June 10, 1958 H. O. BENITEZ 2,837,856

DUAL COMPENSATOR HAVING SHOT CONTROLS FOR DOUBLE BARREL SHOTGUNS

Filed March 21, 1955

FIG. 1

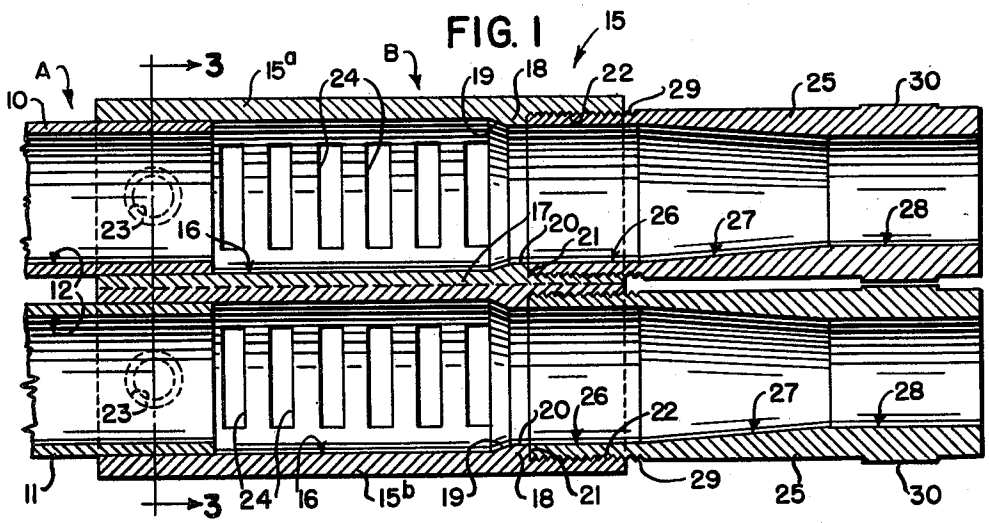


FIG. 2

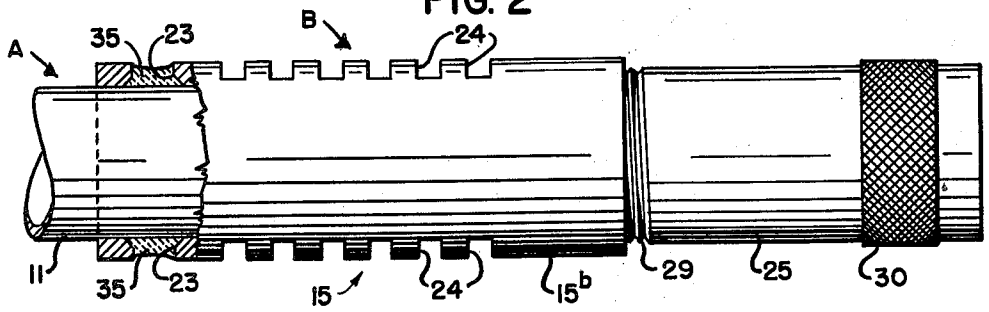
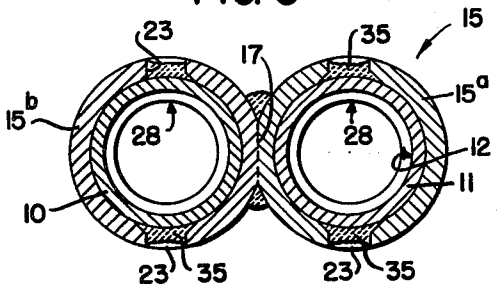


FIG. 3



INVENTOR

Humberto Ortiz Benitez

BY Lancaster, Allwine & Rommel

ATTORNEYS

United States Patent Office 2,837,856 Patented June 10, 1958

2,837,856

DUAL COMPENSATOR HAVING SHOT CONTROLS FOR DOUBLE BARREL SHOTGUNS

Humberto Ortiz Benitez, Mexico City, Mexico

Application March 21, 1955, Serial No. 495,609

1 Claim. (Cl. 42—79)

This invention relates to compensators having shot controls for firearms, and more specifically to a device of this kind for double barrel shotguns.

An important object of the invention is to provide dula compensators having shot controls for double barrel shotguns and including dual chokes which may be selected for specific field conditions and the bores of both chokes may be the same or the size of one may differ from the size of the other, since the chokes are readily removable and replaced by others.

Another important object is to provide dual compensators having shot controls, as described above, which will afford a rapid release of the gases of combustion after they emerge from muzzles of the gun and will thereupon act upon the individual shot in such manner that the latter will leave the exits of the compensators in substantially the same general columnar arrangement as they left the muzzles.

