

Science and Art.

Checked Perspiration.

There are two kinds of perspiration, *sensible* and *insensible*. When we see drops of water on the surface of the body as the result of exercise, or subsidence of fever, that is *sensible perspiration*, perspiration recognized by the sense of sight. But when perspiration is so gentle that it cannot be detected in the shape of water-drops, when no moisture can be felt, when it is known to us only by a certain softness of the skin, that is *insensible perspiration*, and is so gentle that it may be checked to a very considerable extent without special injury. But to use popular language which cannot be mistaken, when a man is sweating freely, and it is suddenly checked, and the sweat is not brought out again in a very few moments, sudden and painful sickness is a very certain result.

What, then, checks perspiration? A draft of air while we are at rest, after exercise, or getting the clothing wet and remaining at rest while it is so. Getting out of a warm bed and going to an open window or door, has been the death of multitudes.

A lady heard the cry of fire at midnight; it was bitter cold; it was so near, the flames illuminated her chamber. She left the bed, hoisted the window, the cold chilled her in a moment. From that hour until her death, a quarter of a century later, she never saw a well day.

A young lady went to her window in her night clothes to look at something in the street, leaning her unprotected arms on the stone window-sill, which was damp and cold. She became an invalid, and will remain so for life.

Sir Thomas Colby being in a profuse sweat one night, happened to remember that he had left the key of his wine cellar on the parlor table, and, fearing his servants might improve the inadvertence and drink some of his wine, he left his bed, walked down stairs, the sweating process was checked, from which he died in a few days, leaving six millions of dollars in English funds. His illness was so brief and violent that he had no opportunity to make his will, and his immense property was divided among five or six day-laborers who were his nearest relatives.

The great practical lesson which we wish to impress upon the mind of the reader is this: When you are perspiring freely, *keep in motion* until you get to a good fire, or to some place where you are perfectly sheltered from any draft of air whatever.

[The above is from *Hall's Journal of Health*, and we cannot but commend it to general attention. There are but few persons, we believe, who cannot recall some case within their own observation, of violent colds, consumption and premature death, caused by perspiration being suddenly checked. We have known many such cases ourselves. No one requires to be informed that checked perspiration is oftentimes the cause of disease; but there are so many who are liable to forget or overlook this fact, that it is good and necessary to give frequent warnings like the above.

Return of the Atlantic Surveying Expedition.

The U. S. steamer *Arctic*, which was sent out by the Secretary of the Navy, to survey the intended route across the Atlantic ocean between Newfoundland and Ireland, for the ocean telegraph cable, has arrived at this port, having sounded all the way across the bed of the ocean. The section traversed by the *Arctic* is a plateau. The bottom, in the deepest part, is a very fine mud, of a mouse-gray color, so soft that the sounding instruments would frequently sink several feet into it. Toward the shores on each side, this mud changes into a fine green ooze. No other substances were met with, no rock, nor anything that might prove fatal to a telegraph wire. The whole distance across was found to be 1,640 sea miles, from St. Johns, Newfoundland, to Valentia Harbor, Ireland. The greatest depth was found nearly in the center between these two places, namely, 2 miles, 186 feet.

The survey was accomplished without much

difficulty, and the conclusion deduced is, that the bed of the ocean for the submarine telegraphic cable is exceedingly favorable.

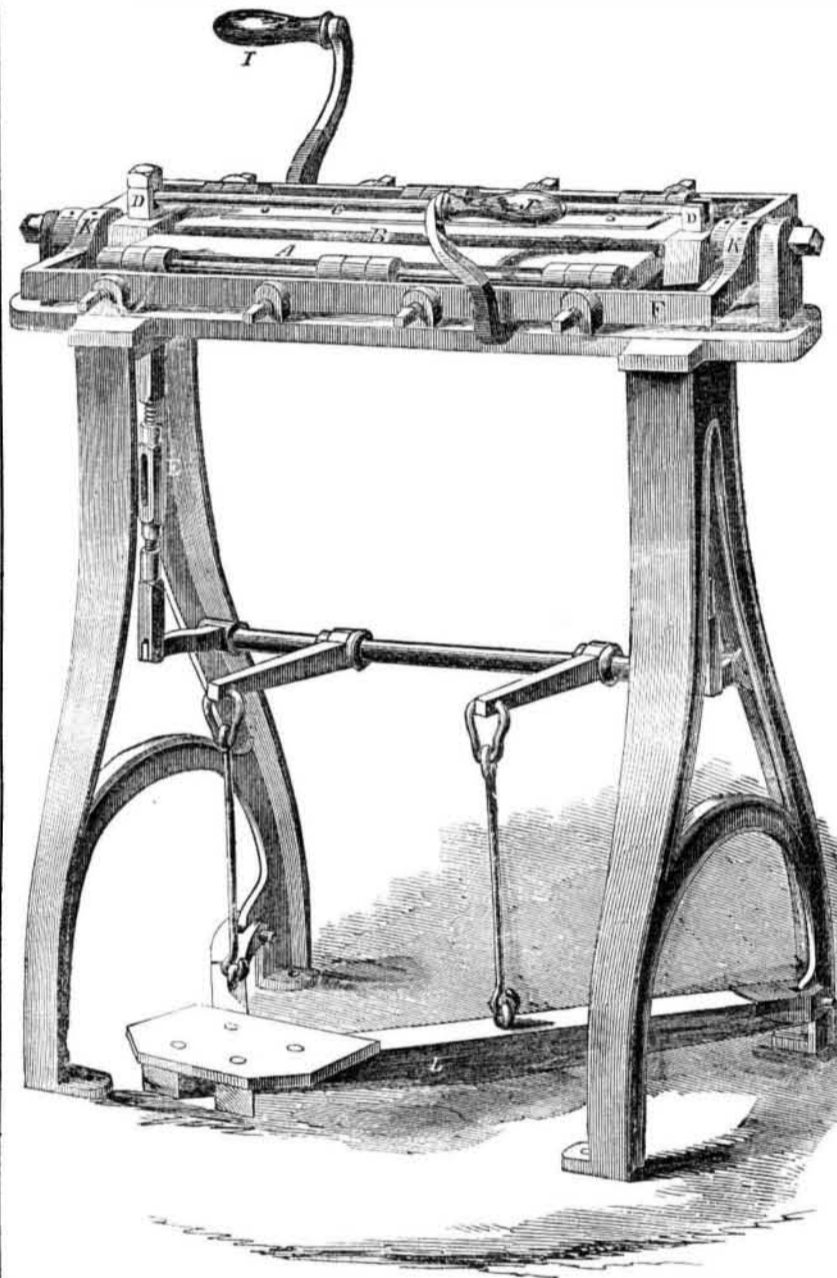
Experiments with Bessemer's Process.

