

beyond any butt pad now produced.

A standard 30'06 caliber requires a 36" barrel to obtain maximum velocity. Therefore it is obvious that a considerable amount of gas energy is being wasted when using barrels of shorter lengths. The escaping gas from a 24" barrel in this caliber generates a muzzle pressure of 10,000#sq and is escaping at velocities in excess of 2700 ft/sec. This escape produces a <sup>rearward</sup> jet effect which is approximately 1/3 of the total recoil energy, and is so significant that if prevented from happening would be one of the more important advances in gun design and recoil reduction in history. An adequate solution would stir the very foundation of the sporting and military gun industry and would provide a powerful edge of leadership. When achieved safely the principle has far-reaching implications in the commercial and military areas. For example with fully automatic rifles recoil would become nearly stabilized during firing, a feat long sought by the military. Reducing recoil in this magnitude could provide the hunter with potential big caliber performance and a recoil of a 223.

Gas  
Cut  
offs

The idea is not a myth. A laboratory model was constructed by Remington personnel using a M760 in 30'06 caliber with the resulting measured recoil of a 223! It is conceivable that this principle could be used on shotguns as well and combined with the recoil-reducing principle in the M1100 could approach a recoil-free shotgun.

Initially some reliable means must be used to trip a