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**CONSTRUCTION OF
DANNERT CONCERTINA WIRE OBSTACLES
WITH ANGLE-IRON PICKETS**

(PROVISIONAL)

MILITARY TRAINING PAMPHLET

No. 21A

(Reprinted in Canada (May, 1941), by permission of the Controller, His Majesty's Stationery Office)

1939

*Prepared under the direction of
The Chief of the Imperial General Staff.*

20M—5-41 (263)
H.Q. 70-44-61

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NOTE.—To be read in conjunction with Military Training Pamphlet No. 21. Dannert Concertina Wire Obstacles 1939 (Provisional).

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SECTION 1.—GENERAL

1. M.T. Pamphlet No. 21, 1939, deals with the construction of "triple concertina fence" using screw pickets.

2. Modifications in the design and method of erection of the fence will be required where the nature of the ground is such that screw pickets cannot be used.

3. An effective obstacle can be made with the use of angle-iron pickets in place of screw pickets. The chief objection to the use of angle-iron pickets is the noise made in driving them.

4. Due to the tactical situation and nature of the ground, or to the lack of stores, it may, therefore, be necessary to erect an obstacle without any pickets. An obstacle thus made may later be strengthened by the addition of angle-iron pickets when the tactical situation permits.

5. This pamphlet deals with:—

- The erection of standard triple concertina fence using angle-iron pickets.
- The erection of triple concertina fence without pickets.
- The addition of angle-iron pickets to a triple concertina fence which has been constructed without any pickets.

SECTION 2.—PROCEDURE FOR CONSTRUCTING 50 YARDS OF "TRIPLE CONCERTINA FENCE," USING ANGLO-IRON PICKETS

1. *Description of the fence.*—The design of the fence is similar to the triple concertina fence using screw pickets, except that the horizontal strand of ordinary barbed wire is fixed higher to the pickets on the home side of the fence.

2. *Stores*.—The stores required for 50 yards of fence are:—

Stores	Man-loads
9 Dannert Concertinas.. . . .	9
26 long angle-iron pickets.. . . .	13
1 coil of barbed wire.. . . .	1
2 sledge hammers (7-lb.).. . . .	1
Tracing tape, wire cutters and windlassing sticks (11).. . . .	1
	—
	25
	—

3. *Procedure for constructing a fence.*

i. The fence may be constructed from right to left or from left to right without alteration of the procedure.

A convenient party is a commander and ten men, who should erect 50 yards of fence in thirty minutes by day.

ii. *Stage 1.*

The commander paces along the tracing tape followed by the party in single file. The commander takes one picket. The first six men each take two pickets. The last four men, who will work in pairs, take the two sledge hammers.

The commander places his picket at the beginning of the task and indicates at five-pace intervals the positions at which the pickets are to be driven.

The men following the commander lay down in turn their pickets pointing in the direction of the enemy at the positions indicated by the commander.

The pairs of men with the sledge hammers drive in all the pickets starting with that laid down by the commander and the one next to it.

All the pickets must be driven firmly into the ground and should be placed with the point of the V facing the home side of the fence.

When he has laid down both his pickets each man returns towards the dump of stores.

The first three men back at the dump each take one concertina, carry it to the position of the 3rd, 7th or 11th picket respectively, lay it on the ground one pace on the enemy side of the picket and undo the fastenings.

The next two men back at the dump take the coil of ordinary barbed wire to the picket at the beginning of the task and undo the end of the wire.

The commander and remaining four men of the party assemble at the concertina that has been laid out nearest to

the start of the task and extend it by pulling it outwards in both directions. They then place themselves on the home side of the concertina close to the pickets, lift it, step back and drop it on to the pickets.

As soon as the first concertina has been placed on the pickets the commander and four men lay out the pickets required in Stage 2. (*See M.T. Pamphlet, No. 21, 1939, p. 10.*) They then extend and place the next two concertinas of Stage 1.

The two men with the coil of ordinary barbed wire run it out and fix it to the pickets by the fastening shown in the *Manual of Field Engineering, Vol. 1 (All Arms), 1933, Plate 16*, at a notch just above the height of the concertina. They will also windlass it to the top of the concertina midway between the pickets.

As the men complete their tasks they return to the beginning of the fence and continue the construction of Stages 2 and 3.

iii. *Stages 2 and 3.*

When they have driven all the pickets of Stage 1, the two pairs of men at once drive the pickets of Stage 2, beginning at the start of the task.

