FOLDING BIPOD ASSEMBLY FOR GUNS

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1. This invention relates to ordnance and fire arms, and especially to automatic and semi-automatic rifles, light machine guns and the like portable rapid-fire weapons. It aims to provide for such guns an improved muzzle support or bipod, adapted for shifting instantly and with a minimum of manipulation between a folded-out-of-the-way position on the gun and a fully set-up and locked position for use.

In the drawings illustrating by way of example one embodiment of the invention:

Fig. 1 shows a gun with the muzzle support or bipod positioned for use;

Fig. 2 is a side elevation of the muzzle and adjacent barrel portion, on a larger scale, showing the bipod folded and locked for carrying;

Fig. 3 is a top plan corresponding to Fig. 2;

Fig. 4 is a front elevation, facing the muzzle, with the bipod set up as in Fig. 1;

Fig. 5 is a side elevation, on a still larger scale, of a quick-release latch for the folded bipod;

Fig. 6 is a cross-section on the line 6—6 of Fig. 2, showing the bipod feet, secured by the holding latch;

Fig. 7 shows one of the feet on a larger scale, partly in section;

Fig. 8 is an enlarged cross-sectional view of the upper portion of the bipod, in set-up position as in Fig. 4, and with parts in vertical cross-section as on the line 8—8 of Fig. 1;

Fig. 9 is a horizontal section on the line 9—9 of Fig. 6;

Fig. 10 is a vertical longitudinal section substantially on the line 10—10 of Fig. 8;

Fig. 11 is a side elevation corresponding to Fig. 12 and 10, and

Fig. 12 is a longitudinal section, on approximately the scale of Figs. 6 to 11, vertically through the gun muzzle and associated bipod mounting.

In Fig. 1 muzzle supporting means representative of the invention is shown installed on a portable rapid-fire gun designated generally at 1, having a barrel 2 and a gas-tube 3. The particular gun selected for the purposes of illustration is the present Browning automatic rifle cal. .30, it being understood that the invention is applicable to other guns of the general class concerned, whether gas-operated or otherwise.

Gun bipods or other front supports have heretofore been adjustable as between a generally upright use position and an intended carrying position in which the legs are more or less parallel to the gun barrel. To adjust such supports, including that presently supplied as standard equipment for the gun of the type and model above mentioned, separate manipulation of a number of parts is required, involving loosening of threaded clamps by unscrewing wing nuts or the like, then manual extending and interengaging the parts, and finally retightening the clamps. In so doing, time is lost when seconds may be invaluable. Projecting portions of these supports, even when knocked down, interfere with portability in overgrown terrain.

Guns of the type more particularly here concerned, while in the category of "light-weight" in the general sense that they can be carried in fully assembled use position by one man, are generally of such weight that they cannot feasibly be fired from the shoulder or otherwise without auxiliary support. It is further essential that such support be instantly available, as in the case of a charge by the rifleman. With the existing equipment a major difficulty is that in making such charge, the gun must be carried with the bipod legs open; the manipulation otherwise required, in unfolding and setting up the existing bipod is too complicated and time-consuming to be left for completion at the end of a charge. The rifleman therefore has no alternatives other than to make his advance with the bipod open, which is a cumbersome procedure, or to discard the support entirely and so leave the gun without adequate front support.

The present invention counteracts these disadvantages, through the provision of a foldable bipod carried compactly along the barrel and adapted for self-opening to and automatic locking in spread use position, in such convenient and rapid fashion that having a gun so equipped the rifleman may execute a charge with the bipod closed and yet lose no valuable time in opening the support on completion of the charge.

The bipod assembly or unit, as a whole, Figs. 1 to 6 comprises a pair of laterally opposed adjustable legs each designated generally at 10. Since the legs may be identical save for opposite lateral pivoting, description of one applies also to the other, corresponding parts being similarly numbered. Each leg has a tubular main or upper member 11 and a longitudinally adjustable lower member 12. As shown the latter telescopes in and may be locked to the upper member 11, in any relative position between the limits of extension and retraction, as by quick-acting clutch means to be described herein.

