

Scientific American.

NEW YORK, MAY 1, 1858.

More Favors Wanted from Congress by Patentees.

We notice among the recent proceedings in Congress that Bancroft Woodcock, of Wheeling, Va., and J. A. & H. A. Pitts, of Buffalo, N. Y., have presented petitions to the Senate for the extension of their patents. Mr. Woodcock has had several patents for improved plows, one of which was extended in 1851, and will therefore expire this year, and we presume this is the one upon which he is seeking to obtain additional protection by a special act of Congress. The Messrs. Pitts are patentees of a machine for threshing and cleansing grain, which is well known to the public, and there is not much doubt that it has richly remunerated its inventors. This patent was originally granted June 29, 1837, and was extended by the Commissioner for a period of seven years beyond its original date. It will therefore expire on the 29th of June next. These petitions were referred to Senator Trumbull, of Illinois; and in each case he has submitted adverse reports, which were concurred in.

To say that we are gratified at the result would be only reiterating sentiments well known to our readers. We hope it is but an augury of the intention of the Committee in relation to other cases which are now before them. There is much more real merit in these cases than in Colt's; and it would redound more to the honor of Congress to extend them than to tolerate the demands of the rich monopolist of revolving fire-arms, whose claim to Congressional protection has scarcely a shade of merit to recommend it.

Since the above was put in type, we learn that the Committee on Patents of the House of Representatives have reported strongly against the extension of Colt's patent, notwithstanding the tremendous pressure that has been brought to bear. The same committee have also reported against an extension of the patent of Sickles' cut-off. It is supposed that the large number of similar cases before the committee will share the same fate.

The Senate Committee on Patents met on the 26th instant, to decide on the india-rubber cases of Hayward & Chaffee, and in our next issue we will endeavor to give their decision and an abstract of its grounds.

Paying Out the Atlantic Telegraph Cable.

By the latest news from Europe, we learn that very active preparations are now making for the next effort in laying the Atlantic telegraph cable. Our noble frigate, the *Niagara*, with the British war steamer *Agamemnon*, her former companion, are taking in their shares of the cable, and they will be in readiness to proceed on the expedition about the end of May. Great care has been taken in the construction of the paying-out machinery, and after it is all completed, the most intelligent machinists in England are to be invited to inspect it and offer critical observations. When no good cause can be shown for further alterations in the machinery, both vessels will proceed to sea, and rehearse a series of experiments in paying out and hauling in the cable, then return to England and report the results. Should these be satisfactory, the final expedition will sail soon afterwards. Instead of commencing to lay down the cable on the Irish coast, as formerly, they will sail out to mid-ocean, divide, and commence paying out from the two vessels at once—stern to stern—the one steaming for England, and the other for Newfoundland.

The principal directors in the last expedition are to occupy the same positions in the next. Mr. Bright is still chief engineer, and from his former experience it is reasonable to suppose he will neglect no precaution to ensure success. A great number of patents have recently been taken out in England for

machines to pay out the cable. The directors of the Telegraph Company have quite a variety of such to select from, and we hope they will choose the best. They seem to have confidence in the entire success of this second attempt, as they have employed a staff of operative telegraphers to practice on the coils to perfect themselves, and be in readiness for immediate action as soon as the cable is laid.

If any impediment should stand in the way of success in this fresh attempt, it will not be caused by a want of attention to the several parts of the work, for each will have to pass through a most rigid ordeal of experiment, under the immediate inspection of the most distinguished scientific men of the world.

From recent experiments on the coils, as stated in English papers, it would appear that only about eight words per minute can be sent through the cable—very slow work indeed—but such as seems to accord with the deductions published on page 184 of the last volume of the SCIENTIFIC AMERICAN.

About fifty-two miles of the lost cable—some of which lay one thousand fathoms deep—have been fished up. It was in as perfect a state as when first laid down, as regards its electrical conditions, but showed signs of the outer covering of the spiral wires having stretched considerably.

Outdoor Exercise and Recreation.

