Jan. 25, 1966 R. A. SMITH 3,230,654

SIGHTING RIB FOR FIREARMS

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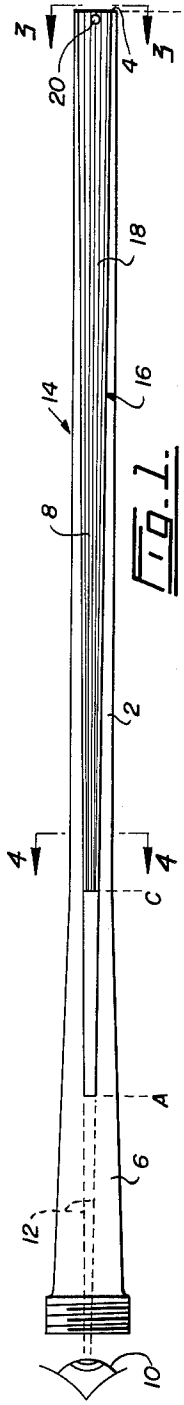


FIG. 1.

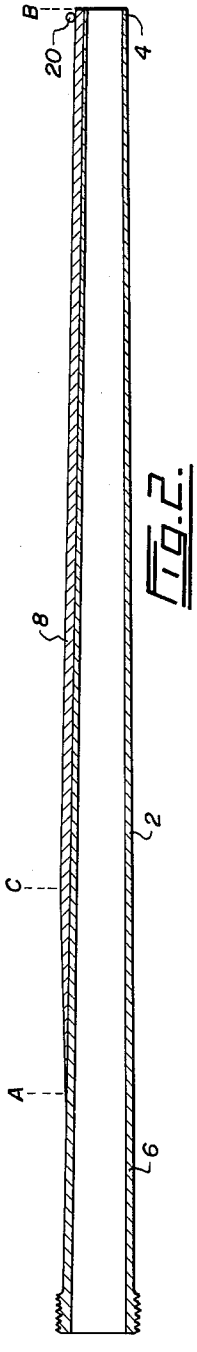


FIG. 2.

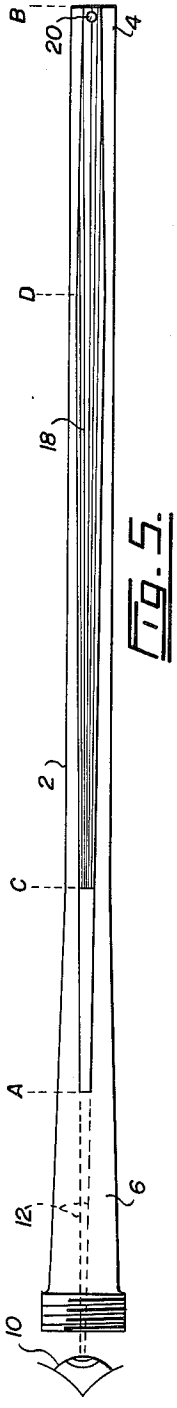


FIG. 5.

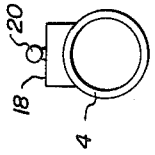


FIG. 3.

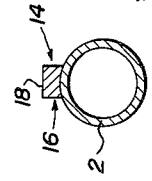


FIG. 4.

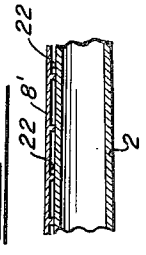


FIG. 6

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SIGHTING RIB FOR FIREARMS

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The present invention relates to firearms and more particularly to a novel and improved sighting rib for the barrel of a firearm.

The sighting rib according to the present invention may or may not be ventilated, although a ventilated rib is to be preferred to minimize distortion in the sighting plane which is the result of heat radiated from the gun barrel; and the sighting rib may be provided in the gun barrel during manufacture of the barrel, or may be provided separately for attachment to gun barrels in any suitable fashion such as described by R. J. Berg in United States Patent No. 2,869,271.

The sighting rib according to the invention is for use with firearms commonly known as shotguns, although application to firearms of the rifled variety is also possible.

It is an object of the present invention to provide a sighting rib for firearms which is novel in design and construction and which has sighting characteristics superior to that of known sighting ribs and affords the shooter rapid and accurate aiming of the firearms.

