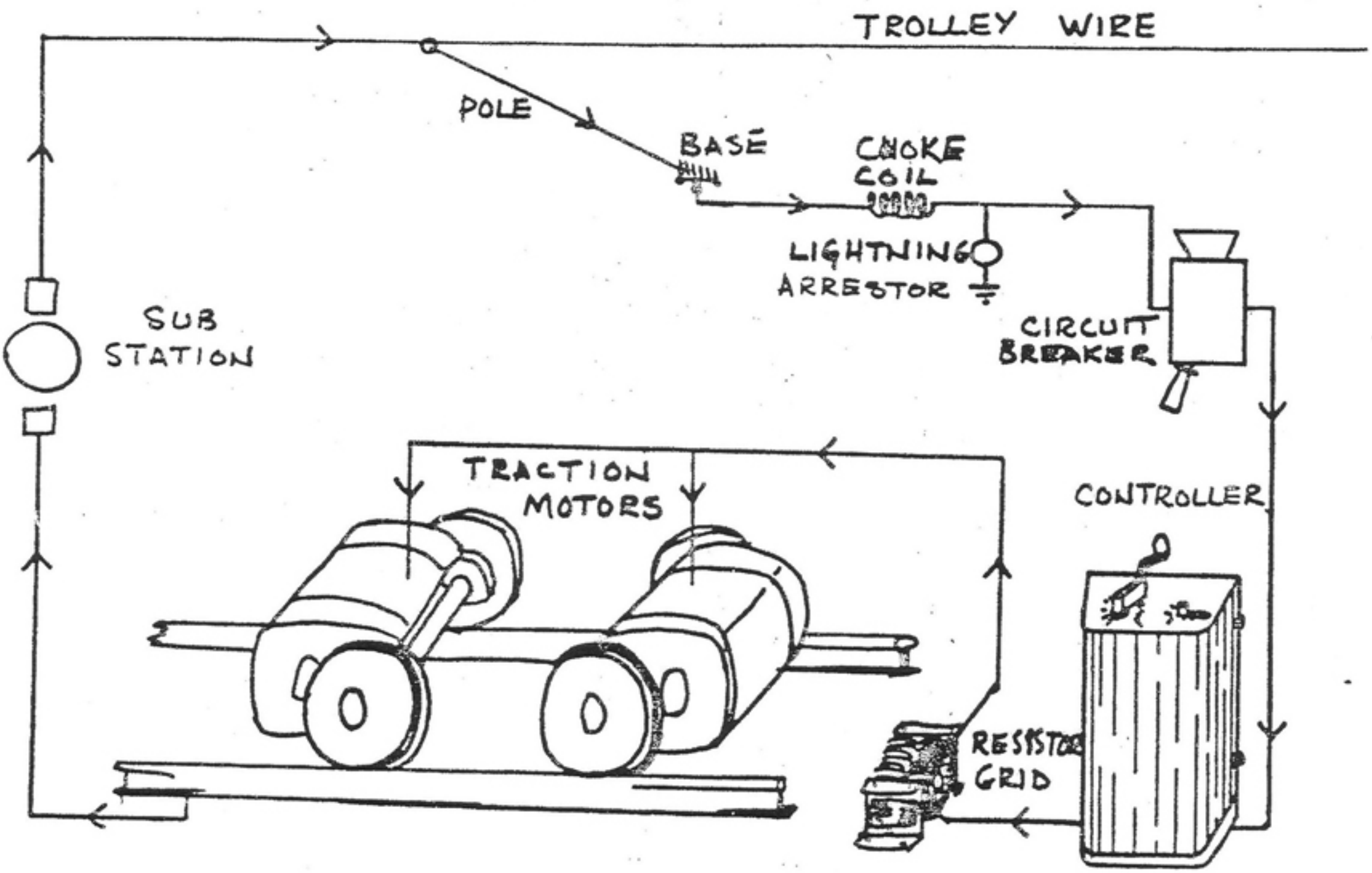
GENERAL INFORMATION

Refer to General Circuit illustration below. Power is supplied at approximately 550 volts D.C. from the substation through the main breaker to the trolley wire. It is picked up by the trolley wheel or shoe, then carried by the pole through the lightning arrestor, choke coil, car circuit breaker, controller, grids (when starting up), to the motors and returning, via the wheels and rails, to the substation. One rail on our system is bonded the entire length of the line to minimize the line loss which results in lower voltage towards the end of the line. All poles are numbered along the right of way as a means of identifying locations.



