SEMI-AUTOMATIC RIFLE m/42

IGAB

Malmö Sweden

Semi-Auto Rifle M/42

SHORT DESCRIPTION

General features.

Principle of design.

Semi-automatic, gas operated rifle, tilt-locked bolt, priming by hammer, firing safety, muzzle recoil brake, and bayonet fastening. Bolt and receiver completely covered and protected against dirt. **Rifle and component parts are shown in fig. 1—2.**

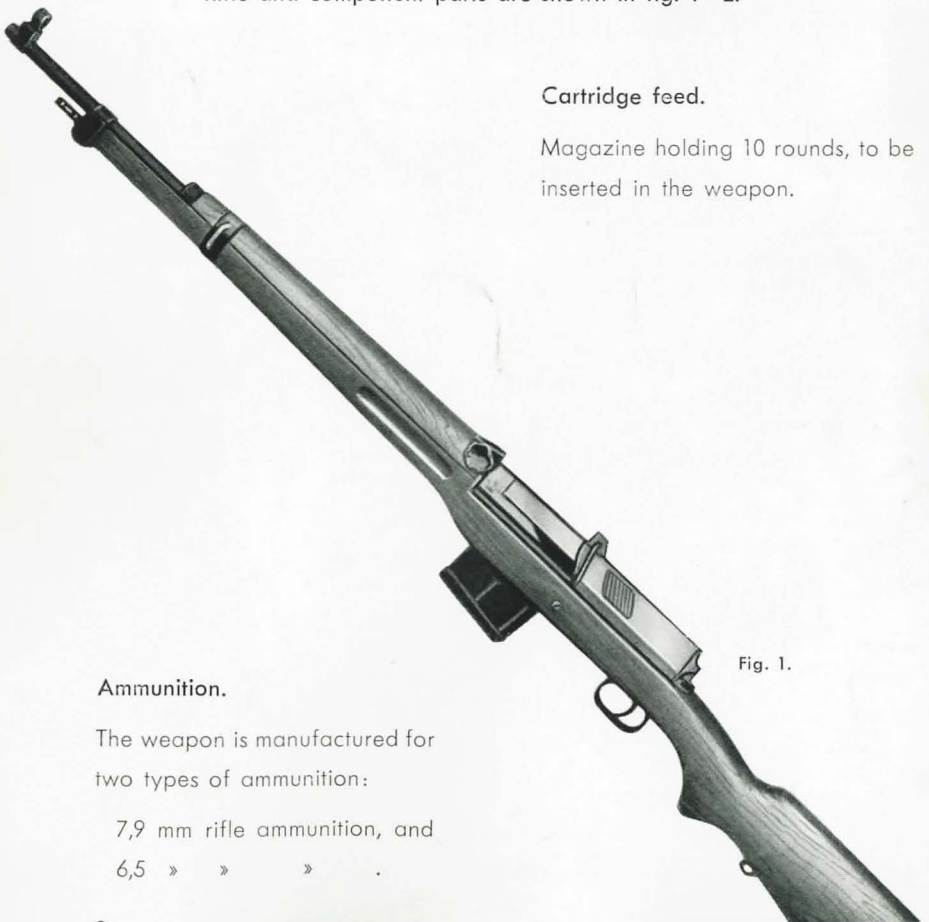


Fig. 1.

Cartridge feed.

Magazine holding 10 rounds, to be inserted in the weapon.

Ammunition.

The weapon is manufactured for two types of ammunition:

7,9 mm rifle ammunition, and
6,5 » » » .

