

OCEAN TELEGRAPHY. Facts Financial and Otherwise Regarding the Transatlantic Cable.

New York Sun. When the two cables Mr. Jay Gould has contracted for are completed the charge for cabling from London to New York will be 25 cents a word, or possibly only 12 1/2 cents a word. At this rate the cable companies will be unable to pay dividends; and although reductions in price have in the past always added to the traffic, so that the loss has been recovered before long, it is evident that there must be a limit at which cable telegraphing will cease to be a profitable business.

At the present moment there are five cables in working order across the Atlantic. Of these three belong to the Anglo-American Cable company, one to the Direct Cable company, and one to the French company. Besides these cables there is another belonging to the Anglo-American company, which will soon be repaired, thus making six cables across the Atlantic. The four working cables of the Anglo-American and Direct companies are, however, duplex, so that when the other cable is mended and arranged as a duplex line there will be no less than eleven separate lines—more than sufficient to transmit double the business which is done at present. So it is clear that the new lines are not needed to relieve the existing lines from any pressure of traffic.

When the first line was opened in 1856 the charge was \$100 for twenty words. It was not until some years later that the word rate was introduced. At this rate the daily average number of messages was twenty-nine, and the receipts per diem were \$375. Three months later the tariff was reduced to \$50 for twenty words, and at this rate the number of messages increased to sixty-four per diem, while the daily receipts only increased to \$440. The next change was made by charging a slightly higher rate, but allowing shorter messages. A message containing only ten words was sent for \$25, and at this rate the number of messages doubled, the daily average being 131 against the former 64. But as these messages were only half the length, the receipts were only \$1770. The rate was then gradually reduced to \$10 for ten words, but the reduction proved disastrous, the daily number of messages increasing to 236, and the daily receipts falling off to \$3,740. This was in 1869, and in 1870 the first French line was laid. A brisk competition began, and the rate was reduced to \$7.50 for ten words. Business at the time was very active, and the daily number of messages sent across the Atlantic was no less than 452, while the receipts were \$5,655. An amalgamation of the two rival companies then took place, and on December 12, 1870, the rate was doubled. Under the new rate the average number of messages fell off for the first time in the history of cabling; but the receipts reached the then enormous total of \$8,870 per diem. A subsequent reduction to \$10 a message showed a falling off in the receipts, and upon May 1, 1872, the old system of ten words messages was done away with and a uniform charge of \$1 a word was instituted. The popularity of the change was at once shown by a large increase in the number of messages. The daily average sprang suddenly from 498 to 646, and the receipts showed an equally satisfactory increase. Those were the palmy days of telegraphy, as an experiment which was made during the month of May, 1873, shows. The rate during that month was raised to \$1.50 a word, the daily number of messages being 588 and the daily receipts \$12,000. What a contrast this is to the profits at the present time will be seen when it is mentioned that the present daily receipts are only \$13,075, while the number of messages is about 3500 per diem.

In view of the coming reduction it will be interesting to see what the effect of a reduction to 25 cents a word was in the past. On September 15, 1875, the rate per word was reduced to 25 cents. The number of messages sent average, 1,390 a day, and the daily receipts were \$4,545. The rate was then raised to \$1 a word and the average number of messages fell to 943, while the receipts rose to \$11,926. Again, in 1877, the rate was reduced to 25 cents, the number of messages being 1,967, and the receipts \$4,365. So that during the year from 1872, when the word rate was introduced, until 1880, when the great amalgamation took place, the change in rates gave the results shown in the following table:

Table with 3 columns: Rate, Ave No. of messages per diem, Ave daily receipts.

From this it is clear that a 50 cent rate has not paid in the past, and that the public will be the only loser by the reduction for a long time to come. Still it is believed that there will be such an increase in the number of messages that the receipts will be almost as great a year or two hence as they are at present. Of course every increase in the message means an increase in operating expenses; so that even should the receipts remain unaltered, the net earnings would be less. Another difficulty which enters into the practical working of a cable is the introduction of codes. To what extent this has been done is shown by the remarkable fact that since the cable companies allowed the use of codes the average number of words in a message has fallen from thirty to twelve and a half. Experience shows that it takes six times as long to send a cable message as it does to cable. The heretofore ordinary sentence, and thus every extension of the use of codes entails a larger staff, and after some time more cables. The duration of a cable is another element which will have to be considered in fixing the marine telegraphic rates of the future. If a storm injures a land line the damage is easily and unexpensively repaired. But not so with a sub-marine cable. The wonderful power of science enables electricians to locate almost exactly the place where the current is interrupted, but it requires a ship specially fitted with expensive machinery to raise the cable, and it requires all the appliances of science to direct the use of the machinery and put the cable back again after it is reported.

