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Sewing Machines.

In 1847, when we first noticed the Sewing Machine of E. B. Howe, Jr., of Cambridge, Mass., we had a number of communications on the subject, afterwards, from persons wishing to know where Mr. Howe resided, many of them having written to Cambridge, but got no answer. We did the same, but received no answer, and concluded that Mr. Howe had removed his place of residence, which, we believe, was correct. It would have been well for Mr. Howe had he given publicity to his invention at that time, and had it illustrated in our columns. Like every invention of a useful nature, which we have noticed, our inventors took the hint and commenced inventing sewing machines for themselves. Since that time we have illustrated no less than seven sewing machines in the columns of the Scientific American. The first was on page 145, Vol. 4; it was Johnson & Morey's agent, John Lerow. It was not a good machine, as it performed only by the running link stitch, with one thread. On page 153, same volume, we published an engraving of Magnin's French embroidering machine. On page 1 of Vol. 5, was illustrated Le Row & Blodgett's Rotary Sewing Machine; on page 73 Wilson's, and on page 369 Watson's. (On page 216, same volume, we presented engravings of Lerow & Blodgett's machine improved). On page 58, this Vol., Sci. Am., we presented engravings of Singer's Sewing Machine.

Wilson's Sewing Machine embraced the principle of a reciprocating motion, and making a stitch during both the forward and backward stroke. It is now three years since we first noticed the sewing machine of A. B. Wilson, in Vol. 4, page 268; he was then living in Pittsfield, Mass., and he sent us a sample of the work performed by it; it was good, but when we saw his first model, we had no thought that he would ever have been able to bring sewing machines to that state of perfection which he now has. Since then he has obtained two American patents, and we have just completed arrangements—having made the drawings, &c.—to get his latest improved machine patented in all the important kingdoms of Europe. All the machines we have spoken of use two threads, excepting the one specified. We have nothing to say against any one of them, but the Wilson machine is, in our opinion, a great triumph of American genius. It is no larger than a neat small work-box, very portable and convenient, and we have seen fine shirt bosoms and collars stitched by it in a more perfect and accurate manner than any we have ever seen done by hand work. When we first noticed Howe's Sewing Machine, in 1847, there was not a solitary machine of the kind in active operation, in our whole country, if in the world. There are now, we believe, about five hundred in operation, and we have been told by Mr. Wilson that the orders for his machines cannot be supplied fast enough. There are at present a hundred machines about finished at the Company's works—Wheeler, Wilson & Co., Wauertown, Conn., and these are all engaged. At present, until the patent is fully secured in Europe, we cannot illustrate nor describe this improved machine, which has received the name of A. B. Wilson's Patent Seaming Lath, and was patented on the 15th of last June, but we will do so, perhaps, during the latter part of this year.

When we look at the progress made in Sewing Machines, we expect them to create a social revolution, for a good housewife will sew a fine shirt, doing all the seams in fine stitching, by one of Wilson's little machines, in a single hour. The time thus saved to wives, tailors, and seamstresses of every description, is of incalculable importance, for it will allow them to devote their attention to other things, during the time which used to be taken up with dull seam sewing. Young ladies will have more time to devote to ornamental work (it would be better for them all if they did more of it), and families in which there are a number of children, which require a continual stitching, in making and

mending from morning till night, will yet be blessed by the improved Sewing Machine.

The Sewing Machine is but on the threshold of its career; it is but partially known and applied in our country. Private families know nothing about its use, and shoemakers and saddlers have not yet tasted its benefits. Mr. Wilson informs us that he is about to make one that will sew boots and shoes with a rapidity that will astonish all the sons of St. Crispin. We suppose that, in a few years, we shall all be wearing shirts, coats, boots, and shoes—the whole habiliments of the *genus homo*—stitched and completed by the Sewing Machine. We suppose there are now full 200 sewing machines in operation in this city.

Accidents.

No country in the world has such an unenviable reputation for fatal accidents as ours. Houses falling, steam boilers bursting, railroad trains coming into collision, are among the common news of every-day life. What can be the reason of this? Are our people less reflective, cool, and considerate than all the rest of the world beside? We believe not; our people are a thinking people, and they possess much firmness and presence of mind. What then can be the reason for so many accidents in our country? One reason for the great number of accidents in our country is avarice; and another is the general prevalence of that stupid principle, "what is everybody's business, is nobody's business." A wretched bridge is built, as cheap as possible, by a private company; it is dangerous, to be sure, but this is a free country, and it's nobody's business. A crowd gathers on the said bridge—it falls, and 17 or more persons lose their lives; but then whose business is it? Nobody's. A child is shot by a pistol in the hands of a careless boy, and a physician and colored man are wounded by guns in the hands of others; yet who is to blame? Nobody. All these accidents took place in and near the city of New York, on the 5th inst.