Some few weeks since, the London *Times* published an article on the relative degrees of health and longevity of the people of Great Britain and of the United States, in which the superiority of the former country in both respects was broadly asserted. The writer attributed the dwindling of the American race, as he was pleased to term it, to the endemic diseases of yellow and other fevers with which portions of our country are unhappily afflicted, and to the impropriety in the manner of living. To the latter more than to the former cause is owing, we think, the results mentioned. The errors in this respect commence with the child. Instead of giving it such an education as will produce a full physical development by constant outdoor exercise, it is confined in a close nursery and subjected to a mode of treatment precisely opposite to the proper one. The frame is at the outset made weak and puny; and habits are engendered and diseases contracted which cling to it during the time when verging towards what should be a maturity of strength and beauty, which it never reaches. And thus in the very morning of life, when the sensations have the untiring activity which novelty begets, the mind is, through a lack of vigor and development of the body, filled with languor, dejection and despair, and diverted from its most noble and devoted aspirations.

There is but one method of establishing and preserving the good health and physical development of a people, and that is, a proper degree of healthy exercise and recreation, both before and after the period of intellectual maturity. Infants should be upon all suitable occasions carried into gardens and other open spaces of country, where they can breathe fresh air, and as soon as they are able to walk, and at a later period, should be allowed to walk, romp, and indulge in the various delightful amusements which the impulses of ingenious youth dictate. The unhealthy restraints in dress which foolish fashion has imposed should be abolished, in order that the lungs and less delicate organizations of the system should have full play to perform their functions, and expand to their greatest natural development. With the advance of the more vigorous and aspiring efforts of intellect, athletic games and employment of a more manly and corresponding character should be freely indulged in, having in view the increased physical strength and more mature judgment. These exercises should take place daily, and as much as possible in the open air, and walking at different periods of the day should constitute one of their most important features. And, finally, when the delightful visions of youth give

place to the cold, cautious and calculating ideas of the experienced, this bodily exercise should be daily continued, and with the hours set apart for it should be also allotted hours for intellectual and other recreations, which shall unbend the mind from the cares and vicissitudes of business and household duties, and give it a corresponding vivacious and healthy exercise with the body.

George Stephenson.

When the very paper you are now perusing, gentle reader, has traveled tens or hundreds of miles upon the iron road drawn by the locomotive engine at the rate of thirty miles an hour, without creating one emotion of surprise, or exciting in you an exclamation of astonishment, you can scarcely be expected to believe that thirty years ago, the man whose name heads this article was called a fool, a madman, and a dreamer, because he undertook to make a locomotive travel ten! Yet such was the case, and all the facilities of land locomotion that we now possess, all the good that railways as social revolutionizers have done, the increase of commerce, and the strengthening of friendly relations between city and city, State and State, that iron roads have effected, we owe to the indomitable courage, heroism, perseverance, and energy of the self-taught, self-made George Stephenson. Not only this, but to him are we also indebted for the "Geordy" safety lamp, for the invention of which he has had the heartfelt blessing of many a poor miner who had nothing else to give. Let us know the history of this man's struggles, said the world, let us know the secret of his success, and give us an opportunity to compare him with the mighty dead whose lives are to us as household words. This has been done. We have before us the "Life of George Stephenson, Railway Engineer," by Samuel Smiles, published by Ticknor & Fields, Boston; a modest, unpretending volume, just in fact what it should be, quiet and strong. Of the work of the biographer, we cannot say too much. There is not one page of dry reading in the book, from the moment you take it in hand to the close. You are engrossed, absorbed; it is a story, not a life, full of incidents, each pregnant with results that have changed the aspect of the world. The reader follows, as through an enchanted grove, the career of this noble man. It is a book that should be on every shelf, and children should have it read to them that they may learn lessons of self-reliance. For the personal gratification that the author has afforded us, we are grateful, and we know that each reader will be laid under the same debt. Heartily do we wish the book success, sincerely can we recommend it to all, for it is a worthy monument to a great man, to a high priest of the nineteenth century civilization, George Stephenson!

Horse Taming.