The lower leg members 11 are provided at their outer ends with ball-headed posts...
feet, one of which is seen separately in Fig. 7. The feet sockets are radially slotted as at 10, Fig. 7, allowing the feet to pivot transversely of the legs in either direction and through a wide range, so as to stand at any convenient angle to the leg axis as the ground or supporting surface may dictate, noting Figs. 4 and 7, or to fold flatwise and generally parallel to the legs, as in Figs. 2, 3 and 6. Projecting centrally at the underface of each supporting foot 15 is a boss or button 17 annularly grooved as at 18 for locking engagement with the catch or holder element designated generally at 20, Fig. 5, and also seen in Figs. 1, 2 and 6. The bosses 17 also assist in anchoring the bipod feet during use of the gun.

As noted, each leg 10 is constructed and arranged for readily securing the lower member 12 in any desired position of longitudinal extension and retraction. One simplified and efficient means for the purpose, in the nature of an expandable cluch, is illustrated in Fig. 8. The inner end of the lower leg member 12, shown as tubular, receives a plug 20 from which projects a stud 21 having a conical taper toward the plug. The larger end of the stud 21 has threaded engagement as at 22 in a longitudinally split clutch element comprising divided collar segments 23 slidably received in and adapted to grip the upper leg member 14. Rotative bearing and guiding means may be provided between the clutch segments 23 and the stud 21, such as the ball bearings 24 held in annular grooves in the opposed surfaces of said parts.

Thus it will be seen that merely by turning the lower leg member 12 about its axis and relative to the upper member 14, the tapered stud 21 will be advanced or retracted in the clutch element 23, thereby expanding it radially into gripping engagement with the wall of the leg member 11, or releasing it and freeing the leg members for relative longitudinal adjustment, depending on the direction of turning. Desirably the thread formation at 22 is such that the leg members may be interlocked or released within a one-half turn or thereabouts, for quick operation. To assist in this connection the projecting portions of the lower leg members 12 desirably are roughened, knurled or otherwise formed as at 12a, Fig. 4, for ease in gripping and manually turning them to and from locked relation.

Maximum extension of the legs is limited by suitable stop means. As shown in Fig. 8 the plugs 20, which are pinned, welded, brazed or otherwise fixed at the inner end of the leg members 12, have shoulders 25 fitting in the upper leg members 11 and circumferentially recessed to receive expansible spring rings 26. Each leg member 11 has an internal annular recess 27 near its lower end adapted to receive the corresponding ring 26, in the fully extended relation of the leg members, Fig. 8. The lower end wall 28 of the recess 27 defines a limiting stop against which the spring ring 26 abuts, while engagement of the ring beneath the shoulder 25 prevents passage of the latter and prevents unintentional withdrawal of the corresponding lower leg part 12. The other end portion of the recess 27 of each bipod leg has a tapered cam surface as at 29, acting to compress the stop ring 26 and facilitating relative telescoping of the leg members 11 and 12 on release of the clutch device.

The described bipod legs 10 have pivotal and swivelling support on and with respect to the muzzle end of the gun barrel 8, for movement between the open position of Figs. 4 and 8 to 11 and the folded carry position of Figs. 2, 3 and 6. Desirably the manner of attachment, as herein shown, provides for lateral traverse of the gun on the set-up bipod, for horizontal sweeping fire through a substantial angle. For this purpose improved mounting means is herein provided, as best seen in detail in Figs. 8 to 11, and more generally in Fig. 11. Noting particularly Fig. 8 such bipod mounting means or head comprises a saddle or housing body designated generally at 30, Fig. 8. It comprises an attaching collar 31 having a close fit on the barrel 8 or the muzzle extension or flash-shield and bipod adapter 8a thereon forward of the front sight 8b, where it may be demountably held between radial flange members, washers or the like on the barrel 8 and on the muzzle extension 8a respectively.

