

THE MARTINI .310 CADET

Period: Circa 1910-1940

In about 1955 a surplus arms dealer introduced the .310 caliber B.S.A. Martini cadet rifle to the American gun market. Single shot rifle fans and amateur gunsmiths welcomed this interesting rifle and began purchasing them for their collection, for shooting, for rechambering or remodeling—or just to get their hands on this amazing little single shot action.

Evidently there must have been a good supply of these rifles. To help sell them the dealers began offering the rifle rechambered for the .32-20 or .32 Special cartridges, or rebored and rechambered for the .357 or .44 Magnum revolver cartridges. Later on the actions alone were offered for sale. The prices varied and after the first rush the original .310 rifle was priced at about \$12.50, the rechambered ones for about \$15.00 to \$20.00, and the rebored ones about \$30.00, and the actions about \$10.00.

The last time I noticed these rifles and actions for sale (in 1961) the complete rifle was offered for less than \$8.00 and the action for \$4.88! This was indeed an amazing value for an amazing action, especially if we consider that Stoeger listed this same action (new) in their 1939 catalog for \$37.50! At the same time the B.S.A. Martini No. 12 target rifle sold for \$125.00 and a sporter in .22 Hornet caliber for \$195.00.

To gain a bit of background on all Martini actions the reader should review the chapter on the "Peabody-Martini Single Shot Action." The basic Peabody action was invented by an American and improved upon by a Swiss inventor named Martini. Many Peabody-Martini rifles were

made in the United States and used by several countries but when the British adopted a rifle based on this same action they dropped the name Peabody and added their own names like Martini-Henry, Martini-Enfield, etc. However, they are generally referred to as the "large Martini" action.

In this chapter we are interested in the "small Martini" action. I have no information as to the exact date or circumstances of its development but somewhere someone figured that the large Martini was too heavy and clumsy to make into a suitable small caliber sporting rifle. Hence, the "small Martini" was born. Basically, the small Martini is just a scaled down version of the larger action, making it an ideal basis for a light weight hunting or target rifle. All small Martinis are not alike and in this chapter we are discussing only the .310 Cadet Martini which is the same action as the No. 12 B.S.A. Martini.

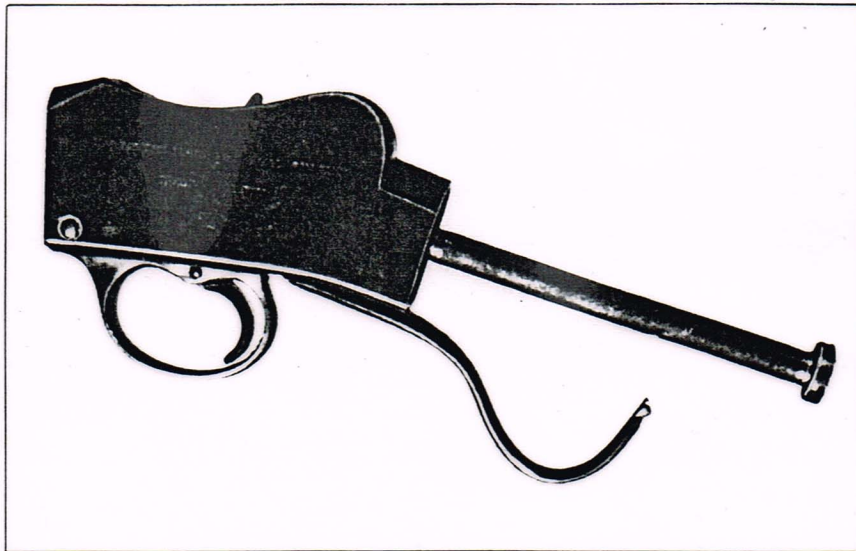
The basic difference between this small action and the large Martini action, other than size, is that the action parts of the Cadet Martini can be quickly and easily removed from the receiver as a unit, whereas the action parts of the large Martini are attached directly to the receiver. Information I have indicates that the B.S.A. firm (B.S.A. Ltd., Warwickshire, England) made approximately 80,000 of the .310 Cadet Martini rifles between 1911 and 1913.

The .310 Cadet Martinis sold on the surplus arms market were military training rifles used by cadets in the British Armed Forces, most of them from Australia. Because many were

made by the Birmingham Small Arms factory they were also known as the B.S.A. Cadet Martini. The Cadet Martinis were also made by other English firms such as Webley & Scott, Greener and others. All of these firms built fine sporting rifles on these actions which were generally known as the Martini Rook rifle when chambered for the .310 Rook cartridge. The official name that is given to this action is the B.S.A. No. 12 Martini, which was also the name of a fine .22 rimfire target rifle built around this action. As a sporting rifle it reached its highest perfection in the mid-thirties when it was chambered for the then new .22 Hornet.

