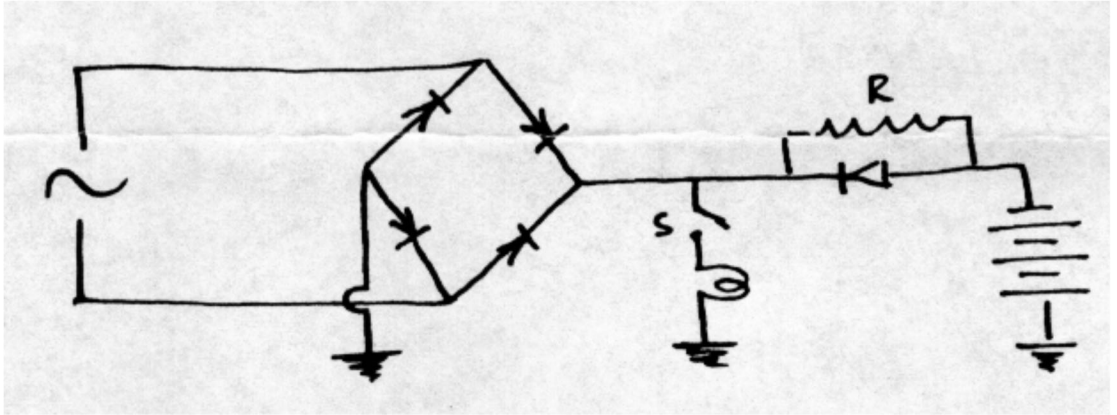


Sturmey-Archer Filter Switch Unit (FSU)

The sketch and notes below come from Tony Hillyer, for many years senior designer at Sturmey-Archer:



When closing switch S with the cycle stationary, the battery pack (3 x R20) supplied the filament lamps. As the cyclist increased speed, the dynamo would generate, sharing the load until at 9mph the dynamo took over. Reducing speed the opposite occurred. There was always a light.

Although R20 primary cells are not rechargeable, we found with the aid of bleed resistance R, a small current flowed through the batteries in the reverse direction, giving a longer life from the batteries. Maybe by depolarising the cells.

NB: Ric Cecconi writes: Hi Tony, for the benefit of other SturmeyArcher dynohub and light enthusiasts, I'd like to point out that Tony Hillyer's sketch shows the battery drawn connected in reverse. As drawn, the rectified dynohub could only discharge a battery connected that way round. An easy mistake to make, but it will baffle many without an electrical background!