The Liverpool (Eng.) *Morning Herald* states that some experiments have recently been made at the Mersey Steel and Iron Works, in that city, to test the merits of Bessemer's process.

At the Monthly Meeting of the Liverpool Polytechnic Society, the Chairman, Edward Jones, Esq., said that a specimen of Bessemer's iron had been received and tested by Mr. Clay, in the presence of Mr. Dawson and

himself, and, he regretted to say, it had been far from satisfactory. The specimen submitted had all the appearance of burned and imperfect cast-iron. He might say it was rotten hot and rotten cold. Mr. Dawson corroborated this statement, and also said that he had been much disappointed in the result; the portion submitted to the rolling machine had proved every way intractable. The Chairman added that he hoped ere long better results of this process would be manifested; but, in the one to which he referred, he was informed that the iron cost £6 per tun originally, and after being operated on as he saw it, he did not consider it worth £4 per tun.

MACHINE FOR MAKING TUBES.



New Tube Former.

The Stowe Manufacturing Co., of Plantsville, Conn., exhibit at the great Fair of the American Institute, Crystal Palace, one of their tube-forming machines, from which our cut is taken. In this machine tubes are formed by first bringing the blank into the shape of the letter U, and by means of hinged folders completing the tube.

C represents the rod around which the tubes are formed; it is hinged to the guide, D, on the right of the machine—and attached to the guide, D, on the left, in such a manner as to be freely liberated, to slip the tube off the rod. This rod is forced into the concave bed, B, by applying the foot to the lever, L. F is a folding wing turning on pins passing through its ends at K K. A is a hinged plate fastened to F in such a manner as to be easily adjusted to rods of any size, whether taper or straight.

The folding wing, with its hinged plate, is turned on its axis over the rod by the crank, J. This axis must be in a line longitudinally with the centers of the die rod, when that rod is forced into its bed. The edge of the plate, A, is made to press on the rod to form the upper parts of the tube, by turning said plate with the folding wing, F, over the rod. This pressure is removed on the return of the fold-

ing wing, F, by means of the hinge by which A is connected to F.

On the other side of the rod there is a folding wing, G, similar to F, and similarly operated by the crank, I. This folding wing, G, bears a gauge against which the blank is placed under the die rod. These machines can be fitted with different die rods and beds to form any desired blank.

To form a tube the blank is placed under the die rod, C; the rod is then forced into its bed by means of the foot lever, L; the folding wing, G, is then moved over the rod, after which the folding wing F is moved in the like manner, and the tube is formed.

The inventor states that with this machine from 6 to 8,000 feet of speaking tubes can be formed in a day, that eight gross of rattle-box handles have been made in an hour.

Six series are made capable of forming tubes two feet long, down to lamp tubes. For further information address the Stowe Manufacturing Co., Plantsville, Conn.

American and English Agricultural Implements.

At a dinner recently given at Aylsford, Kent Co., Eng., to celebrate the return of Mr. Betts, the celebrated railroad contractor, from

a tour in the United States and Canada, he stated that our people in America were behind the people in England in agricultural implements, excepting mowing machines, in which we excelled, and one of which he had brought with him, and which, drawn by two horses, had cut eleven acres per day. He stated that America was a magnificent country, one far better for the poor man, but possessing far less comforts and privileges than England for those who possessed capital.

We think Mr. Betts did not travel altogether with his eyes open in our country. There are just as many comforts and conveniences for those who have capital in this country as there are in England; of course, this is not the case in the newly settled parts of our country; this cannot be expected but in the older states and in our cities. And even in our new States, enterprise is so active that in a very few years after any place is settled it attracts most of the refinements and luxuries of life to it. We know that his opinions respecting American agricultural implements are wrong. Our hay forks, axes, cultivators, planters, scythes, rakers, hoes, and even our plows, yes, most of our agricultural implements are now superior to those made and used in England. A most creditable and marked improvement has been made during the past few years in all our agricultural tools and implements. It is true that there are too many poor implements manufactured so as to be sold cheap, but this is the case in every country; we do not refer to these, but to those of the best quality, which can be obtained of every respectable dealer. We are of opinion, judging from what we have seen ourselves, that American Agricultural Implements, as a whole, are the best in the world.



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