Like its big brother, the small Martini is simple, strong, safe and rugged. The action is operated by the under finger lever. Pulling down on the end of the lever causes the forward end of the breech block to swing down to expose the chamber. Pulling it back up forces the breech block to close and be locked in place and also cocks the striker. There is no external hammer and the action is completely enclosed. The only gimmick on this action is the cocking indicator lever and the end of this lever projects above the edge of the receiver when action is closed and cocked. There is no manual safety, nor is one needed on this rifle. If the rifle is used for hunting the action can be carried open with a cartridge in the chamber. When a shot presents itself the action can be instantly closed.

Illustrated above: A light weight caliber .22 K-Hornet varmint rifle built on the Cadet Martini action.



The Martini Cadet action.

Now examine the No. 12 Martini action in detail. The receiver (1) is machined from a solid piece of steel. The barrel is securely threaded into the receiver having a standard V type right hand thread. The rear of the receiver is hollow to receive the tenon of the stock, which is in turn securely held in place by a sturdy through stock bolt (18).

The trigger guard (2), is the construction feature which sets the No. 12 Martini action apart from other Martini actions. All the working parts of the action are attached to it. This feature permits taking all the working parts out of the receiver as a unit for examination or cleaning. With this unit removed all the action parts are exposed and the operation and function of each part can be easily observed.

The trigger guard unit is held in place in the receiver by the lug (b) in the rear and by the pin (9) at the front. While this pin appears to be a screw it is actually a split pin. To remove the guard unit the pin is first driven out using a drift punch and driving it out split end first. To remove the guard unit from the receiver the index and middle fingers of the right hand are inserted into the trigger guard bow and the finger lever pulled open and held open by the thumb (so the extractor hooks are withdrawn from breech.) Then the front end of the guard is pulled down, tipped back and pulled from the receiver.

The action works are thus fully exposed quite similar to the sectional view drawing. To further disassemble the action push the extractor pin (10) out and remove extractor (8). Next push out the breech block pin (3) and lift out the breech block unit (4). Then push out finger and cocking lever pin (16) and lift out cocking lever (15). The finger lever (17) is

removed by pushing it upwards and twisting it out. To further disassemble the breech block unit remove the small lock screw (not shown in drawing) from the rear. Then using a large screw driver turn out the main spring retainer sleeve (5) and withdraw striker (6) and main spring (7). Reassemble the action in reverse order.

The drawing shows the action closed, locked and cocked, and ready to fire. The trigger sear tip is engaged in the sear notch of the L shaped cocking lever which in turn is holding the striker back against the pressure of the main spring. The breech block is locked into position by the two arms on the finger lever bearing against the locking shoulders under the breech block at (a). Pulling the trigger (14) releases the cocking lever and striker to fire the gun. As the striker goes down the cocking lever is pivoted forward.

Grasping the finger lever and pulling it down causes the front end of the breech block to swing down and open. This activates the extractor and resets the sear so the action will be cocked again when closed. Recapping this in slow motion the following takes place: When the striker is released to move forward, the cocking lever also pivots forward. This brings its lower

