

Slipping Handbrake

The 20hp handbrake lever mechanism is a particularly robust piece of equipment. It is well designed to operate smoothly and to last decades of abuse, as necessary. The handbrake is “on” when the base of the lever (**A**) is pulled forward and held in place by the strong ratchet (**B**). Note that the ratchet teeth are pointing downwards to avoid the accumulation of oily debris which could prevent the ratchet pawl from engaging the teeth.

The other important part of the ratchet mechanism is the spring (**E**) which ensures that the pawl is held firmly in position by the teeth. **If the ratchet fails to hold the handbrake lever “on” the car will run away.**

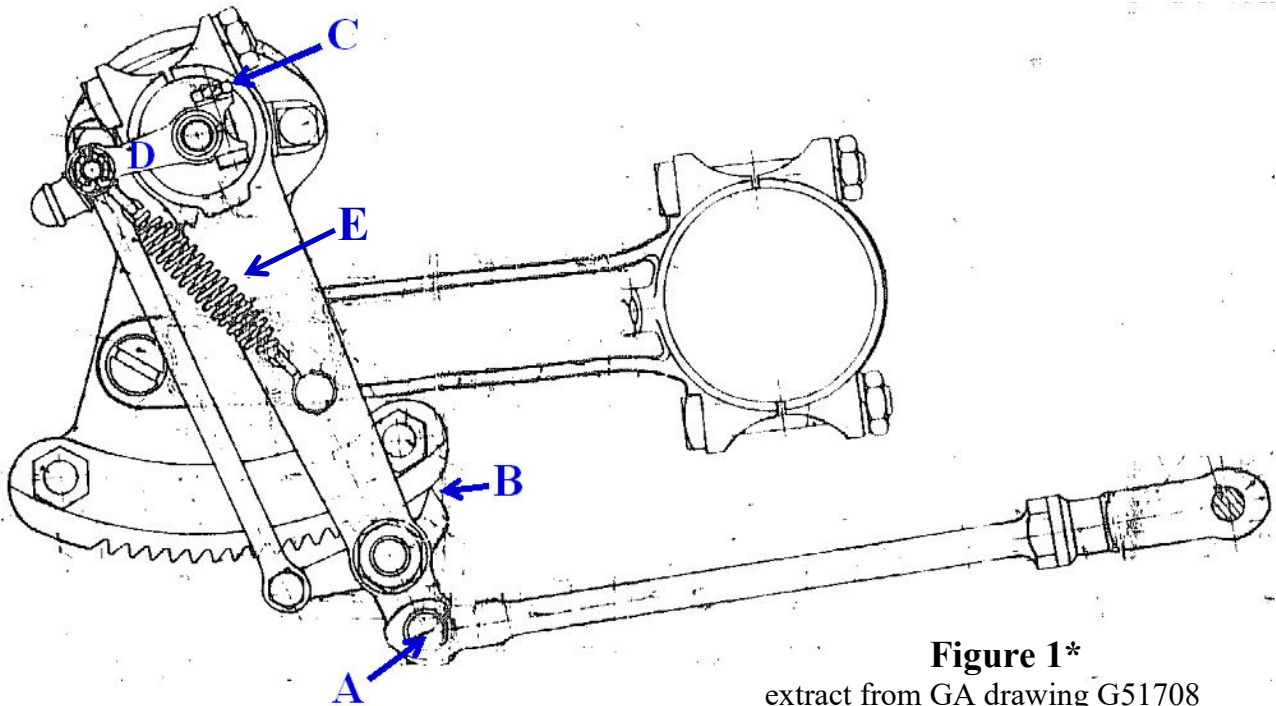


Figure 1*

extract from GA drawing G51708

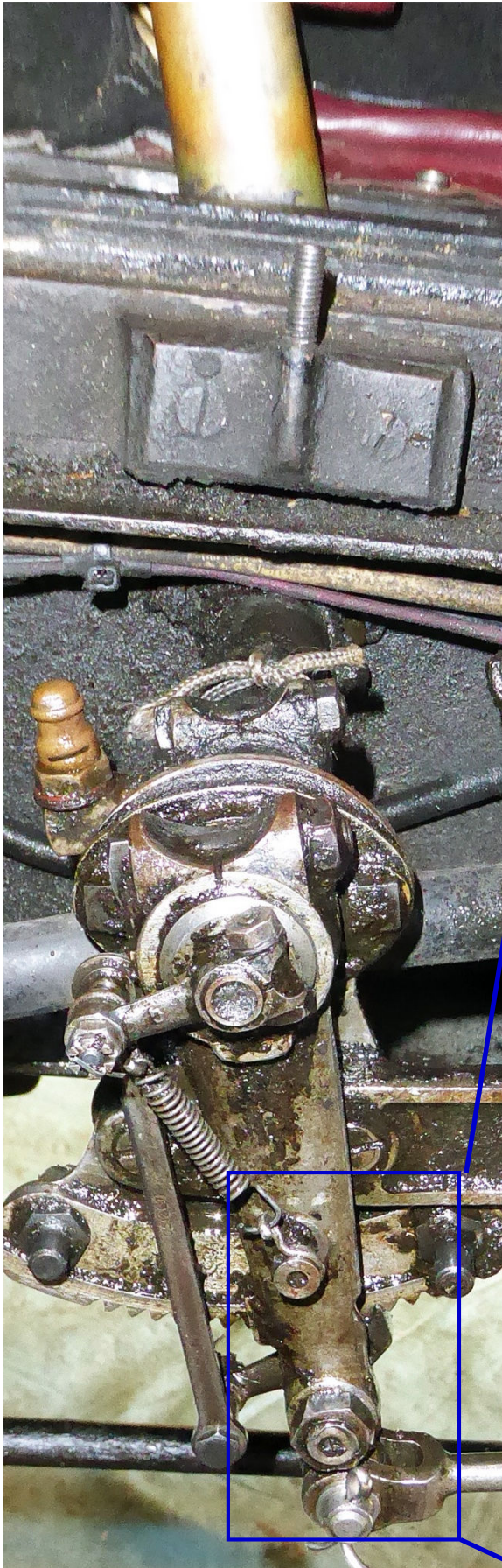
What could be more disastrous than the handbrake slipping out of engagement while parked on a hill? Even if the car is in bottom gear, the engine by itself cannot hold the car on a relatively gentle slope.

It is well worthwhile to check your handbrake mechanism. After cleaning, it should come up like new, **Figure 2**. Take special care to clean all the teeth in the ratchet. Check the condition of spring (**E**). If the handbrake does tend to fall out of engagement easily, it could be the fault of a weak spring which after all might be 90+ years old. Try replacing it with a stronger spring, but not so strong that it is difficult to depress the button on top of the hand brake handle!