The other men as they get back to the dump each take one of the concertinas and place them in pairs at the 3rd, 7th and 11th pickets and about two paces on the home side of the fence.

The commander and four men then assemble at the pair of concertinas nearest the start of the task, extend one of them and place it over the first five pickets of Stage 2.

The second of the pair of concertinas will next be extended and placed on top of the two concertinas already in position at the start of the task.

The centre and end pair of concertinas will similarly be placed in position.

When they have fixed the horizontal strand of barbed wire to the front concertinas, the two men return to the start of the task and begin fixing the rear horizontal strand. The rear horizontal strand will be fixed to the pickets of Stage 2 at a convenient notch at about the level of the top concertina. Before windlassing the loop in the barbed wire to the standing part, a strand of the Dannert wire should be included in order to secure the top concertina to the picket. The rear horizontal strand will also be windlassed to the top concertinas midway between the pickets. Assistance in this task will be given by the two pairs of men as soon as they have driven all the pickets.

SECTION 3.—PROCEDURE FOR CONSTRUCTING 50 YARDS OF "TRIPLE CONCERTINA FENCE," WITH-OUT PICKETS

1. *Description of the fence.*—The concertinas will be arranged in the same form as in the standard triple concertina using pickets. They will be fixed to one another by windlassing and anchored to the ground by means of the staples, which are issued with each concertina.

2. *Stores.*—The stores required for 50 yards of fence are:—

Stores.	Man-loads.
9 Dannert concertinas each with 3 staples.	9
Tracing tape, wire cutters, windlassing sticks (5),	
3 hammers.	1
	—
	10

3. *Procedure for constructing a fence.*—A convenient party is a commander and four men who should complete 50 yards of fence in fifteen minutes by day.

i. The concertinas will be held out in groups of three at intervals of 20 paces (50 feet) about three paces on the home side of the tape.

ii. *Stage 1.*

Three men each take one staple and the whole party extend the first concertina at the start of the task. The concertina will then be anchored to the ground by means of the staples. When silence is required, the tops of the staples must be muffled with empty sandbags or other means.

The first concertina of the second group will next be extended and anchored with staples. Its end will be windlassed to the end of the concertina already in position by the commander.

The first concertina of the third group will be similarly fixed.

iii. *Stage 2.*

Stage 2 may be begun at the end of the task towards which the work has been done.

As soon as each concertina is opened, the men will anchor it to the ground with staples and windlass it to the corresponding concertina of Stage 1. The commander will windlass together the ends of the concertinas of Stage 2.

iv. *Stage 3.*

When stage 2 has been completed the remaining concertinas will in turn be extended, lifted and placed resting on the two bottom concertinas. Each man will windlass together at one point the top and bottom concertina on the home side of the obstacle. The commander will windlass together the ends of the concertinas of Stage 3.

SECTION 4.—PROCEDURE FOR ADDING ANGLE-IRON PICKETS AND HORIZONTAL STRANDS OF BARBED WIRE TO 50 YARDS OF "TRIPLE CONCERTINA FENCE" WHICH HAS BEEN CONSTRUCTED WITH-OUT PICKETS

1. *Stores.*

Stores.	Man-loads.
25 long angle-iron pickets.	13
1 coil barbed wire.	1
2 sledge hammers (7-lb.)	1
Wire cutters, windlassing sticks.	1
	—
	16

2. *Procedure for strengthening fence.*—The strength of the party depends upon the number of 7-lb. sledge hammers available. If two hammers are used, a suitable party is a commander and six men, who should complete the 50 yards in 20 minutes by day.

Two men take one picket each and two men one hammer each. Working in pairs, they climb through the rear concertina at five paces interval and drive the pickets firmly into the ground through the front concertina.

The commander and remaining two men lay out all the other pickets at 2½ paces interval in rear of the obstacle. Pickets will not be laid out at the points in rear of where the first two pickets are being driven.

The two pairs driving the pickets will drive all the front pickets first. They will then drive the rear pickets 3 feet behind the first line beginning again at the same end of the obstacle.

When they have laid out all the pickets, the commander and two men, beginning at the start of the task, will fix a horizontal strand of barbed wire as low on the front pickets

as the height of the top concertina will allow. This strand will be windlassed to the concertina midway between the pickets.

As soon as any of the party complete their task they will fix the rear horizontal strand of barbed wire to the notches in the rear line of pickets at about the height of the top concertina, including a strand of the top concertina as described in Section 2, 3, iii, and windlass the concertina to the horizontal strand in the intervals between the pickets.