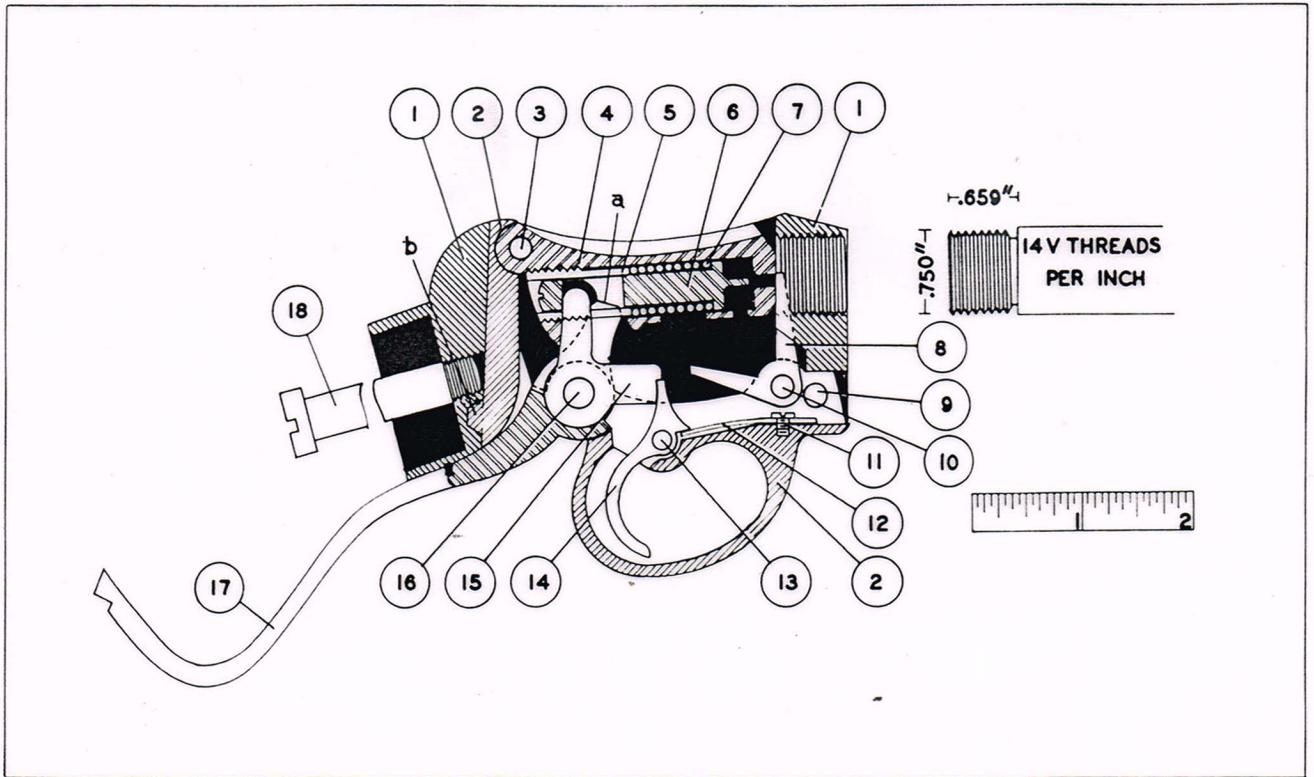
arm into near contact with the base of the finger lever. When the finger lever is pulled down the initial movement causes the cocking lever to be pivoted back. In turn, this causes the striker to be pulled back to retract the firing pin tip out of the spent primer. As the finger lever is being lowered, and after the striker has been pulled back a short ways, the locking arms on the finger lever have moved back off the locking shoulder under the breech block and have moved back against the rear of the breech block. Further movement of the finger lever causes the arms to tip the breech block down and open.

As breech block is nearly open it comes into contact with the lower arm of the extractor, first to apply some camming force to the extractor to loosen the cartridge and then, when the forward edge of the breech block comes into contact closer to the base of the extractor arm, it gives the extractor more "snap" to eject the case clear from the action. When the block has been fully opened the sear notch on the cocking lever has moved over and past the trigger tip. When the action has been fully opened and the finger lever released, the force of the main spring transmitted to the cocking lever causes the breech block to tip up slightly to bring the top edge of the breech block about level with the bottom edge of the chamber. It is at this point that the sears have again engaged. With the breech block in this position the extractor has been freed. A cartridge can then be slid down the sloping groove in the top of the breech block directly into the chamber without hindrance. Pulling the finger lever up against the stock forces the locking arms to push the breech block closed and locks it in this position. Since the sears have been in engagement and the cocking lever held stationary, the closing motion of the breech block has brought the striker back to full cock position.

When this action is fired the greatest percentage of the back thrust of the cartridge against the breech block is absorbed by the close contact of the rear of the block with the inner frame and receiver. A lesser amount of the thrust is taken up by the lock-