The particular example selected for illustration the bipod mounting or saddle 30 as a whole is constructed and arranged for operative association with existing standard parts, such as those for the Browning automatic rifle. Noting particularly Fig. 12, the muzzle proper has a rearward extension 31 formed into which the flash-shield and bipod adapter 8a is threaded. A spring washer 32 is installed between the adapter and the barrel proper. The adapter has an internal radial flange 33 and a projecting hex formation 34 for application of a tool. The radial face members 35 are longitudinally spaced to provide stops receiving the bipod attaching means between them. In the device of the invention the attaching collar 31 accordingly is longitudinally proportioned for receipt in the upper cut members 36 and 37 and has a bore of a diameter for seating on the tubular rear portion of the adapter 8a between said flanges. Desirably the fit is such that in the installed position, with the adapter turned fully home against the spring flange-washer 32 the gun may be rotated about the barrel axis in and relative to the collar 31, for angularly adjusting the butt of the rifle to the rifleman's shoulder. The parts have a relatively tight fit and the spring flange 34 takes up any possible longitudinal play, so that normally the gun and collar 31 is rigidly engaged in an angular position with respect to the barrel axis to which they may have been adjusted.

The body of the saddle 30, of generally rectangular form and herein designated as integral from the collar 31, includes laterally spaced side walls 32, 33 and front and rear cross-walls 34, 35, Figs. 10 and 11. The side walls 32, 33 respectively terminate in opposed lateral flanges 36, 37 of symmetrical arcuate contour as viewed in plan, Fig. 9, to serve as automatic spreader cams and guiding in opening movement of the bipod legs. These arcuate flanges, disposed substantially concentrically about the vertical axis for traversing of the gun, assist in such movement and also together define a supporting rest for the barrel when the bipod is folded, as in Fig. 2.

The saddle 30 have opposed circular openings 32', 33' conjointly forming a partly spherical bearing socket centered with respect to the saddle body and movably supporting a universal swivel element 40. The latter comprises an intermediate tubular portion or sleeve 41 and opposed partly spherical bearing flanges 42, 43 conformant to the ball-like socket 32', 33' of the saddle body. The sleeve 41 carries, preferably non-rotatably, a short cross shaft 45 projecting at the opposite sides of
the saddle 30 to provide trunnion-like supporting studs 46, 47 for the respective bipod legs 10. The studs 46, 47 have diametral apertures receiving pivot pins 48, 49 respectively, on which the receiving legs 10 are directly pivoted.

Each bipod leg 10 has at its upper end a closed yoke-like, coupling including a lower plug portion 51 fit into the adjacent end of the corresponding upper leg member 11 and pinned, welded, brazed or otherwise secured to it as at 52. The leg couplings further each included a coupling ring or yoke 53 integral with the plug portion 51 and surrounding the corresponding stud 46, 47, said coupling rings 53 each having opposed bearing apertures for passage of the corresponding pivot pins 48 or 49; see particularly Fig. 11.

The leg pivot pins 48, 49 desirably are removably held in place as by resilient split rings 54 received in grooves in the pins. Diametrically opposed portions of each coupling ring or yoke 53 are oppositely flared, at the inner and outer sides of the coupling, as at 55, 56 and bevelled inwardly as at 57 for angular movement of the legs 10 about the axes of the pins 48, 49, and adapted to and from a laterally spaced position as in Figs. 4 and 8. These flared portions 55, 56 of the couplings and the bevelled inner corner portions 57 preferably are proportioned and arranged to engage the studs 46, 47 and the sides of the saddle 30, respectively, as limiting and positioning means in the desired maximum open relation of the legs, substantially as in Fig. 8, the base flanges 36, 37 of the saddle cooperating in that connection.