A further object of this invention is to provide dual compensators having shot controls so designed as to facilitate the complete expulsion of the mass making up the missile, such as lead, felt, cardboard, etc., thus eliminating the possibility of any residual accumulation of the above into a crust-like formation which may impair the correct operation of the assembly.

Additionally, an important object is to provide a device as described, portions of which are readily attached to the two barrels of a shotgun, and removal or replacing of one or both of the chokes of the device will not accidentally loosen the portions from the barrels.

A further important object of this invention is to provide dual compensators having shot controls for double barrel shot guns so spaced as to properly align with each of the barrels and so joined as to provide an integral body, the circumferential walls of which are greater than a predetermined minimum thickness.

Other objects and advantages of the invention will be apparent during the course of the following detailed description of the invention, taken in connection with the accompanying drawing, forming a portion of this disclosure, and in which drawing:

Fig. 1 is a horizontal longitudinal section of the new compensator attached to the muzzles of a double barrel shotgun.

Fig. 2 is a view mostly in side elevation of the new compensator, but with a portion broken away in order to reveal portions inwardly thereof.

Fig. 3 is a vertical transverse section, substantially on the line 3—3 of Fig. 1.

In the drawing, wherein for the purpose of illustration is shown a preferred embodiment of the invention and wherein similar reference characters designate corresponding parts throughout the several views, the letter A designates a double barrel shotgun and B the new compensator.

Only the muzzle portions **10** and **11** of the shotgun A are shown, since the gun is of conventional construction with two substantially alike axially parallel barrels, each having a bore.

The new compensator includes a first hollow body or tubular portion **15** which is preferably initially two bodies **15ᵃ** and **15ᵇ**. These two bodies **15ᵃ** and **15ᵇ**, which may be of machined steel, are provided with substantially flat longitudinally cut faces **17**, secant to their outer circles, on one side thereof. These faces **17** are then disposed in face to face relationship one to the other and the two bodies **15ᵃ** and **15ᵇ** integrally joined together in any approved manner, as by welding, thus providing the singular body **15** having two properly spaced apart bores **16**. It will be seen that by uniting these two bodies with the thinner joining faces **17**, that are necessary to assure properly spaced axial alignment, in abutment, I have provided circumferential walls for the bores **16** wherein the thickness of the cut portion is equal to or greater than the uncut portion of the walls. The interior diameter of each bore is such that the rearward end part of the body portion may be slipped over the muzzle portions **10** and **11** to provide good fits. Inwardly of the outer or forward end parts of the body portion, each of the bores is provided with an annular shoulder **18** which has duel functions since it restricts the bore **16** and also provides a shoulder for the choke to be subsequently described. The shoulder has a definitely bevelled innermost face **19** and a face **20** extending forwardly from the outer end of the face **19** and substantially paralleling the longitudinal axes of the bores **16**. From the outer end of the face **20** the bore of the body portion **15** is enlarged, whereby the face **21** is provided, and the body portion is interiorly screw threaded as at **22** from the face **20** to the end of the body portion. Adjacent the other end of the body portion, there are provided openings **23** from the outer face of the body portion to the bore **16**. The openings of each body portion are preferably axially aligned and are enlarged at their inner ends, all for a purpose later detailed. The body portion **15** is provided, intermediate its ends, with means to permit the discharge from the body portion of the products of combustion. This means is preferably the walls of a plurality of transversely arranged spaced apart slots **24** arranged as in Figs. 1 and 2.

Extending from the screw threaded outer end of the body portion **15** is a second hollow body or tubular portion **25** having a bore of special shape. From the inner end of the body portion **25** the surface of the bore parallels the longitudinal axis of the body portion **25** and merges into the face **20** to form a continuation thereof, and provides a first bore portion **26**. From the outer end of the portion **26**, the surface of the bore converges outwardly to form a second or intermediate bore portion **27** and, from the outer end of the bore portion **27**, the bore surface substantially parallels the longitudinal axis of the body portions **25** to provide a bore portion **28** which extends to the outer mouth of the body portion **25**. Thus, the diameter of the bore portion **28** is less than that of the bore portion **26**. A desirable ratio of the bore portion **28** to that of the bore portion **26** is substantially 1:1.166. The bore portion **27** is longer than either of the other two portions **26** and **28** and the preferred length ratio for the portions **26**, **27** and **28** is substantially 3:5:4. Slight variations in this ratio are permissible, but the proper functioning of the choke formed by the body portion **25** is not possible, in conjunction with the body portion **15**, if the ratio departs materially from the above. Of course, the face or surface **20** increases the length of the bore portion **26** slightly.

