

Dannert Concertina Wire Obstacles – by David Gray

Oil-tempered barbed wire was developed during World War I; it was much harder to cut than ordinary barbed wire. During the 1930s, German Horst Dannert developed concertina wire of this high-grade steel wire. The result was entirely self-supporting; it did not require any vertical posts. An individual Dannert wire concertina could be compressed into a compact coil that could be carried by one man and then stretched out along its axis to make a barrier 50 feet (15 m) long and each coil could be held in place with just three staples hammered into the ground. It is still commonly used in military, prison, and border security applications.



It consists of high-grade steel wire—often with sharper, more irregularly spaced barbs—formed into large coils. Dannert wire was imported into Britain from Germany before World War II. During the invasion crisis of 1940–1941 (*left*), the demand for Dannert wire was so great that some was produced with low manganese steel wire which was easier to cut. This material was known as "Yellow Dannert" after the identifying yellow paint. To compensate for the reduced effectiveness of Yellow Dannert, an extra supply of pickets was issued in lieu of screw pickets.

Unlike traditional barbed wire that requires posts, Dannert wire can act as a rigid, cylindrical barrier. It is frequently used interchangeably with the terms "concertina wire" or "razor wire" in modern security contexts.



In World War I, barbed wire obstacles were made by stretching lengths of barbed wire between stakes of wood or iron. At its simplest, such a barrier would resemble a fence as might be used for agricultural purposes. The double apron fence comprised a line of pickets with wires running diagonally down to points on the ground either side of the fence. Horizontal wires were attached to these diagonals. More elaborate and formidable obstructions (*left*), could be formed with multiple lines of stakes connected with wire running from side-to-side, back-to-front, and diagonally in many directions. Effective as these obstacles were, their construction took considerable time.

Barbed wire obstacles were vulnerable to being pushed about by artillery shells; in World War I, this frequently resulted in a mass of randomly entangled wires that could be even more daunting than a carefully constructed obstacle. Learning this lesson, World War I soldiers would deploy barbed wire in so-called concertinas that were relatively loose. Barbed wire concertinas could be prepared in the trenches (*below*), and then deployed in no-man's-land relatively quickly under cover of darkness.

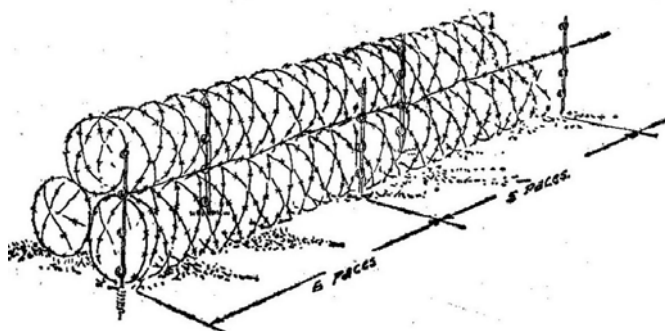
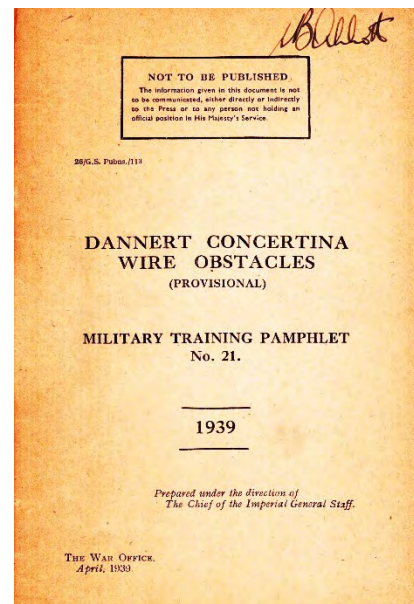


Concertina wire packs flat for ease of transport and can then be deployed as an obstacle much more quickly than ordinary barbed wire, since the flattened coil of wire can easily be stretched out, forming an instant obstacle that will at least slow enemy passage. Several such coils with a few stakes to secure them in place are just as effective as an ordinary barbed wire fence, which must be built by driving stakes and running multiple wires between them.