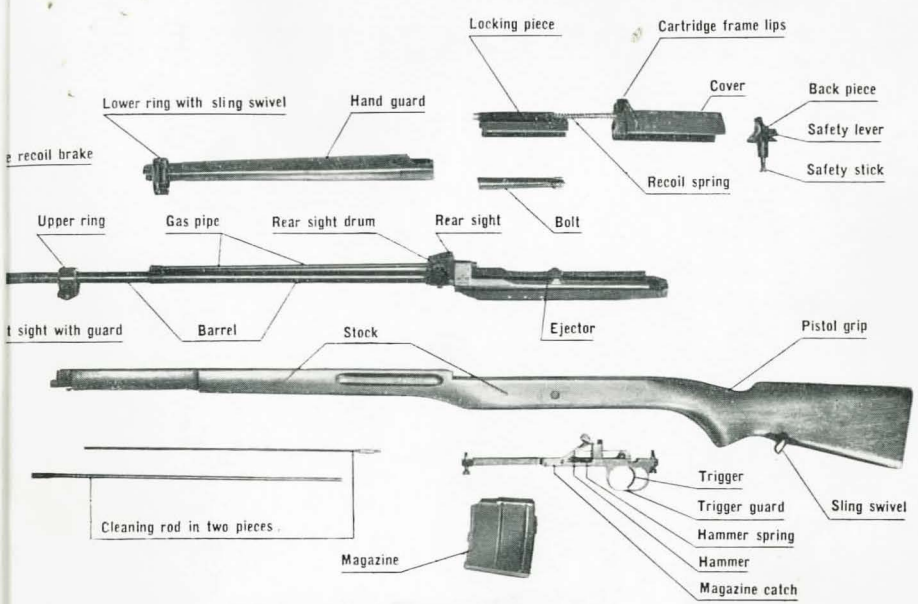


Fig. 2.

Ballistics.

	Calibre 7,9 m	Calibre 6,5 mm
Weight of bullet	12,8 grs	9,0 grs
Muzzle velocity	740 m/sec.	760 m/sec.
Muzzle energy	360 kgm	265 kgm
Impact energy at 700 m	100 kgm	60 kgm
Range, height of bullet path not exceeding 1,5 m	600 m	

Range.

Calibre	7,9	6,5 mm
Maximum range	3500	3300 m
Practicable range		
against shooters in firing position	300—400 m	
against shooters moving forward	600—700 m.	

Sights.

Rear sight and front sight, open type.

Rear sight: Excenter flap sight, adjustable by means of special drum for every 100 m from 100 to 700 m.

Front sight: Post sight, protected by front sight guard ring.

Front sight adjustable laterally by means of front sight adjusting screw.

Rate of fire.

Practicable range of fire: 30—40 well-aimed rounds per min.

Dimensions and weights.

	Calibre 7,9 mm	Calibre 6,5 mm
Length	1215 mm	
Height	170 »	
Width	64 »	
Weight except sling	4400 grs	

Accessories.

Wiper (inserted in the weapon)

Sling

Cleaning and spare parts set in cloth case, weight about 300 grs, dimensions 10 × 6 × 4 cm, containing: Oil box with brush, oil can, wiper for chamber, combination tool, extractor for cracked cartridge cases, sheet box, containing: 1 firing pin with spring, 2 extractors, 1 extractor pin with spring, 1 firing pin peg, 1 tool for removing extractor.

Handling.

General note.

The weapon works with gas-operated mechanism. Along with discharging the empty cartridge case is automatically ejected and the weapon reloaded.

Manner of carrying.

Under movements the weapon is carried on the back or with the sling over the shoulder, when combat is expected, in the hand.

Safety.

The weapon can be adjusted to safety by means of a safety lever on the back piece (fig. 3). When adjusting to safety, the safety lever is put to the right, when releasing safety, to the left.

Automatic safety.

On account of its design the weapon is automatically safe in following respects:

a) Safety against premature firing
b) » » blind firing
c) » » unintentional unloading.

Fig. 3.

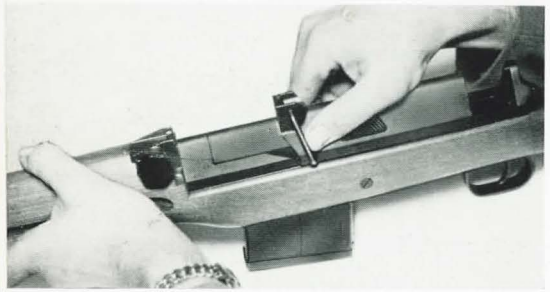
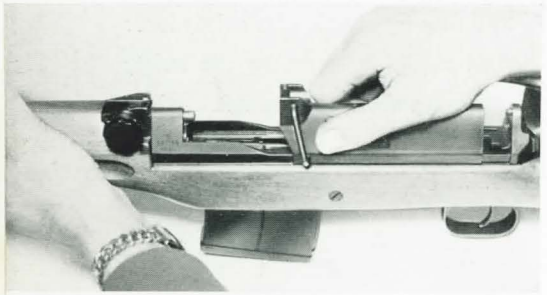


Fig. 4.