MARTINI CADET ACTION SPECIFICATIONS

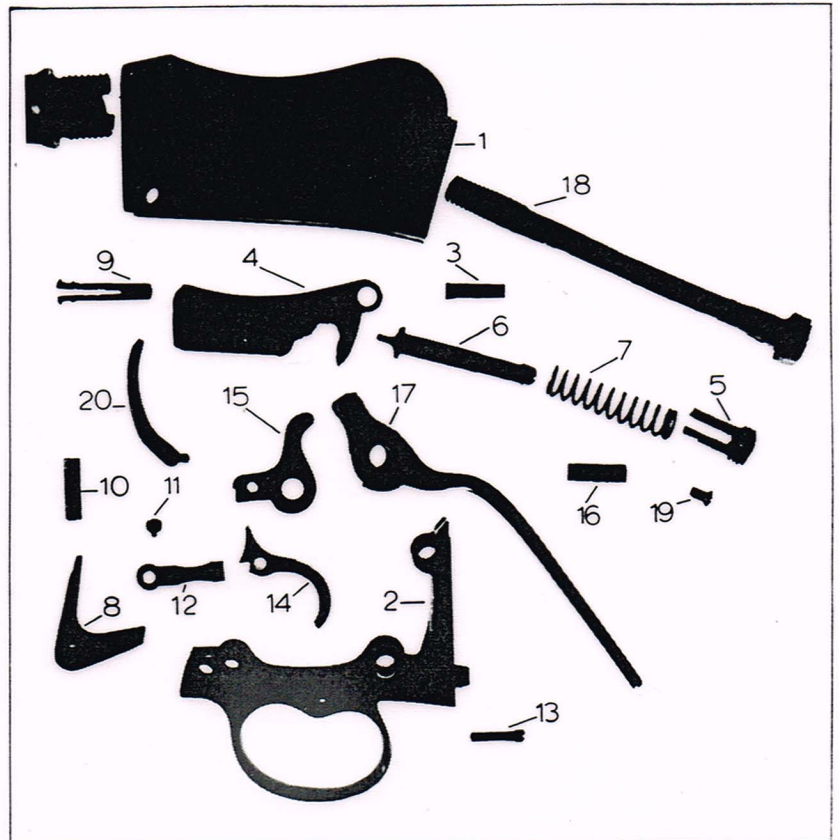
Type	Single shot, swinging breech block, operated by under finger lever.
Receiver	Machined steel.
Receiver finish	Blued.
Take-down	None provided.
Stock fastening	Via through stock bolt.
Ignition	Internal striker, powered by coil spring.
Trigger	Plain. Trigger connected to striker by cocking lever.
Safety	None provided.
Extractor	Automatic, semi-ejecting.
Action weight	1 lb. 8 oz. (w/o stock bolt)
Action thickness	1.00"
Side-wall thickness130"



MARTINI .310 CADET ACTION

Parts Legend

1. Receiver (frame)
 2. Trigger guard (inner frame)
 3. Breech block pin
 4. Breech block
 5. Main spring retainer sleeve
 6. Striker (firing pin)
 7. Main spring
 8. Extractor
 9. Trigger guard pin
 10. Extractor pin
 11. Trigger spring screw
 12. Trigger spring
 13. Trigger screw
 14. Trigger
 15. Cocking lever
 16. Finger & cocking lever pin
 17. Finger lever
 18. Stock bolt
 19. Main spring retainer sleeve lock screw (not shown on drawing)
 20. Cocking indicator lever (not shown on drawing)
- a. Locking shoulder
b. Lug



Component parts of the Martini Cadet action.

ing arms on the finger lever. This action is so well designed that the breech block and finger lever pins are under no stress when rifle is fired; in fact this action could safely handle the thrust of firing with these pins entirely removed. The rear end of the breech block and the hinge of the finger lever are so made and fitted to the trigger guard that they form a solidly supported hinge even without the pins. The pins, however, are needed for the proper operation of the action.

The Cadet Martini action has many good features. As already pointed out, the stock is fastened to the receiver with a through bolt—the best possible method to secure the stock rigidly to the receiver. The short throw of the finger lever to open and close the action is also a good point. The action is very easy to load with the groove in the breech block guiding the cartridge directly into the chamber. The double hooked extractor is strong and has ample power and speed to not only extract center fire cases but also to eject them from the action. The trigger pull is usually very good or can be easily made so. Because of the short travel and light weight striker and stiff coil main spring, lock time is exceedingly fast and positive. Because the action is fully enclosed it is a particularly safe action and there is little chance of powder gases hitting the shooter's face in the event of a ruptured case head or primer.

Because of its small size it is an ideal action on which to build a fine medium weight target rifle or a light weight sporting rifle for small game or varmints. This action is ideal for such smaller cartridges as the .22 Long Rifle, .22 WMR, .22 Hornet, .22 Jet, .218 Bee, .256 Magnum, .25-20, .32-20, .38 Special, .357 Magnum, .44 Special and .44 Magnum. It is also a good choice for some of the smaller wildcat or improved cartridges such as the .22 K-Hornet, Mashburn Bee and .22 Super Jet.