If the pawl does not fully engage with the ratchet teeth, then the geometry may be incorrect. It can easily be corrected as follows. Disconnect the base of the brake lever at joint **A** (split pin plus top hat) – this is not strictly necessary but it makes viewing the ratchet mechanism easier. Carefully watching the mechanism loosen the nut **C** on the clamping screw and rotate the arm **D** slightly anti-clockwise until you see that, while operating the hand brake lever, the pawl fully engages with the ratchet teeth, **Figure 2**,

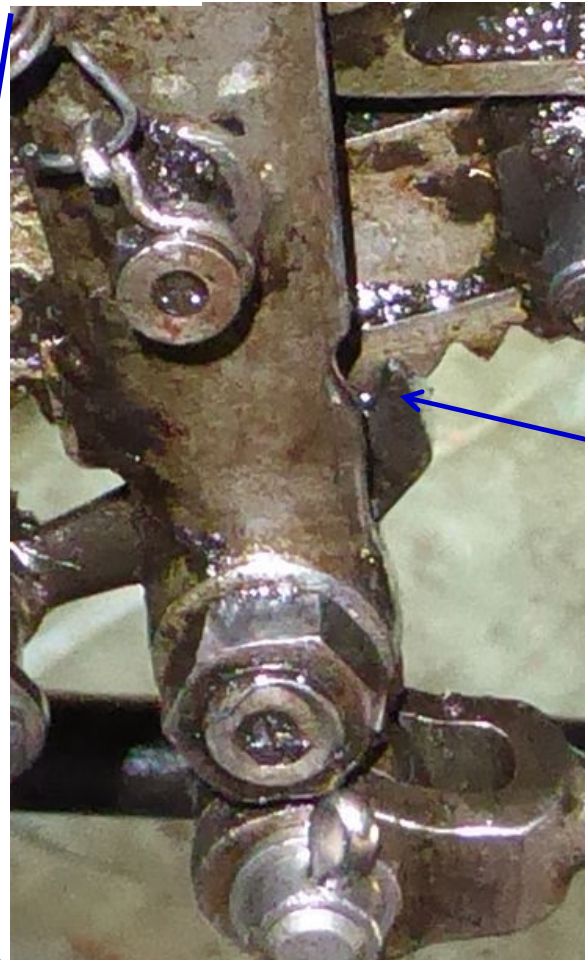
The handbrake should make a satisfying clicking sound, when it is pulled on with the top button released. (Having said that, it is good practice **always** to depress this button when pulling on the handbrake.)

Does your handbrake click as you pull it on? Check to prevent a potential disaster!



***NOTE: Figure 1** is taken from GA drawing G51708 and applies to 20hps from when 4-wheel brakes were introduced in mid-1925. It also applies to early 20/25hps, until S series cars in 1931. Earlier 20hps with 2-wheel brakes have a different ratchet arrangement which does not appear from the GA drawings to be so easily adjustable. Later 20/25s from T series onwards, and Derby Bentleys, have an upside down ratchet and a totally different mechanism for operating the pawl.

Figure 2



Note snug fit of pawl into teeth of ratchet