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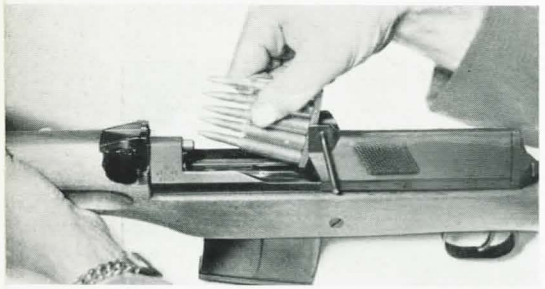
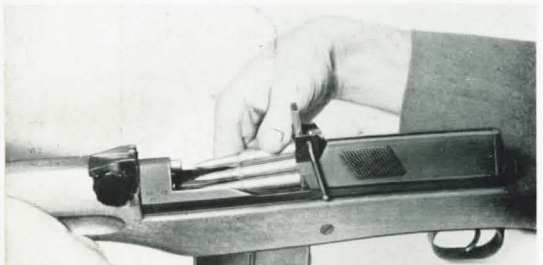


Fig. 6.



Loading.

Release safety.

Move cover forward as long as possible and pull subsequently back to rear position (fig. 4 and 5). Put a cartridge clip **from before** in the recess for the cartridge clip frame, introducing the **upper** knobs of the frame in the grooves on the inside of the projecting ears of the cover (fig. 6).

Push cartridges down in magazine with the right hand in the same way as on mauser rifles (fig. 7).

Take away cartridge frame.

Load with another cartridge clip.

Push cover forward with the right hand as long as possible (3—4 mm) and pull subsequently back, at which locking piece and bolt are thrown forward, fetching the uppermost cartridge from the magazine (fig. 8). Adjust to safety.

The weapon is now loaded and put to safety. Before firing release safety.

When the last cartridge has been fired, the bolt and the locking piece are cocked in rear position by the bolt catch (safety against blind firing).

The magazine is then filled as described above.

Removing cartridge from chamber.

Make sure the weapon is adjusted to safety.

Push cover forward with the right hand as long as possible, and subsequently backwards (fig. 9).

Move cover backwards but not so long that the base of the cartridge touches upon the ejector. At this the fingers of the left hand prevent the cartridge from being thrown out from the receiver (fig. 10).

Repeat the movement until the magazine is empty.

The cartridges are gathered in the right hand an put down in the ammunition girdle (fig. 11).

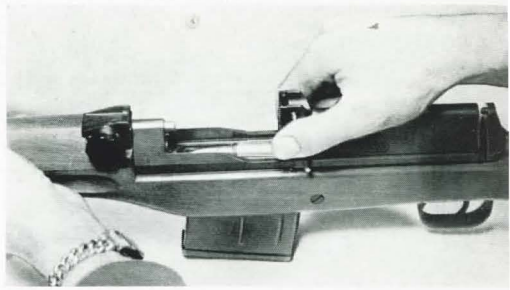


Fig. 8.

Fig. 9.

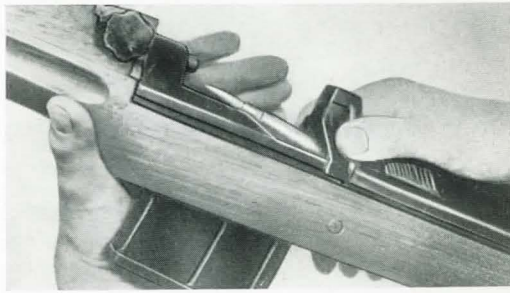


Fig. 10.

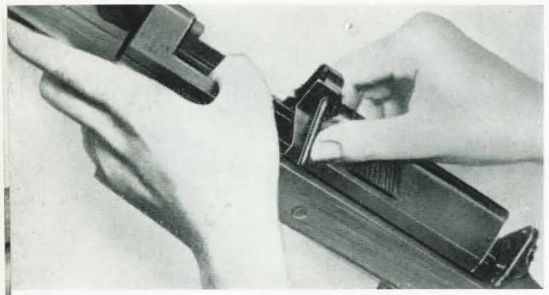


Fig. 12.