I recently purchased the **Military Training Pamphlet No. 21**. (*below*), entitled **Dannert Concertina Wire Obstacles**. This pamphlet was published in April 1939 and gave the British soldier all the information he needed to construct a formidable Dannert wire barrier.

The pamphlet states that various types of obstacle, including road blocks, could be made from Dannert concertina wire. The standard infantry obstacle was the triple concertina fence.

This consisted of three concertinas in the form of a pyramid (*below*). Long screw pickets would be erected at 5 paces (4 yards) intervals through the two bottom concertinas. A longitudinal strand of ordinary barbed wire would be run through the top of each bottom concertina. This strand to be fixed to the second eye from the top of each picket, and to be fixed to the bottom concertina at intervals by the winding of short pieces of wire. The top concertina would be fixed to the top eye of the screw picket and fixed to the horizontal strand of wire again by twisting of small pieces of wire. This produced a pyramid of wire.



When extended to 50 feet a Dannert concertina has a diameter of approximately 3 feet. Further extension will result in a reduction of this diameter, which is undesirable. Fifty feet has therefore been adopted as a standard length. The length of three concertinas (50 yards) is a convenient length for a normal task, and the procedure

for the construction of the fence is based on a 50-yard task. The best party for erecting a 50-yard length of triple concertina fence, is a commander and 7 men.

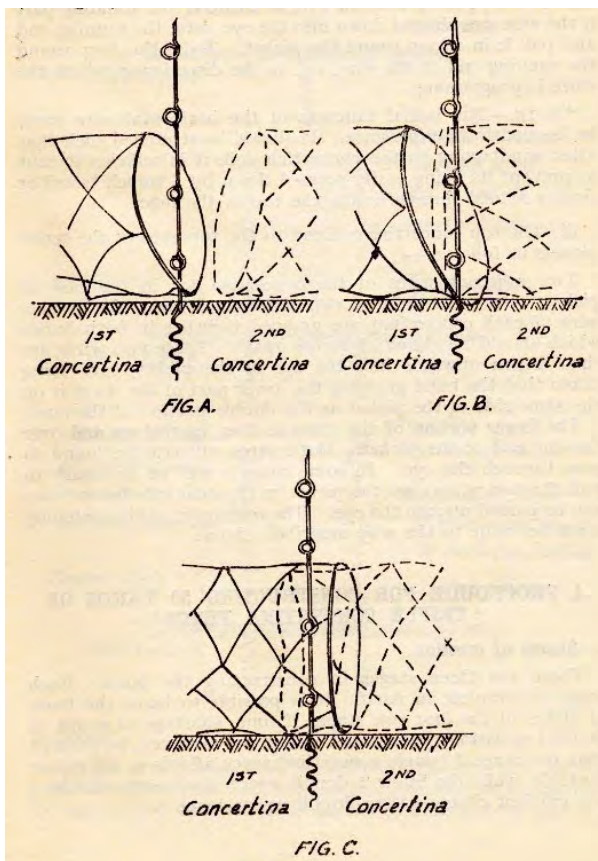
The stores required for 50 yards of fence are:

- 9 Dannert concertinas. 9 man-loads
- 26 long screw pickets 6½ man-loads
- 1 coil of ordinary barbed wire 1 man-load

- Tracing tape
- Wire cutters
- Winding (windlassing) sticks

All the stores must be first carried to the site and laid out near the start of the task. After tracing tape has been laid to show the line of the obstacle, the commander paces along the tape followed by the party of men carrying the screw pickets (*right*), and the commander indicates at five-pace intervals the positions at which the pickets are to be fixed. Once a man has screwed in all of his pickets he returns to the site of the stores for more. The concertinas are eventually installed over the screw pickets as described above.

If a longer length of obstacle was required then other sections of concertina would need to be added on at the end to extend it. To join one coil of concertina to another, only the bottom portion of the end coil of the first concertina is placed over the screw picket (see FIG A in the illustration below). Both the top and bottom of the end coil of the second concertina are then placed over the picket, FIG B. The top portion of the first concertina is finally placed over the picket above all the others, FIG C.



An average party of an N.C.O. and 7 men, with stores ready dumped at the beginning of the task, should be able to construct 50-yards of triple concertina fence in 15 minutes on normal ground by day.