In the course of the past week we have received not a few communications on this subject, some from amateurs and some from persons calling themselves professional horse-tamers, but all deny the use of any drugs, and one correspondent, who says that he acquired his art from the original Rarey, informs us that he adopts no such means. That Mr. Rarey has tamed vicious horses, we are bound to believe; that the temper of any animal may be subdued by kindness we know by personal experience; but that the majority of the persons who are now perambulating the country, taming anything, from horses to black beetles, are humbugs, we are convinced, and we should strongly advise no one to purchase their pretended secrets, but wait and see the effect of time on the animals they have treated.

In the meantime, as a taming mania seems to be pervading the whole of our rural districts, we will give a receipt that can be safely practiced until we are able from authentic sources to publish what is at present the great secret. Be kind to every animal in your possession, or that may come across you in the day, use less whip and more persuasion, backed

by a little choice feed, keep the animals lodgings clean and sweet, and pay attention to its body; take in fact the greatest care of your cattle or horses, become fond of them individually, and they will become fond of you; in a word, treat all animals with the attention and respect they deserve, as fellow laborers, and, our word for it, you will never regret the trouble.

The French Military Force in the Crimea.

M. Vaillant, the French Minister of War has given details of the supplies of men and material that were sent to the Crimea during the war with Russia. The whole force sent by France to the Black Sea was 309,268 soldiers and 41,974 horses; of the former 70,000 were killed or died in the hospitals, or were otherwise missing. It is considered that 93,000 were wounded and survived. Of the horses only 9,000 returned to France. The great guns, howitzers, &c., were 644, besides 603 furnished by the navy. The light artillery for field service furnished 500 guns more, and in all there were 4,800 wheel vehicles for cannon sent from France. The missiles of death, too, were fearfully vast; 2,000,000 of shells and cannon balls, 10,000,000 pounds of gunpowder, and 66,000,000 of ball cartridges. One hundred batteries and fifty miles of trench were constructed, besides ten miles of defensive works, and five miles of subterranean galleries in the solid rock.

The food sent from France, besides items of smaller quantities, was 30,000,000 pounds of biscuit; 96,000,000 of flour, equal to 450,000 barrels; 7,000,000 pounds of preserved beef; 14,000,000 pounds of salt beef and lard; 8,000,000 pounds of rice; 4,500,000 pounds of coffee; 6,000,000 pounds of sugar; 10,000 head live cattle; 2,500,000 gallons of wine, and nearly 1,000,000 pounds of Chollet's preserved vegetables were among the larger items of supplies. The horse feed, too, was immense: 170,000,000 pounds (equal to 85,000 tuns) of hay; 180,000,000 pounds (90,000 tuns) of oats and barley; 20,000 tuns wood; 20,000 tuns coal, charcoal and coke. There were 150 ovens to bake bread, and 140 presses to press hay. The clothing was another branch of large supply, comprising garments in such hundreds of thousands that it would be tedious to enumerate them; but as some clue to the matter, the number ranged from 250,000 to 350,000 of each article of clothing. For the piercing cold of the Crimea there were 15,000 sheepskin palatots, 250,000 sheepskin gaiters, and tents for 250,000 men. The harness and farriery departments present an immense quantity of supplies, among them were 800,000 horse shoes, and 6,000,000 horse shoe nails.

In nothing do the French excel as in their hospital arrangements. They sent 27,000 bedsteads for invalids, as many mattresses, and 40,000 coverlets. There was the material for ambulances for 24,000 sick men, and 600 cases of instruments, and 700,000 pounds (350 tuns) of lint, bandages and dressings of various kinds. Then for the sick there were the most liberal supplies for their sustenance, such as concentrated milk, essence of bouillon, granulated gluten, &c. The money expended at the seat of war was \$56,000,000. Marshal Vaillant also tells of the vast maritime preparations for conveying the army and its supplies over the sea. Among the vessels employed between France and the Crimea, though not stated in the report, were 40,000 tuns of American shipping, embracing some of the finest and largest clipper vessels, as well as some steamers of the American mercantile marine, and for whose services a liberal compensation was made. Taking the totality of all the voyages made by all the men, horses and material, there were conveyed by the French government during the two and a half years of the war, 550,000 men, 50,000 horses and 720,000 tuns of material.

Some beautiful photographs of the moon have lately been taken in Europe, through a large telescope, and on them the mountains, hills, and valleys of our satellite are perfectly portrayed.