cable is laid on the bottom of the deep Atlantic it should remain there forever unharmed. It is well known that at the great depths where a cable lies the sea is quite motionless, and that the storms and waves which would toss it about in nearer the surface cannot affect it when lying at the bottom. Hence the public conclude that once the cable is lowered into its place it cannot be injured. Apparently the pioneers in the laying of cables shared in this view, and it was only from sad experience that they have been obliged to alter their pleasant belief. One reason for this change has been the accurate soundings taken by the ships of different governments. They have shown that the bottom of the Atlantic is not, as was formerly believed, an enormous plain gradually falling from the coast of Ireland until mid-ocean is reached, and then ascending to the coast of Newfoundland; but that it is a very rugged mountainous country, intersected with deep valleys and plentifully besprikled with sharp rocks and cliffs, each of which means destruction to any cable which is not unusually strong. There are two principal dangers that threaten a cable. The one is that in laying it should consequently lie on the bottom in a circle instead of in a right line. The enormous pressure of water upon such a kink would soon crack the outer coating, and thus expose the wires to the action of the salt water. The other danger is when the cable hangs over a sharp-pointed rock or a steep cliff. In this case the pressure bends the cable at an angle similar to that of the rock, and it is evident that if the cable were bent at an acute angle the coating might be seriously injured. When these dangers were first discovered the life of the cable was thought to be no longer that about eight years, but some into movements in the manufacturing of the outer coatings have extended the probable duration of a cable to three or ten years.

It has been suggested that the cost of cabling may be reduced by adopting the use of the telephone. Certain experiments have already been made between France and England, with fairly satisfactory results. But any communication across the Atlantic is in the present state of science impossible. In cabling the opposition increases as the square of the distance, and the utmost that the cabling between Europe and America can do is to give eight vibrations. A sound consisting of eight vibrations is inaudible, the faintest sound which the human ear can hear being one of sixteen vibrations when made in an organ pipe. Hence it appears that there is but little hope of reducing the cost of cabling by any use of the telephone.

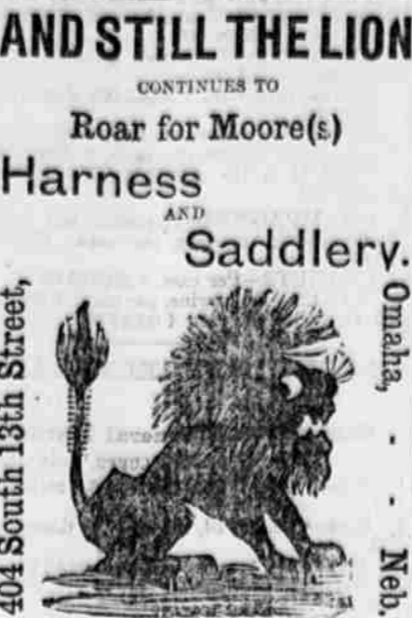
Three Northern Iowa Farms National Live Stock Journal.

In a recent visit to the well known "Cedar Falls Stock Farm," of W. M. Fields & Bro., at Cedar Falls, Black Hawk county, Iowa, our representative was surprised at the large amount of fine stock found upon their broad pastures. Their herd numbers 80 head of well-bred females, embracing such families as the Young Mary, Arabella, Louan, Crocus, Adelaide, and Pansy, headed by Baron Belleville 18,922, and Carlotta's Duke, a by imp. 2d Duke of Underage 22,964. They have at all times a choice lot of young but and heifers for sale. It will be remembered that the Missouri Fields Bros. made, last year, a very important and large importation of English draft stallions. These gentlemen have also very choice flocks of Cotswold and Oxford Down sheep, which were personally selected and imported from the most noted flocks of England. Their herds of Poland-Chinas and Berkshires are in a splendid, thrifty condition.