From the foregoing description with particular reference to Figs. 10 to 11, and assuming now that the bipod is in the open or set-up firing position as there shown, it will be apparent that the mounting and universal pivotal connections provide for ready folding of the legs to the closed or carry position of Figs. 2, 3 and 6. In this folding, the legs swing inwardly toward each other, about the axes of the pivot pins 48, 49, and also rearwardly and inwardly toward the gun barrel, into approximate parallelism with the latter, notably particularly Fig. 2. In this latter movement the two legs swing in unison about the axis of the cross shaft 45 and the coincident cross axis of the spherical bearing 40, the latter turning in and relative to its supporting socket 32, 32' on the saddle 30. In the set-up position of the bipod, said spherical bearing means affords capacity for sweeping fire, enabling the gun to be swung azimuthally on the bipod.

The saddle or mounting 30 is further provided with means for automatically locking the bipod in the open position and desirably also with means urging the bipod to the firing position, and further to automatically limit movement of the legs there secured, preferably detachably, by screws or the like 68. The closed end of the retainer 65 has its inner surface formed upon an arc concentric with the axis of the cross shaft 48, and the outer end of the locking plunger 61 is rounded to ride easily along said surface, during movement of the bipod legs between closed and open positions.

The retainer 65 is apertured as at 69 at its lower portion, centrally between the saddle cross-walls 34, 35, to receive the outer end of the plunger 61 when the latter is opposite and is projected into the aperture by the spring 62, as shown in Figs. 8 and 10. Outward movement of the plunger 61 is limited as by an annular shoulder 61a thereon adapted to abut the retainer 65 peripherally of the locking aperture 66.

It will be understood that the plunger has an overall length calculated with reference to the depth of the housing recess such that the plunger may be thrust inwardly from the automatic locking position of Figs. 8 and 10 sufficiently to clear it from the housing recess 63 of the retainer 65, whereby the bipod legs are freed for folding in the manner already described.

To assist in the automatic opening action of the bipod, notably particularly Fig. 10, I have herein provided opening means as previously mentioned. As here illustrated such means comprises an elongated coil spring 70 housed in the saddle 30, within the U-shaped retainer 65. One end of the spring 70, that away from the gun muzzle and seen at the right in Fig. 10, is anchored to the saddle as by inserting it through apertures in the retainer leg 67 and the rear cross wall 36 and hooking or otherwise securing it as at 71. From its anchored end the spring extends forwardly over and reversely down around the spherical bearing sleeve 41 and has its other end hooked about the projecting portion of the plunger sleeve 60, as at 72. Fig. 10. Said plunger sleeve thus serves as a crank arm affording a leverage for rotating the leg-carrying cross shaft 45 about its axis.

Referring still particularly to Fig. 10, it will be understood that in the closing movement of the bipod legs, the trunnion-like cross shaft 45 together with the spherical bearing 40 turns in the counterclockwise direction so that the released plunger 61 rides upwardly along the retainer 65 in the direction of the dotted arrow. The spring 70 accordingly is further extended and tensioned. Hence on subsequent release of the bipod legs contraction of the spring 70 acts to move the rotative parts reversely, clockwise in Fig. 10, in the down direction of the dotted arrow. This opening action is assisted by gravity and the weight of the legs when the gun is in a general horizontal position, and also by the normal act of thrusting the gun forwardly and down onto the ground in firing position. Consequently no time is lost in adjusting the bipod, as for example after completing a charge with the bipod in the folded carry position.

In the full extended position of the bipod the locking plunger 61 comes opposite the aperture 65 in the retainer 65, where it automatically snaps into the locked position of Figs. 8 and 10. It is further particularly emphasized that in this opening action the bipod legs 10 are automatically spaced laterally to correct open position by action with the arcuate cam-like edge portions of the basal flanges 36, 37 of the mounting sadd...
There remains to be described the cooperative quick-releasing means for securing the bipod in the folded or carry position of Figs. 2, 3 and 6. Referring to said figures, also Fig. 5, I provide for this purpose a movable catch device 80, here-in slidyly mounted on and between the gun barrel 8 and the gas-tube 9.

