

time, was described before the American Institute of Electrical Engineers in New York City.

The new cable is a part of the Western Union transatlantic system making land connection at Bay Roberts, Newfoundland, with New York City, and cable connection at Horta, Azores, with German and Italian communications, it was explained by J. W. Milnor and

G. A. Randall, telegraph engineers located in this city. The final splice was made in September, 1928.

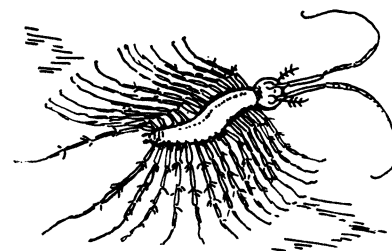
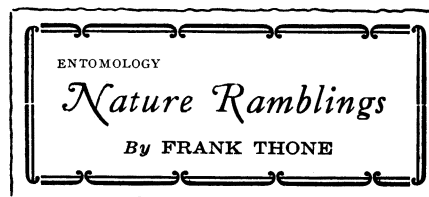
"This cable combines the advantages of high speed operation characteristic of the new continuously loaded cable, with the facility of duplex, or two-way operation, inherent in the old non-loaded type of cable," the engineers stated. "The duplex speed is several times as high as that of any long cable that has previously been duplexed, and provides the greatest message carrying capacity of any existing trans-ocean cable."

A cable of such great message capacity could not be built until metallurgists had discovered a new alloy of unusual magnetic properties. This alloy, known as "permalloy" in the United States and as "numetal" in England, is composed of nickel and iron and is more than 30 times easier to magnetize than soft iron, the metal which in the past has had the greatest magnetic permeability. Over 50,000 miles of fine wire made of this metal is wrapped around the copper conductor of the cable.

Another unusual feature of the cable which makes possible the sending of messages in both directions at the same time is the fact that there are "artificial cables" in both Newfoundland and the Azores which duplicate exactly the electrical characteristics of the cable actually under the water.

The resistance of the 1341.2 nautical miles of conductor is 4,521 ohms. When a 12-volt battery is used for sending in both directions at 1,400 letters a minute, a current of only six thousandths of an ampere is received at the other end of the line.

Science News Letter, January 31, 1931



House Centipede


It is really a pity that the house centipede is such a wriggly, squirmy object, fit to send any good housewife into a conniption fit, and to make her reach for an annihilating broom at the same time. For it is the melancholy truth that this many-legged little racer across our walls and floors—even our ceilings—is classified as a household pest and yet is one of the most useful of all our domestic animals. Indeed, saving only the equally persecuted spider, he is about the only uninvited housemate of man that earns his keep. He does this as the spider does, by killing and eating the other uninvited guests—flies, roaches and similar nuisances.

Like the hunting spiders that spin no webs, the centipede does most of his stalking at night. Then all the diurnal insects, such as flies, are fast asleep, and the centipede, coursing rapidly around on the ceiling in the dark, literally stumbles on them and nabs them like a flash before they are sufficiently aroused to take flight. And of course the night-prowling vermin are just as much in the dark as he, and a collision is most likely to end in a meal—for the centipede.

In spite of his more or less terrifying appearance, the house centipede is utterly harmless to human beings. He has biting jaws and he has poison, but the jaws are too weak to go through even the tenderest of human skins, so the poison does no harm. And if caught by a curious child, the centipede rarely attempts to defend himself by biting, but prefers to break off several legs—which he can easily do and won't miss much anyway—and thereby escape. Afterwards he grows new ones at his leisure.

Science News Letter, January 31, 1931

Any soil that will grow a good crop of weeds will support a rose garden.



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