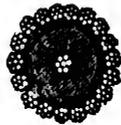
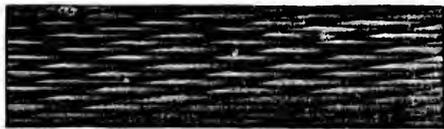


(P.)

DESCRIPTIONS respectively of the Cable submerged between Ireland and Newfoundland by the Company by the Telegraph Construction and Maintenance Company, Limited

DISTANCE FROM IRELAND TO NEWFOUNDLAND

ATLANTIC CABLE, 1858.



CONDUCTOR—A Copper strand, consisting of 7 wires (6 laid round one), and weighing 107 lbs. per nautical mile.

INSULATOR—Gutta Porcha laid on in three coverings and weighing 261 lbs. per knot.

EXTERNAL PROTECTION—18 strands of Charcoal Iron wire, each strand composed of 7 wires (6 laid round one), laid spirally round the core, which latter was previously padded with a serving of hemp saturated with a tar mixture. The separate wires were each 22½ gauge, the strand complete was No. 14 gauge.

WEIGHT IN AIR—20 cwt. per nautical mile.

WEIGHT IN WATER—13¼ cwt. per nautical mile.

BREAKING STRAIN—3 tons 5 cwt., or equal to 4·85 times its weight in water per nautical mile; that is to say, the cable would bear its own weight in a little less than 5 miles depth of water.

DEEPEST WATER TO BE ENCOUNTERED, 2,400 fathoms, or less than 2½ nautical miles.

THE CONTRACT STRAIN was equal to 4·85 times its weight per nautical mile in water.

LENGTH OF CABLE SHIPPED—2,174 nautical miles.

ATLANTIC CABLE



CONDUCTOR—Copper strand consisting of 7 wires, weighing 300 lbs. per nautical mile, embedded in Chatterton's Compound. Gauge of single wire ·048 of strand ·144 = ordinary No. 10 gauge.

INSULATION—Gutta Percha, 4 layers of which the core is surrounded by four thin layers of Chatterton's Compound insulation 400 lbs. per nautical mile. Diameter of core 1·392.

EXTERNAL PROTECTION—Ten solid wires (No. 14 gauge) drawn from Webster and Horsfall's compound, surrounded separately with five strands of Jute Yarn, a preservative compound, and the whole surrounded with a serving of Jute Yarn, which latter is padded with Jute Yarn, mixture.

WEIGHT IN AIR—35 cwt. 3 qrs. per nautical mile.

WEIGHT IN WATER—14 cwt. per nautical mile.

BREAKING STRAIN.—7 tons 15 cwt., or equal to 4·85 times its weight in water per nautical mile; that is to say, the cable would bear its own weight in eleven miles depth of water.

DEEPEST WATER TO BE ENCOUNTERED, 2,400 fathoms, or less than 2½ nautical miles.

THE CONTRACT STRAIN is equal to 11 times its weight per nautical mile in water.

LENGTH OF CABLE SHIPPED—2,300 nautical miles.

Speed of working through new cable, with the present improved instruments, is certified by

Captain Douglas Galton, R.E., F.R.G.S., F.G.S., F.R.S.; William Fairbairn, Esq., C.E., F.R.S.; Charles Wheatstone, Esq., F.R.S., formed the Scientific Committee, appointed by the Directors of the Atlantic Telegraph Company to examine all Specimens of the Cable, and that their Tender for making and laying the Cable be accepted.

London, 54, Old Broad Street, E.C., March, 1866.