SIMPLIFIED STREETCAR CIRCUIT

FIG. 1

THE POLES

When one pole is up the other is usualy energized so treat each with due respect. Poles should be placed on the wire sharply and accurately to avoid surging the compressor. When changing ends it is good practice to place the second pole on the wire before pulling down the first. Both these practices will prevent excessive arcing at the trolley wheel when the compressor is operating. Bouncing the pole on and off the wire does no good to the trolley wheel, wire or compressor. THE FRONT POLE SHOULD ALWAYS BE CHECKED TO MAKE SURE IT IS UNDER THE HOOK AND THE TROLLEY ROPE SECURED AROUND THE TROLLEY CATCHER. The catcher is separate from the bracket and can be removed by rotating it while holding the securing latch (underneath) open. If the catcher is not properly and securely attached to its bracket it can come loose and fly up with the pole if a dewirement occurs. The trolley catcher, when operating properly, will catch and not unwind when the rope is pulled up rapidly, as when the trolley wheel or shoe jumps the wire. Hence the pole will remain at the elevation it was when it jumped. It can, however, hit the span wires with possible serious consequences if the car is not stopped promptly. The conductor should immediately give the emergency stop signal of three bells when he is aware of this happening. In the event that the rope breaks leaving the pole vertcal and against the wire it may be safely (and cautiously) handled by standing on the dry, canvas roof of the car. Never never stand on the controller or other metal parts of the car and reach up to a pole while the other is on the wire. Once on the roof however, on a car having two poles, one must be placed on the wire before handling the other.

BEFORE MOVING A CAR ALWAYS STEP BACK AND MAKE SURE THE FRONT POLE IS DOWN, UNDER THE HOOK, AND THE ROPE SECURED AROUND THE CATCHER. If someone kindly changes poles for you, check anyway. If something goes wrong the responsibility is YOURS.

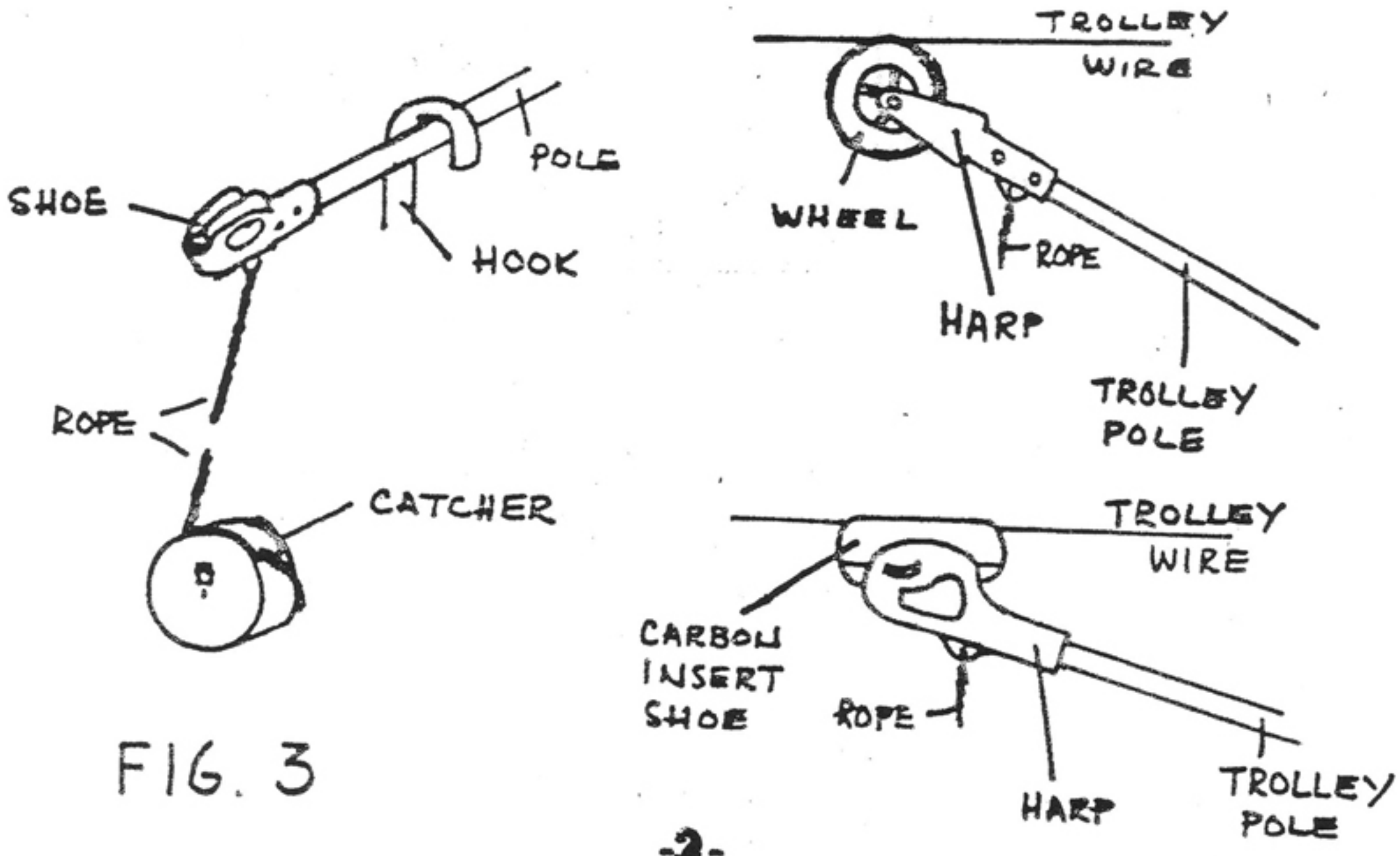


FIG. 3