

but as a soldier I claim the privilege of unmasking my batteries when I please.

"In giving to the *North American Review* at this late day these letters, which thus far have remained hidden in my private files, I commit no breach of confidence, and to put at rest a matter of constant inquiry referred to in my letter of May 28, 1884, I here record that my immediate family are strongly Catholic. I am not and cannot be. That is all the public has a right to know; nor do I wish to be construed as departing from a resolve made forty years ago, never to embark in politics. The brightest and best youth of our land have been drawn into that maelstrom, and their wrecked fortunes strew the beach of the ocean of time. My memory, even in its short time, brings up the names of victims by the hundreds, if not thousands.

W. T. SHERMAN."

WEALTH IN TELEPHONES.

Very few persons realize how many men have been beggared as well as enriched by the telephone. Inventors who have cudged their brains and wasted their time over it are innumerable.

A good many telephone companies have been formed, some of them backed by plenty of money, like the Drawbaugh; some of them unquestionably for the purpose of compelling the Bell Company to buy or compromise.

Bell, himself, who is not a financier, would probably have gone the way of all poor inventors had he not happened to marry the daughter of one of the most skillful financiers in the country, and an expert in telegraphic stock and management, Mr. Gardner Hubbard.

But nobody realizes better than Mr. Bell that his telephone is not yet perfected. Far from it. It does not always work satisfactorily, and, as a general thing, for long distances is practically worthless as yet. Other companies doubtless have improvements, great ones, but these have been patented, although the patents avail little, because all these telephones make use of the electric current for the transmission of the voice.

There has been of late unquestionably something of a reaction on the part of the public, especially in New England, from the high favor in which the telephone was held. This has been partly due to the charges, partly to inefficiency and partly because many customers have come to regard these instruments as more of a bother than a benefit.

There prevails an impression among capitalists who have given some attention to money possibilities in telephones, that the Bell people do not expect always to defend their bonanza, so as to keep it a monopoly. Such capitalists profess to think that the shrewd financiers of the Bell Company are aware that telephoning will be declared some day as free as telegraphing, and that all that any company can do will be to protect its instrument by patent. Whether this is a correct opinion or not, it prevails, and to it is largely due the willingness of capitalists to look with favor upon any telephone scheme. Inventors now have no difficulty in getting moneyed men to examine and look into their telephone inventions, and there are some very superior ones in the market.

A sergeant in the United States Signal Corps invented a field telephone, a marvel of simplicity as well as ingenuity, an instrument so simple and yet so perfect that it could be exposed for weeks to the weather in a field or lie buried in an ash heap and not be injured. The Signal office made use of these instruments daily with perfect satisfaction.

A Washington stove dealer invented a house telephone, a simple little contrivance, making use of gas and water pipes instead of wires, attached to which in each room was a transmitter and receiver.

The simplest telephone in existence, and one that will probably be left undisturbed by the great corporation, is in operation in Fayetteville, N. C. It is an old telegraph wire, each end fastened into a thin sheet of wood, and its total distance is about a quarter of a mile, extending from the hotel office to the livery stable. Yet, rude as it is, it serves its purpose admirably, carrying the voice over the wire with perfect clearness, though one has to use some considerable lung power.

There are a number of men who for the past four or five years have felt very much like asking somebody to kick them. These are men who had a great fortune at hand and turned their back on it because they did not know it. Gov. Jewell, of Connecticut, two or three years before his death, became enthusiastic over the telephone. He caught the fever in Boston, where the telephone first asserted itself. He desired to form a local company that would control the State, but he went begging, nobody knew anything about the telephone. Nobody had any faith in it. At last Gov. Jewell found three men who were willing to go in with him. One was a young lawyer, Morris F. Tyler, who had been the executive secretary of Gov. Bigelow.

Another was a shrewd business man named H. P. Frost, and there was a third. Jewell died just as he was beginning to see the splendid returns his company was getting, but under Tyler and Frost this little company had developed into the Southern New England Telephone Company, which controls two-thirds of the business in New England out of Boston, the Washington and Baltimore companies, and some others.—*N. Y. Recorder*.

POWER OF THE PHONOGRAPH.

The accounts of the experiments recently made by a learned professor at the Smithsonian Institute in determining the meaning of the various sounds of the Simian tongue is of exceptional interest. This gentleman, according to the *Pittsburg Dispatch*, has, with extreme patience, succeeded in recording upon the phonographic cylinder, many times repeated, the chatter of monkeys; and after careful practice of the sounds thus obtained he finds that by repeating them he can make himself understood by the animals. As it is but natural to suppose, it is only sounds expressive of sensations common to ourselves and our four-footed brethren that have as yet been recognized and defined; sounds, for instance, that express cold, hunger, fear and other of the feelings most frequently experienced.

The value, however, of such investigations as these, from a scientific standpoint, can hardly be overestimated. They will unquestionably result in the following out of an entirely new line of speculation in the near future. This novel use of the phonograph is an interesting confirmation of the fact that the more or less marked tendency of many scientific discoveries is toward special applications undreamed of when the offspring of the inventor's ingenuity was first made known to the world. What at first is regarded as an ingenious toy, frequently becomes a necessary adjunct to our civilization. Photography, for a considerable time, seemed to have little use other than that of ministering to the vanity of a favored few who could afford to employ it; now it is used in every branch of science, and art, and is, indeed, absolutely indispensable. The phonograph was long considered a wonderful but comparatively useless plaything, and doubts are still expressed of its ultimate practical value for the purpose for which it was originally designed; but there can be no question that this invention, like many of its predecessors, is destined to open out fresh fields of investigation and develop new wonders in many and widely varied directions.

Some very interesting facts have been lately established which point to the possibility of the use of the phonograph in the solution of certain problems involving musical acoustics. About two years ago, when Dr. Wangemann, Mr. Edison's representative, was exhibiting the phonograph before the young German Emperor at his palace in Berlin, a record was about to be made of a performance of the royal orchestra. Dr. Wangemann suggested certain changes in the position of the instruments, which experience convinced him were more favorable to the blending and recording of sound than their ordinary disposition. The leader of the orchestra was horror stricken at the unheard of innovation; the Emperor at once commanded that it should be done and the record was made. The result so pleased the Emperor that at the next royal concert the strings, woodwind and brass were placed a la phonograph. The recording of the subtlest quality, or the soul of the human voice, the phonograph has not attained to, but for indicating the purely technical capabilities of the vocal organ it possesses remarkable possibilities.

When in Paris Dr. Wangemann called on Mme. Marchesi, the celebrated teacher of singing, and suggested that the phonograph might be used for vocal teaching, and rendered possible certain distinctions and shades of tone which often escape the unaided ear. Mme. Marchesi ridiculed the idea saying that her thirty-five years of tuition had been none too much to give her right ideas on the subject, but she could trust herself sooner than the new-fangled instrument. Dr. Wangemann, however, gained permission to call the next day, when twelve of the artist's pupils sang a plain scale, ascending and descending into the phonograph. Mme. Marchesi was perfectly astounded with the result, for on listening to the record she perceived inequalities and inaccuracies of tone which had escaped even her keen ear.