

# How the German Cables Were Diverted

## A war measure establishes a scientific fact

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English correspondent of the Popular Science Monthly  
Drawings made by G. H. Davis

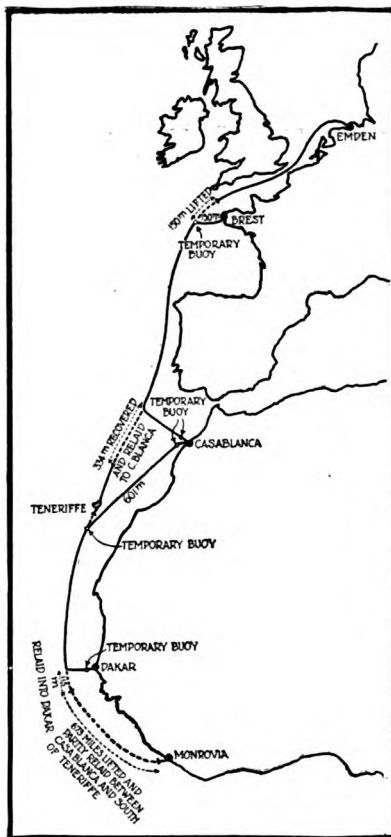
**S**HORTLY after the declaration of war, all German telegraph cables were cut.

Mr. C. H. Gray conceived the idea of utilizing these cables, and, on behalf of the French government, undertook the operation of converting them. The success of the operations was of immense importance, proving that the recovery in good condition and relaying of deep-sea cables is practicable.

One of the German cables was 3905 miles long, in two sections, one from Emden to Teneriffe and from Teneriffe to Monrovia, West Africa.

### The Task Was Begun in 1915

The cable steamship *Dacia* left London in August, 1915. The cable was picked up at a depth of two and one quarter miles by means of a special grapnel, and hauled to the surface. On September 11 it was cut in shallow water off Brest, the southern end was buoyed, and 150 miles were recovered to the northward. One end of this recovered portion was landed at Brest, and nearly all was relaid, and the other end spliced to the buoyed end off Brest. The German cable was under cables belonging to the Allies, which necessitated cutting and grappling it again. A heavy cable was then laid out from Casablanca and buoyed.

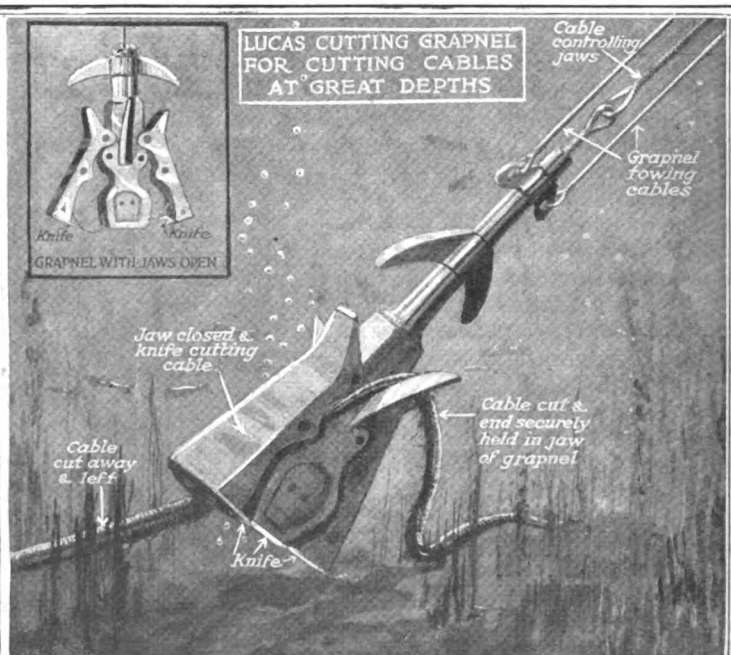
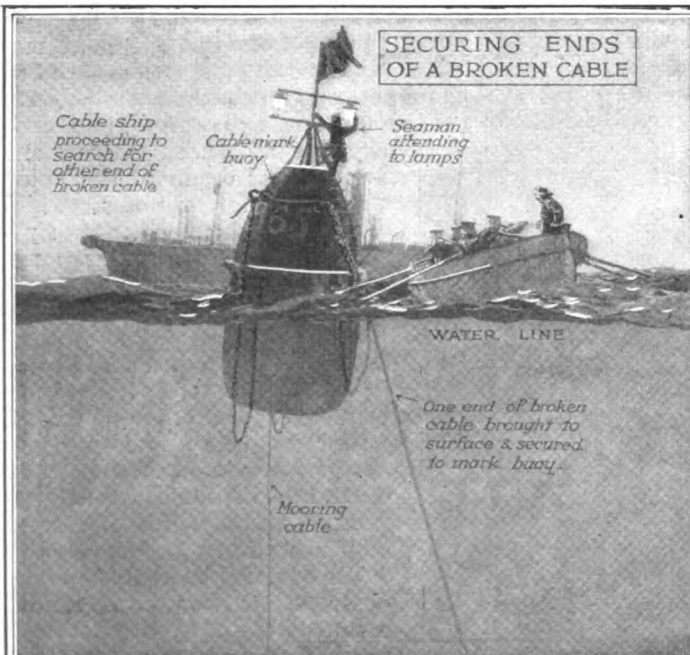