Fig. 13.

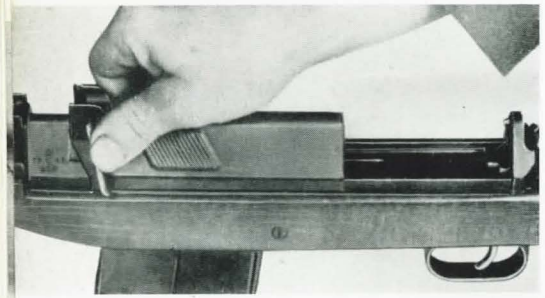


Fig. 14A.

Press down feeder (**Note: The weapon must be adjusted to safety,** compare fig. 12 and 13) and push cover forward as long as possible. Press in clasp of cover with thumb of right hand. Release cover slowly in backward direction (fig. 14 A).

Release safety, fire and put to safety again.

Dismounting and assembling.

Dismounting: Move cover fully to foremost position (fig. 14 B).

Turn safety lever straight backwards and lift back piece out (fig. 15).

Press down clasp of cover releasing it from locking piece (fig. 16).

At this hold the cover and release it slowly, allowing it to move backwards. Take away cover and recoil spring. Take away locking piece and bolt (fig. 17).

Hold locking piece, upside down, in the left hand, the foremost part directed forward. Catch bolt with thumb and forefinger of right hand (fig. 18) and raise its back part so that the locking shoulders come above the grooves in the locking piece. Move bolt forward twisting it slightly and lift it out of locking piece.

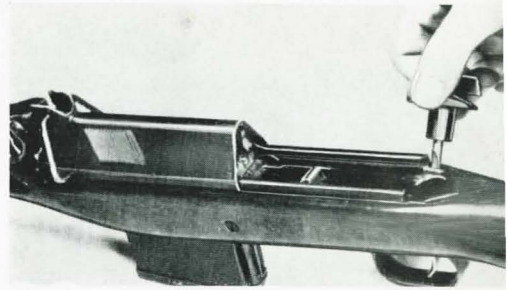


Fig. 15.

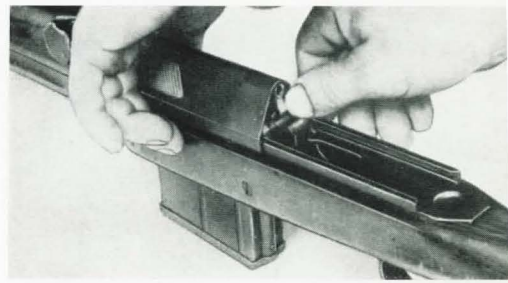
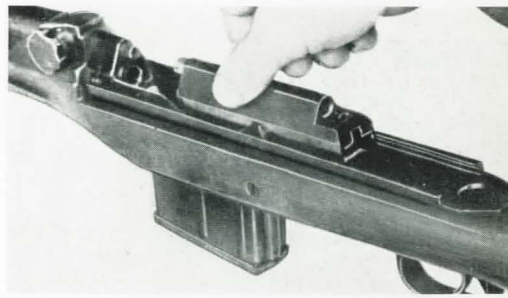


Fig. 16.



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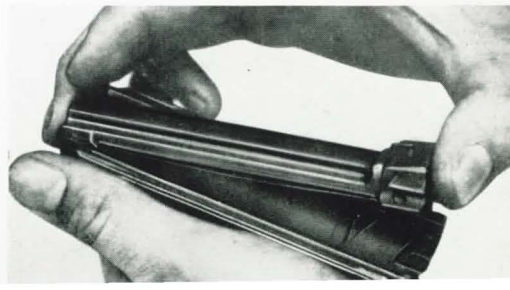

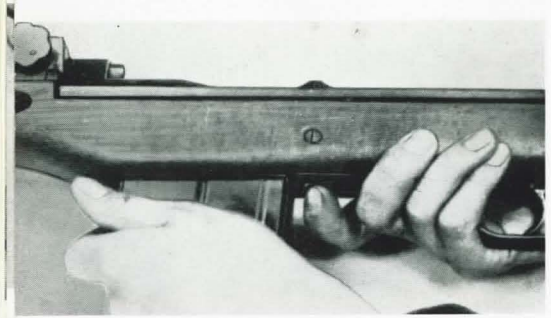

Fig. 19.