As best seen in Figs. 5 and 6, this catch unit 80 comprises a pair of opposed reversely curved elongated spring plates 81, 82 preferably having rounded ends substantially as shown. The opposite upper and lower portions of the two spring plates are formed to fit slidyly against and conform to the walls of the gun barrel and gas-tube respectively. The two plates are fastened to each other, and held in place on the gun, as by rivet-headed cross pins, bolts or the like 83, 84 adjacent the respective ends of the plates and extending across in the space between the barrel 8 and the gas-tube 9. At one or both sides of the gun one of the plate-connecting pins such as 84 has a lateral extension carrying a wooden, fibre or other heat-insulating collar as at 85, Fig. 6, providing a convenient finger piece for manipulating the catch 80; see also Figs. 1 to 3.

Each spring plate 81, 82 has an elongated longitudinal slot 86, with enlargements at one and preferably both ends, as at 87, 88. The opposite marginal portions of the slots 86 are interumed and flared as at 89, Fig. 6, for mutual holding engagement with the buttons 17 of the corresponding bipod feet 15. As best seen in Fig. 6 the plates 81, 82, of spring material thus in effect each provide an elongated socket-like formation, in the nature of the female element of a snap fastener. On folding of the bipod the feet buttons 17 are easily snapped into holding relation with the corresponding plates 81, 82, at any location along the slots 86 in which they may happen to come. Thus for any given position of the catch of fastener 80 as a whole, along the gun barrel, there is a substantial range of adjusted leg-length of the bipod at which the feet may be snapped into the catch. Or if the leg length has been substantially altered after the last previous closed fastening of the bipod, the catch as a whole may quickly be slid on the barrel in one or the other direction to bring the fastener slots 86 opposite the feet buttons 17. Accordingly it is generally unnecessary to telescope the bipod legs in order to fasten them closed along the gun barrel.

Whenever desired, however, lengthening or shortening of the legs may be quickly accomplished as previously described in connection with Fig. 6. In knocking down or folding and fastening the bipod in the carry position, as above described, the locking plunger 61, the spring 62 of which may be relatively light, is readily depressible by the operator's finger sufficiently to release it from the retainer 66.

To release the bipod for automatic opening the catch 80 is slid in either direction at the preference of the riflemen, bringing the feet buttons 17 opposite either the front or the rear end apertures 87 or 88. The length of the buttons 17 of the bipod feet desirably is calculated with relation to location of the snap-fastener slots 86 transversely of the gun so that in the closed and fastened position, noting particularly Fig. 6, the bipod feet and legs are held in toward or against the plates under some tension. Hence to open the bipod all that is required is a quick short movement of the catch, aligning one of the aperture pairs 87 and 88 with the feet buttons 17. Thereon the tension under which the legs have been held together causes them automatically to spring oppositely outward sufficiently to withdraw the buttons from the catch. The bipod is then immediately subject to the action of gravity, herein aided by the opening spring 10, so that the legs automatically assume the desired open and locked position as previously explained. The rapidity with which the gun may be brought into action following a shift in location will readily be apparent.

While the invention has been illustrated in connection with a Browning automatic rifle, a gas-operated gun equipped with a tube such as 9, and with respect to which the closing catch 80 is particularly adapted, it will be understood that instances where a gas-tube is not available for mounting the bipod catch, similar or other holding means may be otherwise associated with the barrel or any conveniently available fixed part whereby to afford a compact non-projectant closed condition for the bipod substantially as herein disclosed.

Among numerous other advantages included in the bipod-muzzle-support of the invention is that of ease in manufacture. For example, the entire mounting unit 30 including the rectangular body 33, attaching collar 31 and the basal portions 36, 37 forming the closed, stamped or otherwise formed from sheet or pressed steel, with avoidance of numerous machining operations required for gun supports as heretofore employed. The same also applies generally to the other parts, all of which are of simple construction and adapted for rapid manufacture and assembly in large quantities.