The steamboat St. James, on the same day, while on Lake Ponchartrain, near New Orleans, exploded her boilers, and it is believed that not less than fifty persons lost their lives, as the boat was crowded. Among the number of the killed was Judge Preston, of the Supreme Court of Louisiana, and some of the most prominent citizens of New Orleans. Yet who was to blame? Nobody. These things are a disgrace, not to our country, but to ourselves as a people. There is too much selfishness prevalent, consequently there is a disregard for the safety of others by those who are seeking after their own interests and their own enjoyments. Houses, bridges, &c., are built cheap; "this will do," says the constructor; "this will do," says the owner; "it is safe enough, and I have paid enough for it." Down comes the structure, or up goes the boiler—scores of lives are lost—coroners' inquests are held—notes of the events are made in the papers—the matter is passed over, and other events of a like nature press on, transpire, and it seems to be nobody's business. Every child seems to stand on tip-toe, with the Declaration of Independence on its tongue's end, and men seem to act, as if they had no duties to perform to their fellow men in the Republic, except to make the most of them. True liberty can only exist where there is a healthy restraint upon all wrong-doing, and surely where wrong deeds go unpunished, no healthy restraint is there. It would be more to the honor, credit, and happiness of our people, if they would go a-head with a little more of the ballast of safety, and a more tender regard for the welfare and general happiness of the whole body of the people.

The Great Balloon.

On Monday, the 5th inst., Mons. Petin, the daring balloonist, was to have made an ascent from Bridgeport, Conn., near the country-seat of the famous P. T. Barnum. A splendid large balloon was made for the occasion, it contained 47,000 cubic feet of gas, and was the admiration of all who saw it, ourselves among the number. We anticipated no little pleasure, along with 15,000 others, in viewing the ascent of such a noble balloon. We were disappointed in our expectations: the balloon, with M. Petin in it, slowly arose from the ground at about 3 P. M., but, unfortunately, it soon came in contact with the wires of the te-

legraph, which made it rock and sway, when it reeled over against a barn and was torn to pieces. M. Petin fell out when about twelve feet above the ground. The whole multitude were sadly disappointed at the unfortunate result. The ascent of a large balloon always gives us peculiar pleasure; we experience strange sensations at seeing the huge mass rise up grandly, shaking the earth from its feet for a season. From what we have seen of balloons, however, they require, in every instance, the most skillful management to be successful. M. Petin, although a bold aeronaut, has been very unfortunate in his plans since he came to this country. We hope he will be more successful next time.

The Electrical Properties of Flame—Light.

Prof. Buff, of the University of Giessen, has recently published an interesting paper on the electrical properties of flame. He has come to the conclusion that gaseous bodies, which have been rendered conductable by strong heating, are capable of exciting other conductors, solid as well as gaseous, electrically.

Two small strips of platinum were introduced into a glass tube closed at one end; they were separated by an interval of a thin line of air. The air within the tube could not be heated to a degree sufficient to permit the electricity of two of Daniell's cells to pass through it. When the glass became soft by heating, and both pieces of platinum were permitted to touch it, a strong deflection of the needle of the galvanometer was the consequence.

When the strips of platinum were exposed to the direct action of the flame of a spirit lamp, the first notice of the passage of the electricity was obtained, when they were placed at about three inches above its extreme point, and began to show signs of redness. The deflection increased as the strips were lowered in the flame. When the flame was strongest there was a permanent deflection of 70°. The flame current passed always from the hottest platinum strip through the separating interval of gas to the other strip. When the metallic wires or other conductors, connected at one end, are brought into contact with highly heated gas, it formed an electric circuit. One platinum wire was introduced into the obscure centre of the flame of a lamp, and the other wire was brought near the outer surface of the flame, a current of electricity immediately exhibited itself, which passed through the flame from the inner to the exterior wire. By properly connecting a platinum wire, which was dipped into the centre of the flame, with a condensing plate, the latter became charged with negative electricity, and hence Prof. Buff concluded that positive electricity is given off by the outer surface of the flame.

