Jan. 4, 1966 W. L. MAHONEY 3,226,868

PIVOTABLE TELESCOPE SIGHT MOUNT

Filed Oct 22, 1962

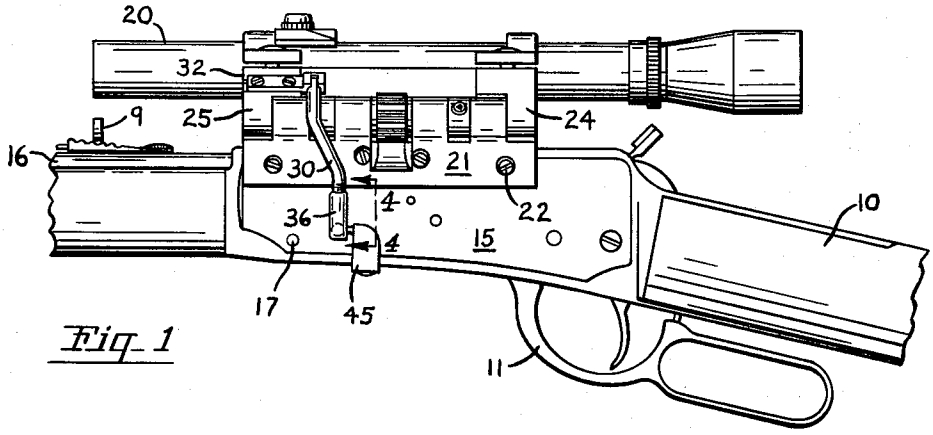


Fig. 1

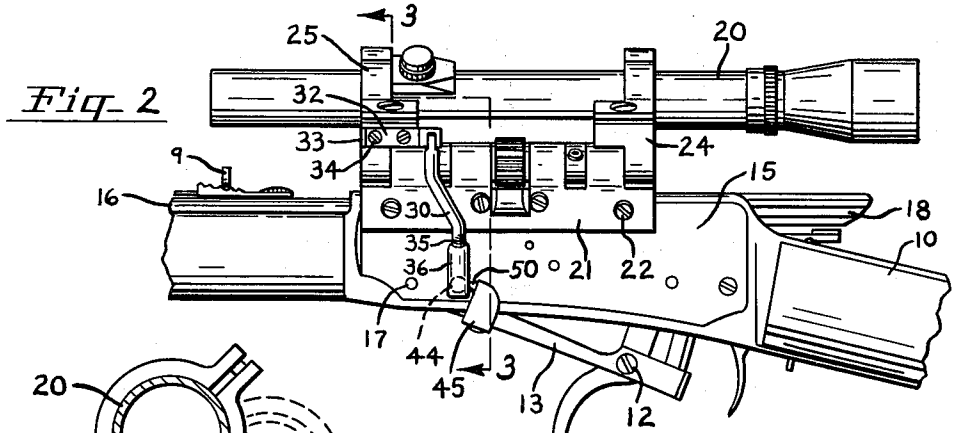


Fig. 2

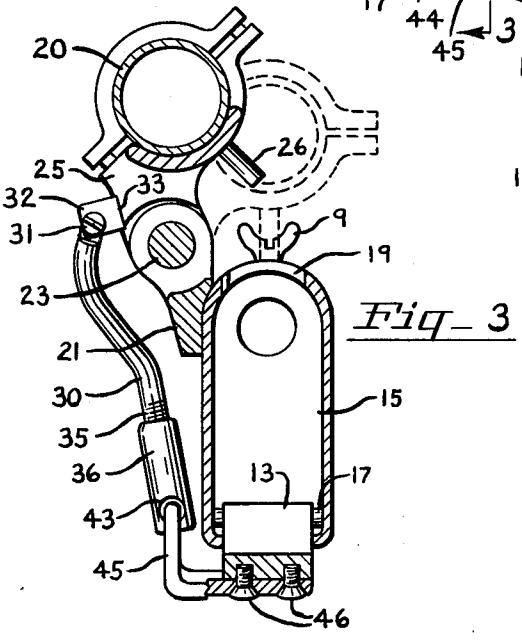


Fig. 3

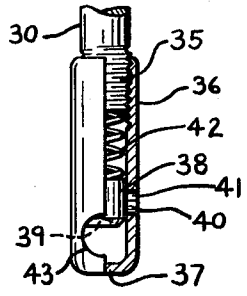


Fig. 4

INVENTOR.
WOODROW L. MAHONEY
BY
Lee R. Schermerhorn
Attorney

United States Patent Office

3,226,868

Patented Jan. 4, 1966

3,226,868

PIVOTABLE TELESCOPE SIGHT MOUNT

Woodrow L. Mahoney, 10129 NE. Saratoga St., Portland, Oreg.

