MISCELLANEOUS.

(For the Scientific American.)

Steam Carriages on Common Roads.---The Last of the Controversy.

WILLIAMSBURGH, L. I.

I have but a few words to say on this subject, and as a favor would request their insertion in the Scientific American.

Mr. Serrell, in your last week's paper, attacked me, not my communication; I neither attacked him nor any other person—I spoke of a scheme. In reference to the Report of the Committee of the House of Commons, I read it long ago, and from the very testimony adduced, I came to the conclusion—not the same as that of the Committee—that the steam carriages of Gurney, Hancock, &c., had proved to be disastrous failures. It is twenty years since that Report was made, and although the Road Commissioners of England would be very happy, since that, to see steam carriages running on the common roads, and would offer them every facility, yet the unfortunate attempts of Gurney, &c., have deterred nearly all others from following in the same line. The farmers of England have long since ceased opposition.

In 1849, Sir James Anderson got up a steam Carriage Co., something like this one in New York; it proved a disastrous failure. The most ingenious mechanics are not the most able to judge of economical schemes; this requires another faculty. Yea, more than this, all men make mistakes; it is not to their discredit, it is human nature. The San Jacinto is an evidence of the truth of this statement; I could adduce many others. Although this is the age of mechanical invention, there is a limit to the payability of every invention. Mr. Serrell, I am afraid, views the anthracite coal, like the Report of the House of Commons. If he reads the Government investigations into the qualities of coals of the United States, on page 307, he will find that coke, from its superior evaporative powers, is stated to be superior to anthracite or free burning coals, and the language of that Report, by that able chemist, Walter R. Johnson, is, "this circumstance justifies the use of coke in locomotive boilers, in preference to any other fuel, where the price does not interfere to prevent it." I happen to know something about coals and coke myself, practically, and if I knew *nothing* about steam carriages for common roads, I would not have said a word on the subject.

A plausible scheme, and one far more sensible than to run steam carriages on common plank roads, would be to make wooden rails, above six inches deep and three wide, and lay a track alongside a plank road. Mr. Ballantine, an English gentleman, who was for some time in Williamsburgh, and came here to carry out the invention of Payenizing wood, has said that he could prepare oak rails to last for a great number of years, and they would become nearly as hard as iron itself; they were to be prepared with the sulphate of copper. A railroad with wooden rails and good light locomotives, I think, would pay well, in some localities; the cost of the road would not be great. I think I have seen a notice of such a road proposed in some of the back volumes of the Scientific American. I know something about plank roads, their construction, use, &c.; I do not think a man should be stigmatized for writing an article about a scheme of any kind, as long as he uses decent language, and makes no personal remarks.

[We have received a letter from Mr. Fisher on the subject, in reply to our answer of his former letter. Mr. Serrell stated, last week, that he left us to him. Well, we do not intend to speak for speech-sake, and we say the above, from the Williamsburgh correspondent, is the last on this subject, and *it* would not be published but for two new points in it, namely, the recommendation of a wooden railroad, and the allusion to a public work on coke and coals.—ED.

American Genius.

Harrison Winans left Baltimore, a few years ago, a poor boy, but with an improved mind, acquired at a country school, with genius, ambition and enterprise. He worked his way in Russia to the head of the machinists and engineers, and became leading contractor on the great railroad between Moscow and St. Petersburgh, 400 miles long, and made over $1,000,000. On his return to Paris he married a talented, and able and beautiful lady, and will soon build a cage for her in the shape of a villa for all kinds of mechanics, and a park of three acres beautifully ornamented, where rich and poor may feast their eyes on indigenous plants and rare exotics. He goes once more to Russia to fulfill a contract with the Emperor, on public works, by which he will bring $500,000 in gold for his mental labors.

For the Scientific American.

New Magnetic Indicator.

This ingenious little instrument, contrived by a Mr. Rutter, of Bristol, England, has attracted so much attention, that the following account of the apparatus, &c., may not perhaps be uninteresting, at least to those who may not have had time to devote much attention to the study of these subjects. The New Magnetic Indicator is thus composed:—