It is our opinion that more discoveries will yet be made respecting flame and light. What do we know of flame, excepting this, "it is the exhibition of a certain action of certain substances, such as carbon, hydrogen, and oxygen?" Flame is an exhibition of these gases in a certain state. This definition is exceedingly unsatisfactory; we are in the dark, yet, respecting one of the most common and simple chemical phenomena. There are hopes of some new discoveries being made, by directing the attention of electricians to this field of investigation. Actinism, and the recent discoveries of the properties of different colored solar rays, are enough to incite philosophers to investigate this subject with great diligence. We have light, in the particular excited action of some chemical substance; we do not call light a substance apart and distinct in itself, and yet it has exceedingly peculiar properties, and produces many exceedingly peculiar effects. We are still ignorant of solar light—that is, how it is produced.

An Afflicting Accident.

On Monday evening, the 5th of July, a sad accident took place at Staten Island, near this city. A crowd of those engaged in enjoying the pleasures of that day, collected upon the "fall" of the Ferry Bridge, when it broke, and no less than 17 persons were drowned—they were mostly women and children. The fall of the bridge was a hinged leaf, supported by a chain. The hinge broke first, and then the chain. There should be no fall-bridges—they are worthy of the most rude

times of inventive construction. About 12 years ago, a bridge of the same kind fell, precipitating about twenty persons into the basin, at Albany—fourteen were drowned. Such bridges are unsafe, and should not be tolerated. Is there a country on the face of the earth, where there are so many unsafe public structures suffered to exist? Our people are killed by scores every month. The late accident was a culpable one, for what did the women and children know about the safety of the bridge? Nothing—they should not have been allowed to crowd upon it as they did.

The Climates of Countries.

Although Edinburgh, in Great Britain, is situated ten degrees farther north than the city of New York, it has a much warmer climate in winter, and the heat and cold never attain to such extremes. The climate of England is, to the majority of our people, a mystery. The Island is situated between 50° and 55° north latitude, and it has a milder climate than we enjoy in the latitudes of 40 and 45°. The British Isles are situated in the path of warm ocean currents, which flow across the Atlantic and beat upon and circulate around them. The wild Orkney Islands which are situated in 59° 5', have warmer winters than we have in New York City, which is situated about 17° further south. In the city of Glasgow, the mean temperature in the month of January is 38°, and it has never been below zero but twice in forty years, and then only 3° for two days. In Unst, in the Shetland Isles, in latitude 60° 5 min., the mean temperature in January is 40°. In many places of the United States, ranging from New York to Maine, in latitude 45°, the mean temperature is 6° below zero. Unst is only one degree colder than Constantinople, in January; and no country in Europe, nor the world perhaps, enjoys the mildness of climate peculiar to Great Britain and Ireland. This must have a wonderful effect upon the health and organization of the people. The cause is, as we have stated, generally attributed to the currents of the Gulf Stream; one philosopher, however, attributes the genial warmth to moist breezes from Africa, which come over the Atlantic, crossing the equator. In Russia, Moscow is on the same line with Edinburgh, yet its mean temperature in winter is at least 13° lower. The climate of England is moist and wet. To foreigners, accustomed to clear skies, it is disagreeable. The atmosphere is cloudy in summer, and this is one reason why it is not so warm as in other countries in the same northern latitude. Were it not for the warm ocean currents and the warm breezes, the coasts of England would be ice-bound, and many of the plants which now flourish there as evergreens, would be unknown.

On the northern coast of our Continent—in northern Oregon—the climate is much warmer in winter than in places on the same lines of latitude in our Eastern States. It is believed that currents from the orient flow over the Pacific and wash the Oregon shores, as the Gulf Stream of the Atlantic does the British Isles. During the past winter the thermometer ranged at 17° above zero, and the prairies were green all the time, except when covered by occasional snow storms. The farmer is not compelled, as in the Eastern States, to depend for the winter sustenance of his cattle on hay raised the previous season, his cattle can graze there throughout the whole year, and wild flowers may often be plucked in the months of January and February.

Are Lizards Poisonous?

L. M. Boatner, writing to the Southern Cultivator, says he has examined many snakes and lizards, to know if they were poisonous, and he is satisfied that many snakes are destroyed which are not only harmless but useful. He has examined all sorts of lizards and never found a poisonous one. The large water lizards are also innocent—they are named "lamper eels."

The Exhumed Macadamized Road.

A correspondent writing to us from Somersfield, Pa., informs us that a gentleman from that place has visited the supposed old Macadamized road, at Fairmount. He thinks, from its position, locality, and the shape of the stones, that it could not have been the bed of a stream.