There is no question but that this small Martini action is strong. Due to the improved design of this small action, wherein no holes are required in the receiver walls, and because the receiver walls are approximately the same thickness, I would judge this small Martini to be fully as strong, if not stronger, than the larger Martini action. Although I consider this doubtful, it is also possible that the smaller actions were made of better steel than the large action. At any rate this small action has ample strength for cartridges developing moderately high breech pressures and it has been used successfully with larger and more powerful cartridges than listed above.

The action itself is strong enough for larger cartridges, but due to its size, and to the small size of the bar-



The author's light weight varmint rifle in .218 Bee caliber built on the Cadet Martini action. The Weatherby 3x9x variable scope is attached to the rifle with Weaver high detachable rings on the Weaver No. 60 base. rel shank, it should be limited to the smaller cartridges. This action is perfectly OK for a cartridge like the .219 Zipper or .25/35, but I would hesitate to recommend it for the .219 Improved Zipper or similar cartridges. It is the size of this action, rather than its strength, that should be, and is, the limiting factor as to the cartridge choice.

Another limiting factor as to cartridge choice is the extractor, which more or less restricts this action to be used with rimmed cartridges only. If it were easily possible to alter the extractor to positively extract and eject a rimless case then this action could also be used for the .222 Remington and the .30 U.S. Carbine cartridge. Due to the design of the extractor, however, and because of the very limited space in the receiver, designing, making and installing a rimless extractor is, although possible, a very difficult task and therefore not practical.

Like all other single shot actions the No. 12 Martini action is not perfect and has its share of faults. The top loading feature is fine when the rifle is equipped with iron sights but this feature somewhat limits the choice of scopes that can be used. The normal over-bore mounting of a hunting scope is just about out of the question on this action as it would interfere with the loading and unloading of the rifle. Mounting a scope low but offset to the right or left would do but no one likes a scope so mounted if it can be avoided. Mounting the hunting scope high over the bore would do, but here again the scope is in an odd position. The best solution is to use a target type scope and mounts and this puts the scope tube high enough above the action so it can readily be loaded and unloaded.

When this action is used to build a .22 target rifle the use of greased target ammunition is likely to present a problem with extraction. Because the spent cases are so light in weight and because the chamber becomes sticky from the bullet lubricant, it is generally necessary to flick the empty cases out of the chamber and action after the extractor has partly extracted the case but failed to eject it. This is no problem with most single shot rifles having a well exposed breech, but with the small Martini

action the shooter should have strong finger nails. The problem is further complicated with a scope mounting. The solution is to cut away part of the receiver wall to make more room for the finger. In this way the finger can be inserted from the side of the action, the case flicked out of the chamber on the breech block, and then the rifle tipped a bit to allow case to fall free. Cutting away the side wall also allows easier loading for the small .22 rimfire cartridges.

A clever adaptation of the No. 12 Martini action can be found in the Vicker's .22 Target rifle which enjoyed some popularity a number of years ago. Instead of using a flat sided receiver the Vicker's receiver was round like that of a regular bolt action rifle. This round receiver was milled out to receive the trigger guard and inside action unit almost identical to that used in the No. 12 action. This unit was held in place by a lug in the rear and by a knurled headed screw through the front of the receiver. The round receiver permitted the action to be inletted into a one piece stock, with the thought being that this would result in better accuracy than the two piece stock. From the side the Vicker's rifle appeared similar to a regular bolt action rifle minus the bolt handle and the action was cleverly hidden. However, from the top or bottom the action remained 100% Martini.

Some of the finest European free pistols have been made using a Martini type action and I have often wondered why some manufacturer has not followed the lead and taken the No. 12 action and used it for a pistol. Although the Ruger single shot Hawkeye pistol is of clever design, I believe that a pistol built on a properly redesigned Martini action would outperform it in every way.

The alterations required in using this action for making a rifle are few and easily done, and the general "how to" instructions can be found in most of the gunsmithing books. When the action is rebarreled to one of the small varmint cartridges like the .218 Bee or .22 Jet, to prevent the breech block from "freezing" and to make the action safer, the firing pin hole in the breech block must be bushed and the firing pin tip made smaller. No extractor alteration is required with the Bee sized cartridges and only a minor change needed when a Jet sized case is used. Changing the firing pin and extractor to handle a rimfire cartridge is more difficult but not beyond the limits of the average craftsman in his home workshop. If restocked with a pistol grip stock the remaining alteration required is to bend the finger lever as desired. Because the alterations can be readily done the .310 Cadet Martini action is a natural for the amateur gunsmith.