My invention is not limited to the particular embodiment thereof illustrated and described herein, and I set forth its scope in my following claims.

I claim:

1. In combination with a gun of the class including automatic, semi-automatic and machine guns, a folding bipod mount comprising a saddle having a collar received on the gun barrel adjacent the muzzle and a dependent mounting body, a transverse bearing member universally pivoted in said body, barrel-supporting legs successively pivoted to oppositely projecting portions of the bearing member for opening and closing movement relatively to each other and transversely of the barrel, said bearing member adapting the legs for swinging longitudinally of the barrel between general parallelism therewith and approximate perpendicularly thereto and providing also for angular traverse of the barrel and saddle on and relative to the legs, spring-actuated manually releasable means automatically to lock the legs in said perpendicular position for firing, and a fastener device on the gun for holding the legs in said generally parallel position for carrying.

2. In combination with an automatic rifle having a muzzle-fitted bipod adapter, a folding bipod mounted on the adapter and comprising a supporting saddle, a bearing member having a major longitudinal axis, said bearing member movably carried by the saddle for pivoting relative thereto in a plurality of different angularly related planes and having barrel-supporting legs pivoted thereon, on parallel axes perpendicular to said major axis of the bearing member, whereby the legs are movable between an angularly spread and generally upright firing position and a relatively compacted carry position along the gun barrel, spring-actuated manually releasable means automatically to lock the legs in firing position, and a
fastener device on the gun for holding the legs in carry position subject to instant release and opening.

3. A folding bipod assembly for guns of the class described, comprising a mounting saddle including a barrel collar and an offset housing body, a cross shaft having an intermediate universal bearing and oppositely projecting ends, a socket for said bearing in the housing body, a pair of legs having yoke-like end couplings transversely pivoted at the respective ends of the shaft, a spring-pressed locking element and a cooperative gripping element, one on the shaft and the other on the housing and interengaging to lock the shaft and legs at a given angle relative to the axis of the barrel collar, releasable fastener means adapted for mounting on the gun and cooperation of fastener members on the respective legs; for securing the latter in a generally parallel folded position.

4. A folding bipod mount for guns of the class described, comprising, in combination, a saddle having a supporting barrel fitting, a cross shaft universally pivoted in the saddle, a supporting leg pivoted at each end of the cross shaft on parallel axes of the cross shaft, and spring-actuated manually releasable means for interengaging the cross shaft and the saddle to lock them in a given angular relation.

5. A folding mount for a portable gun, comprising an attaching collar, a mounting body on the collar, a pair of legs, a transverse element presenting opposed axially aligned studs, means connecting the upper ends of the respective legs to the studs for pivoting toward and from each other at right angles to the stud axes, and universal bearing connections between the mounting body and the transverse element adapting the latter for turning in the body about the stud axis and also in a plane perpendicular thereto for gun traversing purposes.

6. A bipod mount for guns of the class described, comprising, in combination, a supporting body, a plurality of legs each having one end pivoted to the body for movement between open and closed positions, each leg having a plate-like positioning foot universally swivelled at the outer end of the leg and each such foot having at the outer face thereof a projecting conjoint anchor and fastener stud for ground anchoring the foot in the open leg position and for releasable fastening of its leg in the folded position.

7. A bipod mount for guns of the class described, comprising in combination, a supporting body having a tubular collar adapted for coaxial attachment to a gun barrel to present the body in pendant relation thereto, a transverse bearing element having coaxial opposed trunnion-like studs, and element journalled in the body for turning about the stud axis, a supporting leg pivotally connected to each stud on parallel axes perpendicular to the stud axis, said legs pivotally moveable in unison about the stud axis between an open supporting position substantially at right angles thereto and a folded position approximately paralleling the axis of the attaching collar, and spring means in the supporting body loaded by said movement of the legs to folded position and tending to turn the transverse bearing element so as to move the legs to supporting position.

