Mr. Lee Shorter
Box [illegible]
Athens, West Virginia

July 5, 1962

Dear Mr. Shorter:

I am not at liberty to make statements about the qualities of our competitors' products. However, all of the presently available products competing with the M/700 have been tested. We are continually testing bolt action rifles of other makers as well as our own. Tests are also being made on other types of actions.

You are in error when you say that the Mark V Weatherby has larger shear area on the locking lugs than the Remington M/700. By direct scale measurement the Weatherby Mark V .300W Magnum has a shear area on the lugs of 0.360 square inches. The same scale measurement of a M/700 shows a shear area of [illegible]. The engagement area of the M/700 is also larger by about 20%. These differences are of small consequence since both designs have a large factor of safety if made of good alloy steel containing about .4 carbon, then heat treated to give an elastic limit of about 150,000 psi.

Failure of the lug area occurs as a combination of shear and compression. It is unlikely that either of the rifles in question would fail during firing in this manner. Failure occurs when the cartridge case starts to flow at the head due to excessive pressure and gas escapes around the bolt head. The large forces exerted by the high pressure gases on the larger areas of the receiver and bolt are the real causes of failure. What usually happens, if the gas does escape, is that the receiver is blown apart.