It is a further object of the present invention to provide a sighting rib which enables the shooter to center his aiming eye over the firearm quickly and exactly, and which prevents canting of the gun and which eliminates the need of an intermediate bead sight.

The sighting rib of this invention will be more fully described with reference to the accompanying drawings wherein:

FIGURE 1 illustrates in top view a barrel of a firearm with the sighting rib in place thereon,

FIGURE 2 illustrates in side view a barrel of a firearm with the sighting rib in place thereon, and

FIGURE 3 illustrates a cross-section view taken along line 3—3 of FIGURE 1,

FIGURE 4 illustrates a cross-section view taken along line 4—4 of FIGURE 1,

FIGURE 5 illustrates in top view the barrel of a firearm and showing a second embodiment of the sighting rib in position thereon,

FIGURE 6 is a fragmentary sectional view similar to the mid-region of FIGURE 2 showing an embodiment of the present invention wherein the sighting rib is ventilated.

In FIGURES 1 and 2, numeral **2** indicates the barrel of a firearm, numeral **4** the muzzle end of the barrel, and numeral **6** the receiver end of the barrel. The sighting rib is shown by numeral **8**; and for purposes of illustration the aiming eye of the shooter is shown at **10**.

In FIGURE 1 it will be appreciated that the width of the rib is greater at the muzzle end (point B) of the barrel than at the receiver end (point A). It will be appreciated also that the width of the rib decreased *uniformly* from the muzzle end toward the receiver end, and if the planes of the two sides of the rib are projected (see broken lines **12** in FIGURE 1) over the receiver end and toward the butt (not shown) of the firearm that they will converge at a point somewhat behind the receiver end and in the aiming eye **10** of the shooter. Thus it will be clear that the sides **14** and **16** of the sighting rib are so constructed, and the rib so positioned on the firearm barrel, that the planes of the sides of the sighting rib radiate from the aiming eye of the shooter. The uniformly tapered sides of the sighting rib are found to be an extremely great

advantage in correctly and quickly aiming the gun. When a gun equipped with the sighting rib of this invention is brought to the shoulder of the shooter, and the shooter's eye lowered into aiming position, the eye is, in fact, in line with both sides **14** and **16** of the sighting rib at the same time. Any horizontal movement of the aiming eye brings the near side of the rib into full view, and the shooter instantly knows his aim is improper and quickly corrects.

In FIGURES 1 and 2 the total length of the rib is designated by the letters A and B. From points C to B the height of the rib above the barrel is preferably uniform, and from point C the height of the rib decreases uniformly toward A as shown clearly in FIGURE 2. It may be found advantageous to have the height of the rib at C, slightly higher than at B, or vice-versa, depending upon the practical application.

In FIGURE 1 while the grooves or lines **18** are provided only on the length C–B of the rib this is simply a matter of construction and the grooves or lines **18** can be provided throughout the whole length A–B as desired.

As above explained the sides of the rib are cut on lines which radiate from the aiming eye to the muzzle end regardless of the length of the rib or its width at the muzzle end. The rib may extend from the muzzle end of the gun to a few inches down the barrel, or from the muzzle end of the gun to, and sometimes over, the receiver of the gun. The topside or face of the rib may be lined or grooved (see **18** in FIGURE 1) to prevent light reflections. In addition these lines **18** will also radiate from the same point as the lines (in plan view FIGURE 1) which form the sides of the rib and assist in aiming. The muzzle end width and the length of the rib will vary from gun model to gun model.

If the distance from the aiming eye in shooting position to the muzzle end of the rib is 36 inches, and the rib muzzle width is, for example ½ inch. The width of the rib 18 inches from the muzzle or halfway to the aiming eye is therefore ¼ inch.

When the eye is lowered to near the top plane of the sighting rib (normal shooting position) the top face will appear to have parallel sides and grooving. When the aiming eye is centered over it, the aiming eye is, in fact, in line with both sides of the top face of the rib at the same time. Any horizontal movement of the aiming eye brings the near side of the rib into view, and the very strong tendency of the rib to cause the shooter to center the gun is illustrated.