A wooden stand is fixed to a table; from this rises a perpendicular pole, with a horizontal brass rod projecting from its summit; at the extremity of the rod there is a delicate pair of forceps, which grasps a thread of silk, the thread holding in suspension a little pendulum of sealing-wax. The bit of wax is surrounded by a glass shade, and is suspended over a small dial-plate, marked out somewhat after the manner of a compass, with the letters a, b, c, d, e, f, g, h. The operator puts his finger, or finger and thumb, upon the top of the perpendicular pole, to which the brass rod is attached, when the pendulum makes a variety of definite movements over the face of the dial plate. These movements are described as modified in an extraordinary manner by the sex of the operator, the substances held in his hand, and a variety of other circumstances. But we must refer to the inventor himself for an account of his wonderful machines. Mr. Rutter tells us that "by means of this instrument, he is not only able to demonstrate the influence of the minutest portion of matter upon the living orgasm, but likewise the polarization of our bodies, and those parts where the north and south poles are situated." "He is also able to demonstrate most clearly the difference between the male and female currents; and that the latter are generally inverse, or antagonistic to those of man." "If a person of the female sex merely breathe upon the hand of the operator, it immediately changes the current to the female. If a hair of a female is placed on the hand of the operator, or the hand of the last of any number of men in contact with him, the female current is immediately produced. The same phenomenon is produced by a pocket-handkerchief worn by a lady.

Drs. Quin and Madden, the famous homœpathic practitioners, on seeing the instrument and a few of Mr. Rutter's experiments, they at once conceived that it offered the means of demonstrating the action of homœpathic doses of remedies. Experiments were made with about fifty different remedies, from the 3 to 800 dilution; each globule produced exactly the same result as that caused by the same agent in mass."

These were the leading claims of Mr. Rutter's discovery, as given in the report of the first lecture on this subject, delivered by Dr. Quin before the British Homœpathic Society. Dr. Madden has since published a lecture; but alas for Dr. Quin, the "first on the stage" discovers that his, Quin's, experiments were full of fallacies and blunders. He showed that out of sixteen actions of medicines recorded by Dr. Quin, the actions of twelve differed from those produced by the same medicine on himself. This discrepancy staggered the homœpathic faculty,—the bubble burst. Madden turns State's evidence, and proffers himself as a witness at the bar of public opinion against his two accomplices, Rutter and Quin.

The aim of the homœpathic organs, which a few week's ago proclaimed this as a wonderful and brilliant discovery, is now to let them all down as gently as possible. It is discovered that all the wonderful currents of the New Magnetic Indicator has depended upon the will of the operator. How this exercise of the will is to be distinguished from voluntary and responsible fraud, we leave the reader to determine.

It is almost useless to speculate on the real nature and origin of Mr. Rutter's proceedings. It seems pretty certain that his instruments and experiments are plagiarisms from some nonsensical writings of Herbert Muyo. However, the incomprehensible extent of the folly or fraud shown in the whole affair, renders it difficult to ascertain the springs and motives of the chief actors. Nothing but a determination to be deceived, or the utmost conceivable facility for self-deception, could have led persons, having the stature and years of adult men, to pin doctrines, which they profess to hold in reverence, to a silly and babyish toy. Nothing but this could have led them to forget the triple movement discovered, all too late, by Dr. Madden, to lose sight of the tendency of a weight attached to a silk thread to rotate, and of muscular unsteadiness and arterial action to impart motion in an instrument poised with the utmost delicacy.

A. S. COPEMAN.

Utica, N. Y.

For the Scientific American.

The Sinking of Ice.

In No. 2, Vol. 6, of the Scientific American, there is an article on the above subject, which would go to prove that it cannot sink; but, as it is undecided, I will give a reason that may account for it. When the south wind has been blowing, or the sun shining, for some time, the body of water becomes warm and the ice very spongy. The water that is contained in, and in contact with the spongy ice, will be cooled to nearly the freezing point, which is its most dense state; and may not the difference in density of this water, and the water underneath, be sufficient to make the ice sink? Anchor ice, I think, is formed on the bottom in swift shallow places. The reason is, the water being agitated and not freezing, the stones on the bottom get chilled, so that ice forms on them until it becomes of sufficient bulk, when it is carried away by the current. I have frequently seen it on the bottom and just as it was rising, but never except in swift shallow places. The ice often brings the stones up with it, and carries them down the stream. If the matter is of sufficient importance, by calling attention to it now, some one may be induced to make accurate observations (as they will in a short time have ample opportunity), and the facts of the case be ascertained.

F. C.

Elmira, January 20, 1852.

Flax Cotton.

M. Clausen, of whom so much has been said, has opened a manufactory at Stepney-Green, Eng., for the purpose of carrying out his discoveries in flax cotton.