Exteriorly, the body portion **25** is provided with screw threads **29** to cooperate with the screw threads **22** and is also preferably provided with means to aid in the rotation of the body portion **25** in order to remove or attach

the body portion 25. This means may be a band 30 raised from the outer periphery of the body portion 25 and knurled on its outer face.

The new compensator B may be fixedly secured to the muzzle portions 10 and 11 of the shotgun A after the compensator B is mounted thereon, by means of molten solder 35 introduced into the openings 23 and allowed to harden.

Being detachable, the body portion 25 may be removed and another substituted. This substitution may be a body portion 25 somewhat longer than the body portion illustrated, but with the ratio of bore portion lengths maintained. It is now clear that one body portion 25 mounted upon one body portion 15 may thus differ from the body portion 25 mounted upon the other body portion 15 in order to cause the discharged shot column to be selectively varied.

Upon the discharge of a barrel of the gun A carrying the compensator B, the shot and gases of combustion emerge from the mouth of the muzzle of the gun and most of the gases are quickly ejected through the slots 24 which action tends to counteract the effects of recoil as the gun is fired. The grouping of the shot column is normally disarranged as the column leaves the mouth of the gun muzzle. When the shot column, containing the pellets, cardboard, felt, and the other residual products of combustion, emerges from the muzzle of the gun it will strike the bevelled face 19, of the shoulder 18, and will be directed inwardly protecting the screw threads 22 from the accumulation of the above residual products into a crust-like formation impairing the removal of the member 25, which has heretofore been one of the many shortcomings of the prior devices of this character. The shot column travels along the bore portion 26 substantially unchanged in overall diameter and substantially cylindrical, until it reaches the bore portion 27 where it is very gradually restricted over a relatively long path and into a truncated conical shape, and the maximum restriction is maintained in the bore portion 28. It have discovered that the shot column, that is somewhat disrupted as it leaves the muzzle of the gun, is re-grouped or re-formed as it passes through the bore portion 26 so that it reaches the gradually restricted portion 27 in a perfect formation, thus increasing the efficiency of the portions 27 and 28 and assuring the proper shot pattern.

Various changes may be made to the form of the invention herein shown and described without departing from the spirit of the invention or scope of the claim.

What is claimed is:

As an article of manufacture a compensator for a double barrel shotgun, said compensator comprising an elongated tubular body having an inner end portion, an outer end portion, a substantially circular inner face, an arcuate outer face defined by two substantially parallel longitudinal edges of said body, a substantially flat and elongated outer face extending to both of said edges for the entire length of said tubular body and secant to said arcuate outer face, said flat outer face being bisected by the transverse axis of said body, the shortest distance from said circular inner face to said flat outer face being less than the shortest distance from said circular inner face to said arcuate outer face, whereby two of said articles of manufacture may be disposed in substantial parallelism with their flat outer faces in face-to-face abutting relationship for mounting upon the outer end portions of the barrels of a double barrel shotgun, said elongated tubular body being provided with a gas discharge opening, from said circular inner face to said arcuate outer face and disposed intermediate the ends of said elongated tubular body, said inner end portion being of an interior circumference to telescopically receive the outer end portion of a barrel of a double barrel shotgun and said outer end portion of said elongated tubular body being provided with directing means to deflect the shot column, emerging from said elongated tubular body, toward the longitudinal axis of said elongated tubular body comprising a beveled annular inner face portion of said inner face thereof extending toward the longitudinal axis of said elongated tubular body and toward the outer end of said elongated tubular body and falling short of the outer end of said outer end portion of said elongated tubular body, and connecting means for detachably connecting a screw threaded choke to said elongated tubular body, comprising an annular shoulder and interior screw threads carried by said outer end portion outwardly of said bevelled annular inner face portion with said interior screw threads extending outwardly from the base of said annular shoulder, whereby said directing means will also deflect hot residual products of combustion toward said axis and away from said screw threads in order to protect said screw threads from heat and the connection of elongated tubular body and choke from incrustations of deposited residual products of combustion.

References Cited in the file of this patent

UNITED STATES PATENTS

555,432	Cory	Feb. 25, 1896
618,901	Peterson	Feb. 7, 1899
906,443	Michaud	Dec. 8, 1908
1,599,008	Diener	Sept. 7, 1926
2,398,298	Finlay et al.	Apr. 9, 1946
2,484,988	Finlay	Oct. 18, 1949
2,484,998	Hutchinson	Oct. 18, 1949
2,512,850	Crandall	June 27, 1950
2,522,329	Wolff	Sept. 12, 1950
2,602,255	Cutts	July 8, 1952
2,731,754	Gibson	Jan. 24, 1956

FOREIGN PATENTS

23,832	Great Britain	1911
935,762	France	Feb. 9, 1948