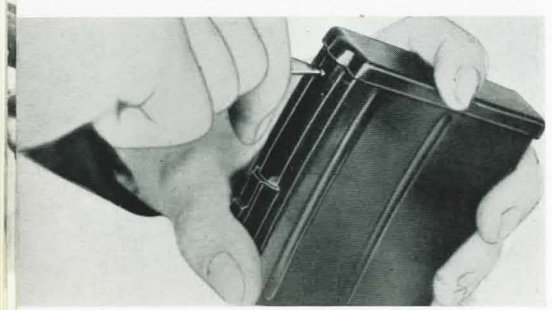

Fig. 20.

Fig. 21.

Remove magazine (fig. 19).

If the magazine catch spring should be so hard, that auxiliary tools may be needed, the point of a bullet can be employed.

The magazine is dissassembled by pressing in the magazine bottom catch with the point of a bullet or a suitable wooden peg (fig. 20).

When necessary remove firing pin and firing pin spring by pressing out firing pin peg with a metal punch or other metal subject (fig. 21).

When necessary remove extractor by pressing back extractor pin with tool for removing extractor (fig. 22).

Assembling: Insert bolt in locking piece in reversed order as compared with dismounting (fig. 23).

Introduce locking piece with bolt in receiver. At this the hammer must be pressed down (fig. 24). (If the magazine is inserted in the weapon the feeder must also be pressed down to let the bolt pass).

Cover with recoil spring, the fore end of which is to be introduced in the locking piece, is moved to its foremost position so it will hook on to the locking piece with the clasp. At this see the pin for the recoil spring enters the connecting socket (fig. 25).

Place back piece in position and turn safety lever to the left (fig. 26).

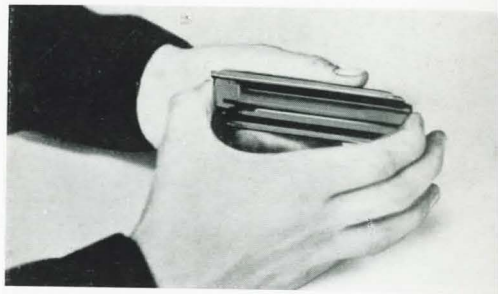

Fig. 23.

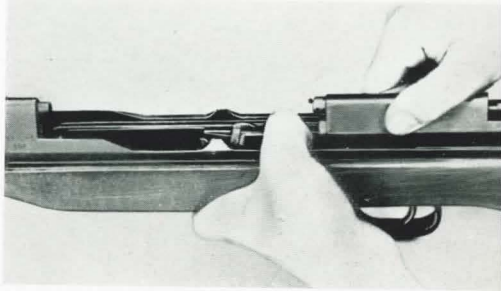

Fig. 24.

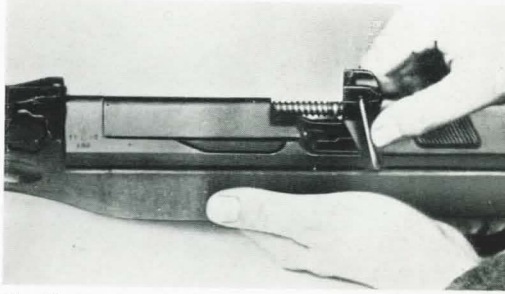

Fig. 25.

Fig. 27.

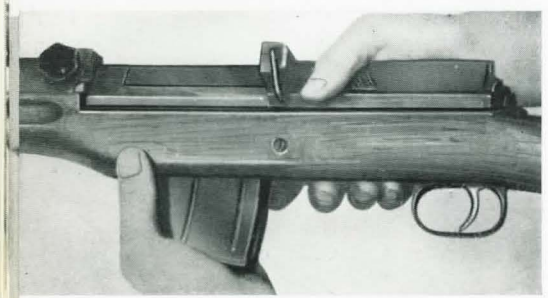

Fig. 28.

