

relays to close call-bell circuits. They are of iridio-platinum wire, 3 mils diameter and 2 by 4 cm. dimensions; they have a frequency of 16 per second, and with a clearance of 2 mils .001 erg. per second is required to bring them into contact. This can be used at a distance of 10 kilometers with $\frac{1}{3}$ ton of copper and would be little affected by the absorption; it has not, however, been adapted to the transmission of Morse signals. The power used by the telephone is more than 600 times the power used by the rectangle in this case. F. C. C.

THE BEQUESTS OF THE LATE PROFESSOR MARSH.

THE will of the late Professor Marsh leaves his entire estate to Yale University, with the exception of \$10,000 to the National Academy of Sciences. Its provisions are as follows: 1. The library which he had collected is to be placed in the Yale library, and all duplicates are to be given to the library of the Peabody Museum. 2. His home and the land surrounding it, nearly three acres on Prospect Hill, is given to the University to be used exclusively as a botanical garden 'and for no other purpose.' The garden is to be under the custody of a regularly appointed curator at a salary of \$2,000. The house is either to be used as the residence of the curator or as a botanical laboratory, as his executors may see fit. In case the corporation does not wish to accept the house and grounds for this purpose Professor Marsh orders that they be sold and the proceeds added to the residuary estate. 3. His executors are ordered to sell all his pictures, paintings, furniture, bric-à-brac, silver and Oriental collections, the proceeds to be turned over to the University. 4. The gift is made to the University of a collection of 2,000 orchids and of all of his greenhouse plants. If not needed by the University these may be sold for the benefit of the estate. 5. The bequest is made of all of his scientific collections in paleontology, geology, zoology and archæology, to be kept in Peabody Museum. 6. He gives to the National Academy of Sciences of Washington \$10,000 as a trust fund, 'the income to be used and expended for promoting original research in the natural sciences.' 7. The sum of \$30,000 which, by the

terms of the will of George Peabody, Professor Marsh was authorized to dispose of in his will, is left to the corporation of Yale 'to be expended by the trustees of Peabody Museum in preparing for publication and publishing the results of my explorations in the West.' 8. All the rest, residue and remainder of the property and estate real and personal, is given to Yale University to be used and expended by it for 'promoting original research in the natural sciences.'

The value of Professor Marsh's estate is said to be about \$100,000, but may not prove to be as much. It will be remembered that somewhat more than a year ago Professor Marsh gave his extremely valuable collections in paleontology and other sciences to the University. It is estimated that these were secured at a cost of about \$250,000. The Peabody Museum was given by Mr. George Peabody, Professor Marsh's uncle, through his influence. It should also be remembered that Professor Marsh never accepted any salary from Yale University.

SCIENTIFIC NOTES AND NEWS.

THE first Hodgkins gold medal given by the Smithsonian Institution has been conferred on Professor James Dewar, F.R.S., for his work on the liquefaction of air.

PROFESSOR HELMERT, of Berlin, has been elected a foreign correspondent of the Paris Academy of Sciences for the Section of Geography and Navigation. In the same section Père Colin, founder and director of the observatory at Tananarivo, Madagascar, was elected a corresponding member.

THE Paris Academy of Medicine has awarded its Lecaze prize (10,000 fr.) to Dr. Widal for his serum method of diagnosing typhoid fever.

It is proposed, says the London *Times*, that a portrait of the late Dr. John Hopkinson should be placed in the Hopkinson Memorial Wing of the Engineering Laboratory at Cambridge University, the cost to be defrayed by subscription. A chimney piece which Mrs. Hopkinson has presented for use in one of the principal rooms contains a panel in which such a portrait could appropriately be placed. Mr. T. B. Kennington, who painted a portrait of Dr. Hopkinson some years ago, has suggested that instead of simply