From Brest to Monrovia the *Dacia* steamed, recovering severed German cables. Hardly was the task accomplished than the ship was torpedoed and sunk by a German submarine

From Teneriffe the German cable was again grappled in deep water and lifted, and a length of 334 miles was recovered, of which 328 miles was relaid and spliced to the buoyed end off Casablanca. This completed the conversion of the first section, and thus within four months of beginning work 1400 miles of cable between Brest and Casablanca were at the French government's disposal, less than 500 miles of the cable having been picked up and relaid.

### How the Cable Was Located

The second section from Teneriffe to Monrovia was a task of greater magnitude, because a greater length had to be picked up and relaid in a depth averaging two and one half miles, much farther from its original position. A second length was laid out from Casablanca. South of Teneriffe the cable was cut and recovered shoreward. This was landed and laid out from Dakar, and buoyed. South of Dakar the German cable was cut again in deep water, and 115 miles to northward was recovered and relaid to the buoyed end off Dakar. The cable was then cut off Monrovia, and picking up was continued in deep water until 673 miles of good cable had been recovered, of which 601 miles was spliced into the cable off

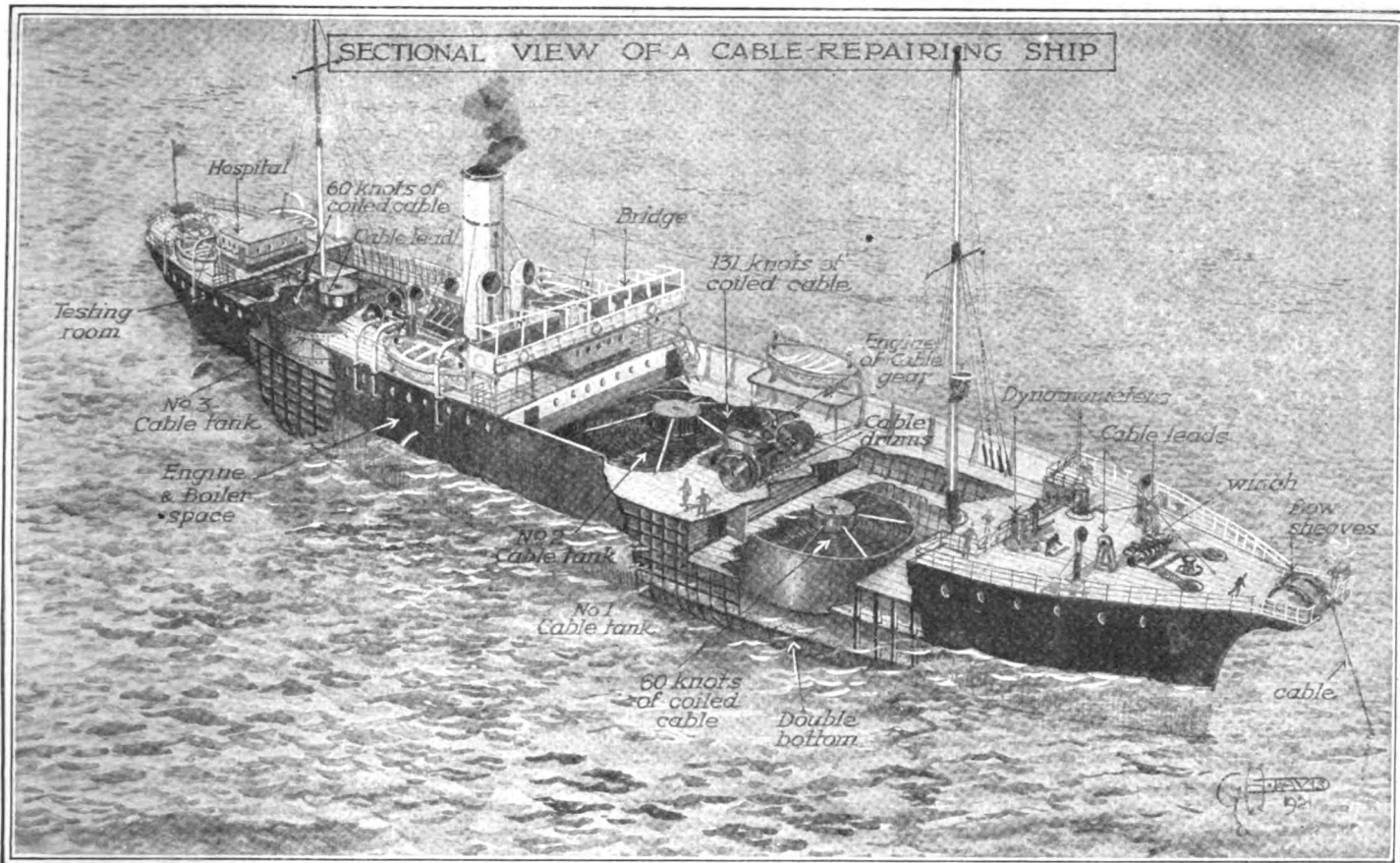


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The cable-ship *Dacia* picked up the German cable at a depth of two and a quarter miles, and hauled it to the surface: the feat necessitated the overcoming of many serious difficulties