A representative of The Journal recently made a visit to the "Willow Lawn Stock Farm" of J. H. and W. R. Bowman, Waverly, Iowa. "Willow Lawn" contains 3,000 acres of as rich land as can be found in the state, with as good farm buildings (cattle and horse barn) to correspond. At the time of the visit the herd of short-horns numbered 100 head, with representatives of the Wild Eys, Rose of Sharon, Young Phyllis, Young Mary, Mary Whicker, Jessamine, Dulcibella, Rosabella, Amelia, Belina, Agatha, Arabella, Adelaide, Galatee, and other good families, headed by Oxford Duke 27,389 and Beau Whitaker. Bowman Bros. are to be congratulated on having one of the best conducted establishments of its kind in the Northwest and we commend them to our readers as straight forward, and reliable gentlemen.

At the conclusion of the recent Marshalltown sales, our representative made a visit to the well-known "Babbage Farm," in Butler county, Iowa, now owned by H. L. Stout, of Dubuque. The farm, of 3,000 acres, is located on the Dubuque and Dakota R. R., 18 miles west of Waverly and 14 miles southwest of Allison—a young but growing town, the county seat, Butler county, and now one year old. Mr. Stout, about seven years ago, purchased this grand estate at \$72,000, and Mr. I. N. Fisher, a very competent gentleman, in charge as general manager. Since that time Mr. Fisher has transformed the old "Babbage Farm" into one of the best conducted and finest estates in all that great northwest. The buildings are all first-class, and Mr. Fisher stated that next year would see a grand new sale stable, a new cattle barn, and other improvements, that will involve the expenditure of more than \$20,000. The present cattle barn is 50x1000 feet, 3 stories high; but the new barn, which is to be used exclusively for the short-horn, is expected to eclipse anything in this country. The herd of short-horn numbers about 40 head. Here also, are kept about 30 elegantly-bred brood mares, many of them purchased in Kentucky by Mr. Stout, at high prices. These mares have all been bred to Mambrino Boy, who has a record of 2:26; and many very promising foals have been dropped. There are now on the farm about 60 choice brood sows, mostly Berkshires. The boars used have all been imported from the best herds of England and Ireland. In the seven years he has been on the farm, there has never been a single case of hog cholera. Here, also, we believe, is the only flock of imported Starapole Down sheep in the state. Although not a large flock (numbering about 18 head), it is a choice one, and consists of imported stock. This

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DEPARTMENT OF THE INTERIOR, Office of Indian Affairs, Washington, June 15, 1881. Sealed proposals, indorsed "Proposals for Beef" and directed to the Commissioner of Indian Affairs, Washington, D. C., will be received until 11 o'clock a. m., Wednesday, July 20th 1881, for furnishing for the Indian service, 14,200,000 pounds of Beef on the hoof.

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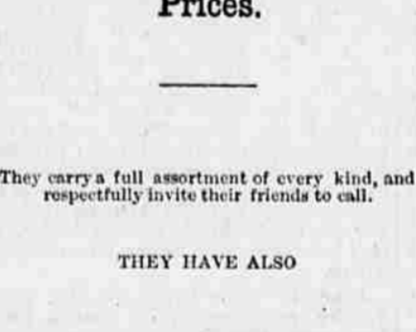
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Table with 3 columns: HOTELS, PROPRIETORS, TOWNS. Lists various hotels and their owners across different western towns.

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Table listing business professionals in Malvern, Iowa, including Station Agent, Farmers and Traders Bank, and various merchants.

EMMERSON, IOWA.

Table listing business professionals in Emerson, Iowa, including Lumber, Lime, Etc., Station Agent, and various grocers.

RED OAK, IOWA.

Table listing business professionals in Red Oak, Iowa, including Grocery and Packing House, Station Agent, and various merchants.

STANTON, IOWA.

Table listing business professionals in Stanton, Iowa, including Hardware, Steves and Tinware, General Merchandise, and various merchants.

VILLISCA, IOWA.

Table listing business professionals in Villisca, Iowa, including Real Estate, Groceries and Meat Market, and various merchants.

CORNING, IOWA.

Table listing business professionals in Corning, Iowa, including Jeweller, Adams County Union, and various merchants.

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