Fig. 29.

Fig. 30.

Release cover by pressing clasp down and let cover go slowly to rear position (fig. 27).

Fire and put to safety.

When necessary assemble magazine and insert the same (fig. 28).

Cleaning.

Common principles for cleaning and oiling are to be applied. For this dismount as above described, when necessary.

Use of certain tools.

When due to defective ammunition a cartridge case is accidentally broken crosswise apply the extractor for cracked cartridge cases by introducing it in the magazine like a common cartridge and plunder (fig. 29) (see Removing cartridge from chamber). The extractor can be adjusted by turning in the screw more or less in the stud.

When firing blank ammunition a special mouthpiece for blank shooting is screwed on instead of the muzzle ring. To remove the mouthpiece the combination tool is applied (fig. 30).

The combination tool contains a hollow mill for cleaning the opening of the gas pipe (fig. 31).

The wiper for the chamber is applied for cleaning the chamber. For handling the lower hole in the combination tool is used, by introducing the hook of the wiper (fig. 32).

Faulty handling of the weapon.

a) Never press feeder down, when safety lever is turned to the left

(fig. 33).

If the cover is then moved backwards, the bolt and the locking piece are thrown forwards so the finger will be jammed (fig. 34).

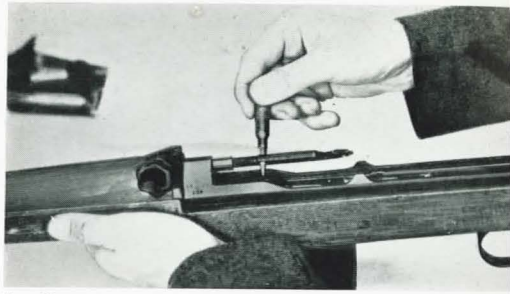

Fig. 31.

Fig. 32.

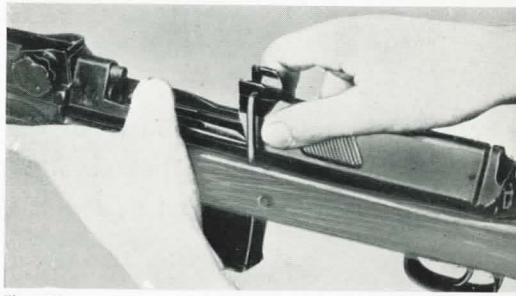

Fig. 33.

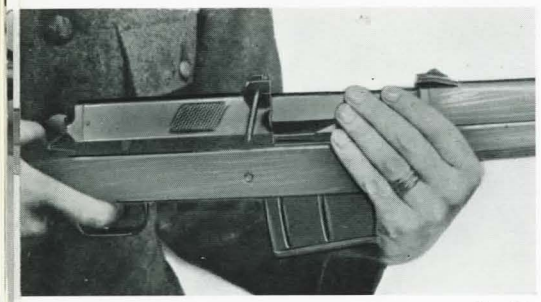

Fig. 35.

b) When firing **never** hold the weapon with the fingers of the left hand touching upon the locking piece (fig. 35). The fingers will then be jammed between the receiver and the moving parts. Therefore hold the left hand further ahead.

Outcomes of the weapon.

At deliveries of the automatic rifle m/42 to the Swedish army the following control of delivery is performed, which guarantees, that the weapons are first class:

a) ocular inspection of finished parts
b) » » » » weapons
c) interchange test on parts
d) control of action
e) control of sight adjustment
f) material test control and record of shop control of dimensions and heat treating is to be presented to the inspector on demand.

At the inspection it has been stated that the automatic rifle m/42 is distinguished by an extraordinary reliability of functioning and that the interchangeability of the parts is 100 p.c.

Below are presented dispersion figures for about 500 series of 10 rounds each. Range 100 m. 10 series were fired immediately one after another during a total time of about 10 minutes. (Time interval between the shots in each series about 4 sec.)

The influence on the dispersion of the heating of the barrel during continuous firing is thus contained in the obtained figures.
Following results were obtained:

	H_{100}	B_{100}	$H_{100}+B_{100}$
Best value	4,0	3,0	8,3 cm
Poorest value	21,5	13,8	35,6 »
Average value	10,5	7,6	18,1 »

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