A special grapnel was devised for the purpose of raising the cable; the operation was a very delicate one owing to the fact that the German cable was laid under those of the Allies

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This is the cable-ship *Dacia*, which was outfitted during the war for the work of retrieving German deep-sea cables and of rearranging them for use by the French government

Teneriffe and relaid to the buoyed end off Casablanca, a distance of from 1400 to 2000 miles away from its previous position.

The cable was found by grappling for it at right angles to its length, using about one third more rope than the depth of the water. A good portion lay at a depth of two and one half miles, and to have attempted to lift it on the bight would almost certainly have resulted in straining it to breaking-point. To overcome this difficulty, a special form of grapnel was

used, by means of which, when the cable had been found, it was cut on one side and the other end was secured and raised to the surface.

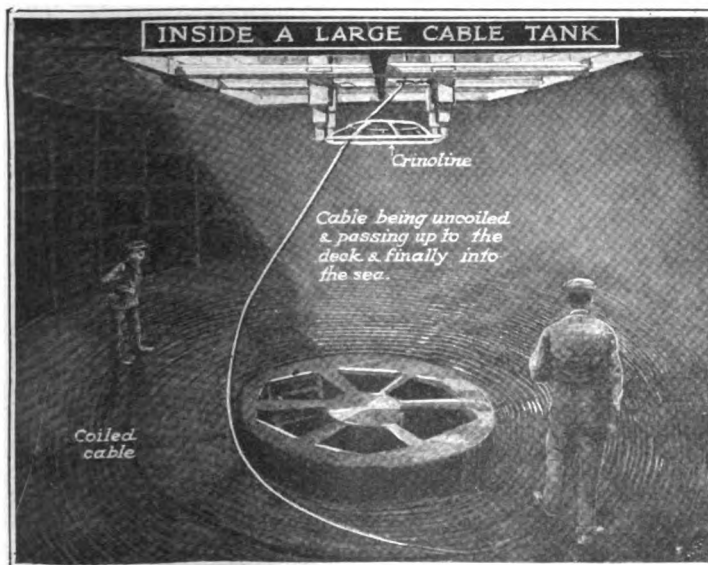
Owing to the fact that the original cable in this vicinity had been cut at the outbreak of war, it had to be grappled for again in deep water when the ship had picked it up to the point of severance.

The magnitude of the task under war conditions can scarcely be over-rated. Imagine fishing in the night for a cable lying two and one half

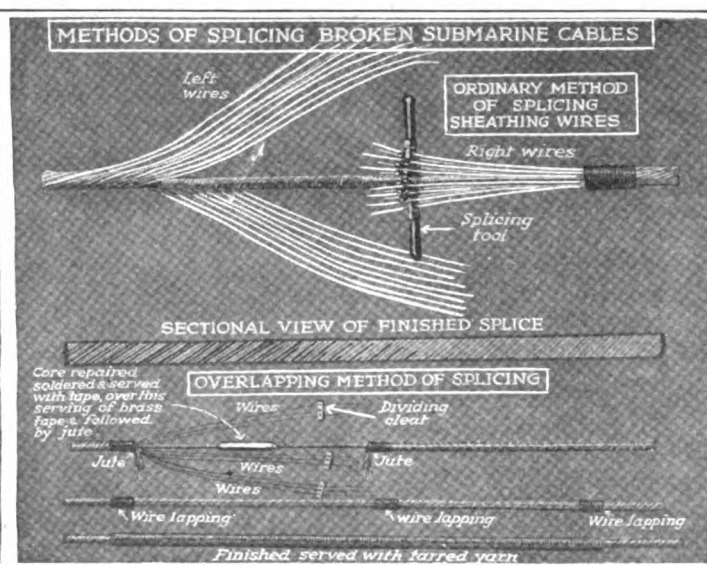
miles deep in the sea, cutting it at that depth, hauling the end up, and splicing and relaying in new positions, knowing that submarines were always near and the ship liable to attack.

In little more than two years the *Dacia's* work was completed, and almost immediately afterward her armed escort was torpedoed and the *Dacia* sunk by a submarine.

Mr. Gray's persistence and success were appreciated by the French government, who conferred upon him the Cross of Chevalier of the Legion of Honor.



Showing the interior of a cable tank of the ship *Dacia*, where the cable was wound on a huge spool until it was relaid



Four months after the work of reclaiming the German cable was started, the ends were respliced by the method shown here and then it was used by the Allies

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