Chevalier Clausen, by his method, takes the flax-straw as it comes from the field; but he proposes that the farmer should mechanically separate the straw from the fibre by the use of a very simple machine, which pounds or breaks the straw and effects the separation; this reduces the substance to one-half its bulk, and the straw may be returned to the soil, or, mixed with cake, crushed seed, &c., be used as cattle food. Now, the stem of the flax plant consists of three parts—the shove or wood, the pure resin or glutinous matter which causes these fibres to adhere together. The first has been got rid of by the farmer by the process described, and it remains to remove the third constituent, namely, the glutinous substances. Chevalier Clausen contends that the present system of steeping in water, either hot or cold, will not effect this, as a large portion of them are insoluble in water, but he has recourse to chemical agents. The fibre is either boiled in a weak caustic soda for four hours, or steeped in a cold solution for twenty-four hours. It is then soured in a bath consisting of 500 parts of water to one of sulphuric acid, washed, dried, and further cleaned, scutched, and so on; flax obtained in this way, being free from all coloring matters, may be bleached afterwards with greater ease, and as the plant need not be cut till ripe, the grower has the advantage of fully ripened seed, and a greater weight per acre of pure fibre. It is calculated that from four tons of flax straw, one of fibre may be obtained.

The fibre is then cut into short lengths by a circular knived cutting machine. The appliances for the metamorphosis of flax into cotton are very simple, consisting of four wooden vats, containing solutions which will presently be named, and an open wooden box, or cage rather, made of strips of wood, which by means of a rope and block, is suspended from a small carriage running along a transverse beam overhead, and thus can be lowered and raised, successively into and from the four vats. The cage being partly filled with the cut flax or waste "tow," is lowered into the first vat, containing a solution of cold water and 10 per cent. of common carbonate of soda. It remains in this about an hour, by which time the liquid has penetrated by capillary attraction every part of the small tubes. The cage is then hoisted up and lowered into the next vat, containing one part of sulphuric acid to 200 parts of water. This acid, by its superior affinity for soda, forms a sulphate of soda with it, and liberates the carbonic acid, which, in its escape, acts mechanically by its elastic force, and separates the fine flax filaments from each other.

The flax fibre soaked in the solution of subcarbonate of soda is no sooner immersed in the vessel containing the acidulated water, than its character at once changes from that of a damp rigid aggregation of flax to a light expansive mass of cottony texture, increasing in size like leavening dough or an expanding sponge. It is then immersed in a second bath of carbonate of soda solution, and if only required to be used in an unbleached state, may be washed and dried. If, however, it is to be bleached, it is immersed in a fourth vat, containing a solution of hypochlorite of magnesia, and in about fifteen minutes attains the color, as in a previous similar time it had acquired the texture of cotton. In fact, it goes in brown flax, and in less than one hour comes out white cotton. It is then washed, drained in baskets, dried in cakes, hanging across iron horses in stove rooms heated to 98° Fahrenheit, and is then ready to be teased like cotton.

Keeping Cattle Warm.

Cattle will eat all that nature requires in a good warm barn, if it is fed to them, and they can have seasonable supplies of water. But nature will require more in an open barn, and more still in a cold yard. The fuel to feed the fires within will always bear a proportion to the cold atmosphere surrounding the surface of the body without, which is to be warmed, in order to keep the creature comfortable. It is like placing your stove outside of the house to warm the circumambient air, instead of placing it within your snug little parlor. The extra out-door appetite is caused mainly, if not entirely, by the extra exposure demanding extra fuel.—[Granite Farmer.

[We hope our farmers, one and all, will pay attention to, and act upon the above information. There is philosophy in the suggestions, they accord with the well known laws of animal chemistry. Cattle that are not well housed in winter, are always stunted and poor, and at the same time they require more food than if they were kept warm; warm stables save hay.

Resuscitation of Frozen Fish.

Prof. S. D Lathrop, in a letter to one of the editors of the American Journal of Sciences, states as a fact well known to those who are accustomed to take fish, such as the common perch and the lake mullet, from Lake Champlain, in the winter, that these fish may be frozen perfectly solid and be transported many miles and kept several days, when upon thawing them out in a tub of cold water they will be found to be alive and active. He has taken some pains to corroborate this fact by inquiry, and has found it to be well sustained by evidence, though he has never seen it. He has found the same fact sustained in the case of the buffalo fish taken from the Rock river.—[Exchange.

[Is this really so? will some of our readers give us what they have seen with their own eyes on this subject.

Manufacturing in Macon, Ga.

The people of Macon are agitating the project of digging a canal some six or seven miles long, by which the water is to be brought into the city for manufacturing purposes. Mr. Holcombe, the Engineer, has surveyed the work, and reports that it can be done at a cost of $212,500. It is estimated that this would afford power sufficient for twelve factories of five hundred spindles each.