8. A bipod mount for guns of the class described, comprising in combination, a supporting body having a tubular collar adapted for coaxial attachment to a gun barrel to present the body in pendant relation thereto, a transverse bearing element having coaxial opposed trunnion-like studs, said element journalled in the body for turning about the stud axis, a supporting leg pivotally connected to each stud on parallel axes perpendicular to the stud axis, said legs pivotally moveable in unison about the stud axis between an open supporting position substantially at right angles thereto and a folded position approximately paralleling the axis of the attaching collar, and lateral means on the supporting body cooperate with the respective legs for relatively spreading them about their pivot connections to the studs on movement of the legs into supporting position, and spring means carried by the supporting body urging the legs toward open and spread position.

9. A bipod mount for guns of the class described, comprising in combination, a supporting body having a tubular collar adapted for coaxial attachment to a gun barrel to present the body in pendant relation thereto, a transverse bearing element having coaxial opposed trunnion-like studs, said element journalled in the body for turning about the stud axis, a supporting leg pivotally connected to each stud on parallel axes perpendicular to the stud axis, said legs pivotally moveable in unison about the stud axis between an open supporting position substantially at right angles thereto and a folded position approximately paralleling the axis of the attaching collar, and automatically engageable manually releasable means for locking the legs in open supporting position.

10. A bipod mount for guns of the class described, comprising in combination, a supporting body having a tubular collar adapted for coaxial attachment to a gun barrel to present the body in pendant relation thereto, a transverse bearing element having coaxial opposed trunnion-like studs, said element journalled in the body for turning about the stud axis, a supporting leg pivotally connected to each stud on parallel axes perpendicular to the stud axis, said legs pivotally moveable in unison about the stud axis between an open supporting position substantially at right angles thereto and a folded position approximately paralleling the axis of the attaching collar, and automatically engageable manually releasable means for locking the legs in open supporting position.

11. A bipod mount for guns of the class described, comprising in combination, a supporting body having a tubular collar adapted for coaxial attachment to a gun barrel to present the body in pendant relation thereto, a transverse bearing element having coaxial opposed trunnion-like studs, said element journalled in the body for turning about the stud axis, a supporting leg pivotally connected to each stud on parallel axes perpendicular to the stud axis, said legs pivotally moveable in unison about the stud axis between an open supporting position substantially at right angles thereto and a folded position approximately paralleling the axis of the attaching collar, and automatically engageable manually releasable means for locking the legs in open supporting position, said means comprising a spring-pressed plunger radially housed in the transverse bearing element, and a plunger retainer having a guide surface therefore concentric with the bearing element and a locking formation to receive
the out-thrust plunger on arrival of the legs in the open supporting position.

12. For a barrel-equipped gun of the class described, a muzzle-supporting bipod assembly including a barrel fitting having a mount housing, a pair of supporting legs having universal pivotal connection with the housing, for pivotal movement between an open supporting position and a folded position for generally paralleling the barrel of such gun, the legs having positioning feet pivoted at the outer ends and having catch means to be mounted on such gun in approximate line rearwardly of the barrel fitting, said means releasably engaging the respective feet thereby to hold the legs when in folded position.

13. In a bipod assembly for a gun according to claim 12, the construction wherein the catch means comprises male and female snap fastener elements, one fashioned to be movably supported on the gun barrel and the other on the feet of the legs.

14. In a gas-operated automatic rifle having a barrel and a gas tube paralleling and radially spaced from the barrel, a muzzle-supporting bipod assembly including a barrel fitting having a mount housing, a pair of supporting legs universally pivotally connected to the housing so as to have an open supporting position and a closed folded position along the barrel, a plural catch element conjointly carried by and between the barrel and the gas tube for manual sliding adjustment along them, said catch element having elongated snap fastener sockets adjacent the folded positions of the respective legs, and the latter having fastener studs for holding engagement in the corresponding socket of the catch element.

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