Filed Oct. 22, 1962, Ser. No. 232,097
2 Claims. (Cl. 42—1)

This invention relates to improvements in telescope sight mounts on hunting rifles and has particular application to lever action top ejection rifles.

Telescopic sights cannot be used on such rifles without some provision for automatically moving the telescope out of the way of the ejected shell which is thrown upward out of a top opening in the receiver by the operation of the ejecting mechanism. Devices heretofore proposed for this purpose have been unsatisfactory because of objectionable modification of parts of the gun mechanism and because the proposed devices have tended to interfere to some extent with the smooth operation of the ejecting mechanism of the gun. Also, most devices heretofore proposed have operated by cam action which entails excessive friction and wear not only on parts of the telescope mount but also on certain parts of the rifle itself.

The general object of the present invention is, therefore, to provide an improved mechanism for swinging a telescope sight out of the path of an empty shell being ejected from a lever action, top ejection rifle. Another object is to provide a device for such purposes which is free of cam operators, which is inexpensive to manufacture and install, which is not subject to appreciable wear and which may be applied to certain conventional telescope mounts.

In the present construction, the telescope is swung to the left by a link connected with the floor plate or lever link on the bottom of the receiver which moves downward when the lever action is operated to eject a shell. The telescope mount starts to move out of the way as soon as initial movement of the lever takes place. By the time the lever has moved far enough to withdraw the shell from the barrel and eject it upwardly, the telescope is clear of the upward path of the shell so that the latter is freely ejected. Then, when the lever is closed to push a new shell into the barrel, the floor plate rises and swings the telescope back into sighting position. All this is accomplished automatically by the usual manipulation of the lever action of the rifle so that there is no possibility of the telescope ever preventing proper ejection of the shell.

The invention will be better understood and the foregoing and additional objects will become apparent from the following description of a preferred embodiment of the invention illustrated on the accompanying drawing. Various changes may be made, however, in the details of construction and arrangement of parts, and all such modifications within the scope of the appended claims are included in the invention.

In the drawing:

FIGURE 1 is a side elevation view of a lever action rifle embodying the present invention, showing the lever action closed and the telescope in normal sighting position;

FIGURE 2 is a view similar to FIGURE 1 with the lever action in open position and the telescope swung out of the way of the ejected shell;

FIGURE 3 is an enlarged cross section view taken on the line 3—3 of FIGURE 2; and

FIGURE 4 is an enlarged fragmentary view, partly in section, taken on the line 4—4 of FIGURE 1, but showing the ball socket with the ball connector removed therefrom.

The drawing, by way of example, illustrates a model of Winchester hunting rifle **10** having a conventional iron rear sight **9**. Ejection of a shell is accomplished by a lever **11** which is pivotally mounted at **12** on the rear end of lever link **13** in the bottom of receiver **15** behind the barrel **16**. The forward end of lever link **13** is pivotally connected to the receiver by a pin **17**. When the lever **11** is closed, as in FIGURE 1, the lever link **13** does not appear in side view because it forms a floor plate for the receiver but, when the lever is moved to open position, the lever link **13** swings downward away from the bottom of the receiver as shown in FIGURE 2. When lever **11** is operated in this manner, bolt **18** is drawn back to open the receiver for ejection of a shell through top opening **19** in the receiver. This movement of the lever link is utilized to swing the telescope **20** out of the way of the ejected shell.

The telescope mount may be of a conventional hinge type adapted for mounting on the left side of the receiver. Thus, the telescope mount has a base plate **21** detachably secured to the receiver by screws **22**. As best shown in FIGURE 3, base plate **21** carries a hinge pin **23** for a pair of telescope clamp arms **24** and **25**. Front arm **25** is equipped with a stop pin **26** which rests on top of the barrel **16** in front of receiver opening **19** to position the telescope in sighting position, as shown in broken lines in FIGURE 3. Further details of construction of the telescope mount itself are immaterial to the present invention.

