

AN AVALAUNCHER FITTING SYSTEM

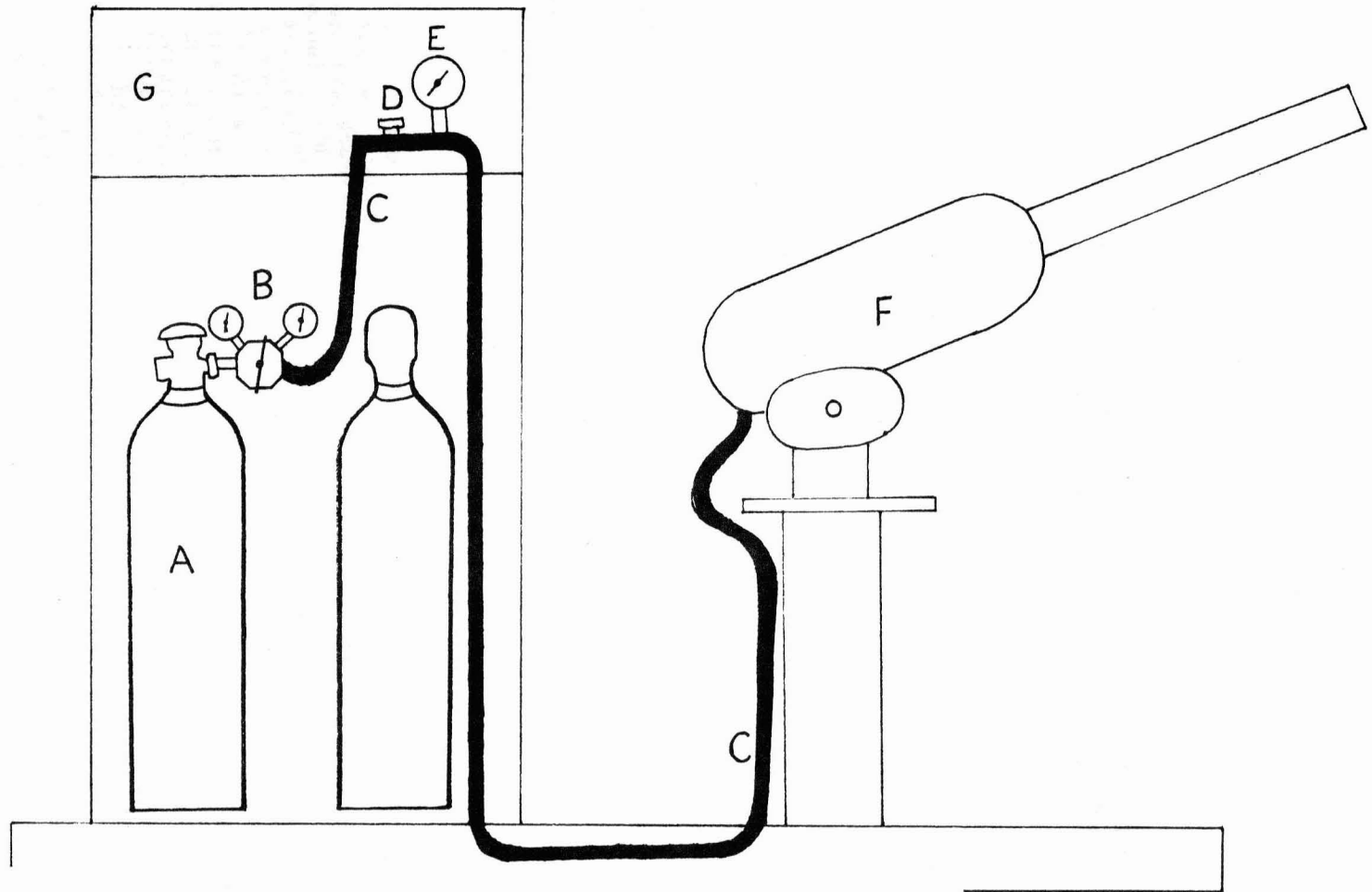
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A reliable and efficient system of equipping avalaunchers for controlling and accurately measuring nitrogen pressure. The system involves a regulator, hoses, in-line valves and gauges, connecting the nitrogen source to the pressure vessel.

Advantages of This Fitting System:

1. Regulator (B) protects system from excessive pressurization.
2. In-line valve (D) allows for exact incremental filling of pressure vessel (F).
3. In-line gauge (E) receives less vibration from avalauncher discharge than former location of gauge on pressure vessel. Location on the vessel proper led to frequent gauge damage and inaccurate readings
4. All fittings are left intact between missions, making for faster set-up.
5. Regulator yields an accurate reading of remaining pressure in N bottles, as well as a back-up pressure reading of in-line pressure.
6. "Black Box" (G) protects system from elements and tampering.

Unanswered Questions: It is likely that in-line gauge (E) is still receiving serious vibration from avalauncher discharge, since an intact air column exists between pressure vessel and in-line valve (D). Our experience is inconclusive at this point, but reliance on regulator gauge measuring line pressure is an alternative, if problems develop.



- A. Nitrogen Bottle
- B. Regulator with 2 Gauges - measuring bottle and vessel/line pressures
- C. Hose - from regulator → avalauncher pressure vessel
- D. In-line Valve
- E. In-line Gauge
- F. Avalauncher Pressure Vessel
- G. "Black Box" Cover