Several things must be in line to accurately point a shotgun; these are the target, point of aim; the front and intermediate bead sights, and the aiming eye. To point a shotgun, some device or design must center the aiming eye so that this eye can act as the rear sight. With a plain barrel hunting gun, the positioning of the aiming eye is only the shooter's approximation of the position of the head in relation to the receiver of the gun. With a standard type target shotgun with intermediate bead sight and raised rib, the shooter tries to put his aiming eye in this rear sight position by alignment of the front and intermediate bead sights. The fact that most shooters "see quit a bit of rib"—that is to say, they leave the aiming eye above the top plane of the rib to give themselves an increased vertical lead on rising targets—reduces what chances there are to accurately align two beads, as the intermediate bead is then seen below the front bead.

The sighting rib of the present invention places the aiming eye easily, quickly, and naturally, in the exact position to act as the rear sight, and eliminates the need of an intermediate sight or any type of rear or receiver sight. The new rib will have a post **20** or bead near the muzzle end to indicate the center of the muzzle end. A point is taken accurately with a gun with the rib according to this

invention by centering the aiming eye by the rib, and placing the front post where the shooter wishes to shoot.

FIGURE 5 illustrates in plan view a further embodiment of the invention. The top surface of the rib is provided with radiating grooves or lines as shown in FIGURE 1, and while the width of the sighting rib increases uniformly from the receiver end to the muzzle end of the barrel for the greater length of the rib, the last few inches (from point D to point B in FIGURE 5) of the rib at the muzzle end taper inwardly somewhat as shown. It is contemplated that the width of the rib at the muzzle end will approximate the width of the rib at the receiver end of the barrel. It has been found that by tapering the width of the muzzle end of the sighting rib as shown in FIGURE 5, that the front post **20** can be "picked up" much quicker by the shooter's eye due to the narrower width of the rib at this point.

This tapering of the rib at the muzzle end does not detract from the astonishing effectiveness which the sight has in sighting the aiming eye over the gun barrel.

It is also contemplated by the inventor to provide the sides of the sighting rib with a light colour to be more easily visible.

In FIGURES 1–5 a non-ventilated sighting rib attached directly to the gun barrel has been shown. As above explained however the rib may be ventilated and may be detachable from the gun barrel for use with various firearms. An exemplary ventilated sighting rib **8'** having ventilation ports **22** substantially similar to those shown in the U.S. patent to Crank 2,496,854. The rib **8'** is otherwise identical to the rib **8** of FIGURES 1–5, possessing the advantages thereof described hereinbefore.

The embodiments of the invention in which an exclusive property or privilege is claimed are defined as follows:

1. A sighting rib for firearms having a barrel with receiver end and muzzle end, the width of said rib decreasing uniformly from the muzzle end to the receiver end of the barrel, the planes of the sides of said rib converging at a distance behind the receiver end of the barrel.

2. A sighting rib according to claim **1** wherein the top surface of the rib is provided with radiating lines or grooves which converge at a point behind the receiver end of the barrel, and coincident with the point that the planes of the sides of the rib converge.

3. A rib according to claim **1**, the top surface of the sighting rib being provided with a sighting post or bead at the muzzle end thereof.

4. A sighting rib according to claim **1** wherein the sides are coloured a light colour.

5. A rib according to claim **1** wherein the rib is ventilated.

6. A sighting rib for firearms having a barrel with a muzzle end and a receiver end, said rib being mounted longitudinally along the top surface of said barrel, the width of said rib in the proximity of the muzzle end of the barrel being greater than the width of the rib in the proximity of the receiver end of the barrel, the planes of the sides of the rib convering at a point in space behind the receiver end of the barrel, and at least a portion of the top surface being provided with a plurality of lines or grooves radiating from the point at which the planes of the sides converge.

7. A sighting rib according to claim **6** wherein the sides of the rib are coloured a light colour, and the top surface of the rib at the muzzle end thereof is provided with a front post.

8. A rib according to claim **6** wherein said rib is ventilated.

9. A sighting rib for firearms having a muzzle end and a receiver end, said rib being positioned longitudinally along the top surface of the barrel of a firearm, the width of the rib being greatest at a point near its muzzle end and decreasing uniformly toward each end thereof, the planes of the sides of the rib from the said point to the receiver end of the rib converging at a point in space behind the receiver end of the rib.

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