The present improvement comprises essentially a link **30** connected at its upper end to the clamp arm **25** and connected at its lower end to the lever link **13** to swing the telescope to the left so as to clear the shell ejection opening **19** when the lever link **13** moves down with the lever **11** in ejecting a shell. The upper end of link **30** is pivotally connected to a pin **31** in a bar bracket **32** mounted on telescope arm **25**. The bar bracket is rigidly secured in a shallow groove **33** in the arm by a pair of screws **34**. The groove **33** precisely fits the bar so that there is substantially no stress on the screws and they do not tend to work loose.

The lower end of link **30** is threaded at **35** to receive a threaded ball joint connector sleeve **36**. The details of this fitting are shown in FIGURE 4. Its lower end is closed at **37** to form a bottom ball seat, and slidably mounted within the sleeve is a plunger **38** having a spherical depression **39** in its lower end to form a top ball seat. Vertical movement of the plunger is limited by a pin **40** which slides in a slot **41** in the sleeve. The plunger is urged toward its lower limit of movement by a compression spring **42**. The lower end of sleeve **36** is provided with a side opening **43** to receive a ball connector **44** on a bracket arm **45**. Bracket arm **45** is L-shaped as shown in FIGURE 3 and is secured to the bottom of lever link **13** by a pair of screws **46**.

The operation will be apparent from the foregoing description of the construction. When lever **11** is swung downward to eject a shell through opening **19**, the telescope is swung out of the way to its full line position in FIGURE 3. When lever **11** is pulled back to insert a new shell in the barrel, the upward movement of lever link **13** shifts the telescope back to its sighting position shown in broken lines in FIGURE 3.

Spring **42** serves two purposes. First, it performs the conventional function of retaining ball **44** in the socket formed by sleeve **36** and concave seat **39** while permitting the ball to be withdrawn through opening **43** for disconnecting the link. Second, the spring holds the telescope firmly seated in sighting position.

For the latter purpose, sleeve **36** is turned on threads **35** to adjust the length of the link so that stop **26** will seat on

top of the rifle barrel just before lever **11** is moved to fully closed position. The final closing movement of lever **11** then raises ball **44** slightly farther than the link **30** will travel upward, causing plunger **38** to rise slightly in the sleeve against the compression of spring **42**. This moves pin **40** up from the lower end of slot **41** so that the downward spring reaction from the lower end of the spring is exerted against ball **44** and the upward spring reaction from the upper end of the spring is exerted against link **30** whereby stop **26** is held in seated position on the rifle barrel by the force of spring **42** and there is no lost motion or play in the linkage. Opening **43** being of a size to admit the ball **44** permits such slight upward movement of the reduced neck **50** of the ball within the opening.

This utilization of ball socket spring **42** obviates the necessity for a spring device on the hinge pin **23** which would interfere to some extent with the operation of lever **11**. Such rifles are equipped with frictional means to hold the lever **11** in closed position, such retention being superior to the force of spring **42** whereby the latter does not tend to move the lever **11** to open position.

Ball **44** provides a universal joint to accommodate the complex movements resulting from the swinging of the ball about the axis of pin **17** and the swinging of the link about the axes of link pin **31** and main hinge pin **23**. When it is desired to remove the telescope mounting from the rifle, the ball **44** may readily be snapped out of its socket so as to disconnect link **30** from the arm **45**. The latter may remain permanently on the rifle since it does not project so as to interfere with manipulation of the rifle in using the conventional iron sights.

Having now described my invention and in what manner the same may be used, what I claim as new and desire to protect by Letters Patent is:

1. In a mount for a telescope sight on a rifle having a receiver with a lever link for lever action and a shell ejection opening in the top of the receiver, said mount having a part secured to one side of the receiver and a telescope clamp member hingedly connected to said part for movement toward and away from a seated sighting position on top of the rifle, the improvement comprising a connecting link pivotally connected at its upper end with said clamp member, a bracket arm on said lever link having a ball end, a socket for said ball on the lower end of said connecting link, and a spring in said socket acting downward against said ball to hold the telescope seated firmly in sighting position when the lever action is closed, said connecting link swinging the telescope to one side of said ejection opening when the lever action is operated to eject a shell.

2. A sight mount as defined in claim **1**, said socket comprising a sleeve having threaded connection with said connecting link for length adjustment.

References Cited by the Examiner

UNITED STATES PATENTS

2,425,130	8/1947	Shelley	42—1
2,499,878	3/1950	Raymond	42—16
2,501,137	3/1950	Minasola	42—16

BENJAMIN A. BORCHELT, *Primary Examiner.*

R. V. LOTTMANN, *Assistant Examiner.*