Flare Pistol Accidental Discharge:

A man kept a loaded flare pistol in his front left trouser pocket as he was fishing. Upon retrieving the device, the exposed hammer drew and released, discharging the pyrotechnic into the pocket and igniting the fabric. The man received burns over a significant portion of his body and required extensive hospitalization.

Discovery materials indicated that this model flare pistol was responsible for at least three unintentional discharges, two of which caused bodily injury, one of which incinerated a school bus. Flare pistols are not firearms and are regulated no differently than are toys. Indeed, the pistol is largely made of injection molded plastic. The pistol design has no external safety and an exposed spur hammer. In some models, the spur hammer can be pulled back to a point of near full draw (sear engagement) and when released the hammer mounted firing pin will protrude past the breech face and detonate the primer. A demonstration of this failure mode is shown below. The flare is launched without use of the trigger by merely pulling and releasing the hammer.

A patent search revealed that this pistol was designed to prevent the subject unintended discharge mode using a rebounding hammer. That is, the design is such that the trigger must be pulled in order to allow the hammer mounted firing pin to go forward of the breech face. However, the current manufacturers of the flare pistol do not make the mating hammer and trigger surfaces from rigid metal (which was the intent of the design), but rather from plastic. The flexibility of the plastic allows the hammer to travel too far and overcome the restraint of the safety sear.

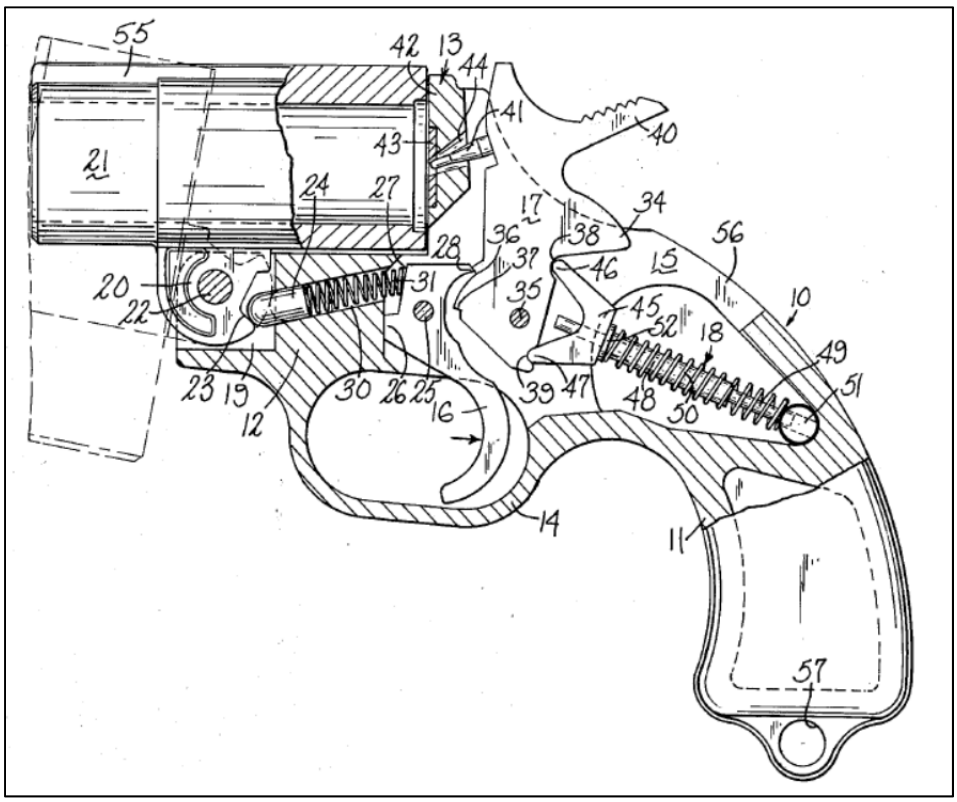

Figure 1 of the relevant patent.

Numerous other previous flare pistol designs were researched. Design features of superior flare pistols included a double-action trigger, hammerless design, or external safety. None of these 'alternative design' flare pistols would have failed in the same manner that the subject design did on numerous occasions.

Two lawsuits were filed as a result of the injuries associated with the unintended discharges of this product. Both were settled prior to trial.