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Experiments with the Turkish Bath.

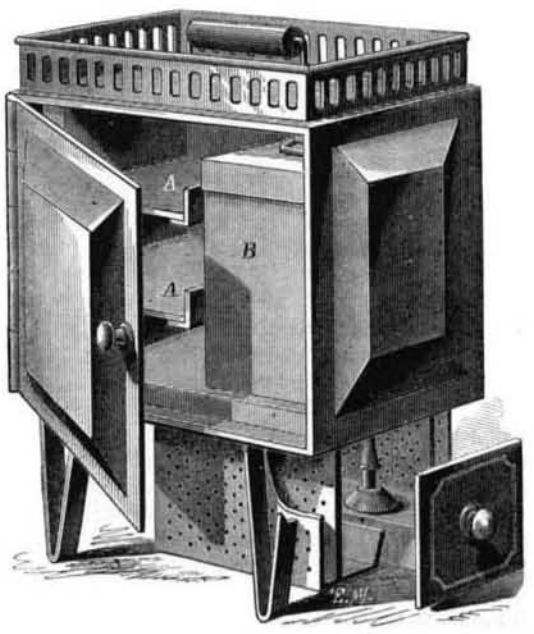
Some interesting observations were related at the last meeting of the British Medical Association, by William James Fleming, M.B. (Glasgow). These experiments were performed by the author upon himself. and consisted of observations on the effect of the Turkish bath at temperatures of from 130° Fah, to 170° Fah., upon the weight, temperature, pulse, respiration, and secretions. The results showed that immersion of the body in hot dry air produced loss of weight to an extent considerably greater than normal, amounting, on the average, to the rate of above forty ounces an hour. This was accompanied by an increase in the temperature of the body and a rise in the pulse rate, with at first a fall and then a rise in the rapidity of respiration. The amount of solids secreted by the kidneys was increased, and coincidently the amount of urea. The sweat contained a quantity of solid matter in solution, and among other things a considerable amount of urea. The most important effect of the bath was the stimulation of the emunctory action of the skin. By this means the tissues could, as it were, be washed by passing water through them from within out. The increased temperature and pulse rate pointed to the necessity of caution in the use of the bath when the circulatory system was diseased.

IMPROVED PORTABLE LUNCH HEATER.

The annexed engraving represents a convenient apparatus for keeping a lunch or dinner warm while being carried from the place where it is cooked to the place where it is to be eaten, and for warming a lunch or dinner quickly, should it become cold.

A box, of rectangular shape, is provided with legs of convenient length. At A are shelves, the ends of which rest upon cleats attached to the box. A narrow space is left at one end of the shelves to receive a cup, B, to contain coffee, tea, soup, or other liquid. The bottom and one end of the box are made with double walls, to form a hot-air chamber for the heated air from the lamp to pass through. The lamp is placed in a chamber of perforated sheet metal, and is secured in place by flanged cleats or angle strips. To the top of the box is attached a handle for convenience in carrying it; and also on the top of the box is attached a rim to form a tray to receive and carry knives, forks, spoons, napkins, and other articles.

This invention was patented through the Scientific American Patent Agency, September 18, 1877, by Mrs. Maria Bradley, of New York city.



A GERMAN contemporary recommends etching with a preparation of 250 grammes of perchloride of iron, which is allowed to slowly decompose in half a liter of water. The advantage of this preparation is said to be that it has an effect on metals of all sorts without giving off noxious vapors. The object will need constant cleaning with a brush. The solution is rectified with oxide of iron when choked with metal; the etched ground is cleaned with turpentine.

INGRAM ROTARY MACHINE FOR PRINTING ILLUSTRATED NEWSPAPERS.

We illustrate herewith the new Ingram rotary printing press, from which engravings are printed from circular forms. It is the invention of Mr. William James Ingram, M.P., the son of the founder of the *Illustrated London News*. It is now used for printing that journal, from the pages of which we take our engravings.

At one end is placed a roll of paper about three miles long; and the machine is no sooner started than the paper is caught in the first instance by the cylinders immediately above the reel, receiving an imprint of the inner letterpress form; thence it is carried diagonally downward to the picture cylinders which print the illustrations on the other side of the sheet; it is next conveyed to the species of guillotine which cuts each number to its proper size, and being carried therefrom by tapes to the folding machine, this finally delivers a perfect copy of the paper—well printed on both sides, and folded—at the rate of 6,500 an hour. One marked advantage claimed for this new machine is the great saving of time in making ready the illustrations for printing, from the fact that the cylinders are more rigid, and require a thinner "overlay" than any other machine we know. As for the letterpress form, neither "underlaying" nor "overlaying" is required, and the machine is constructed to work without roller lifts or bearers on either form. We may remark in further illustration of its many advantages over the ordinary press, that in the second week it was in use for printing a large issue its average work exceeded that of four of our fastest "two feeders"—a rapidity which may be realized all the more forcibly when we add that, whereas the new machine prints both sides of the paper, cuts each sheet, and delivers it folded, the old horizontal machines simply printed one form in the same time, and did not fold the sheets. There is thus a considerable saving of manual labor, only four men being engaged on the rotary machine, whilst twenty-four men were employed on the four machines. Let it be added that the "Ingram" machine only occupies the space of an ordinary perfecting machine; and little more

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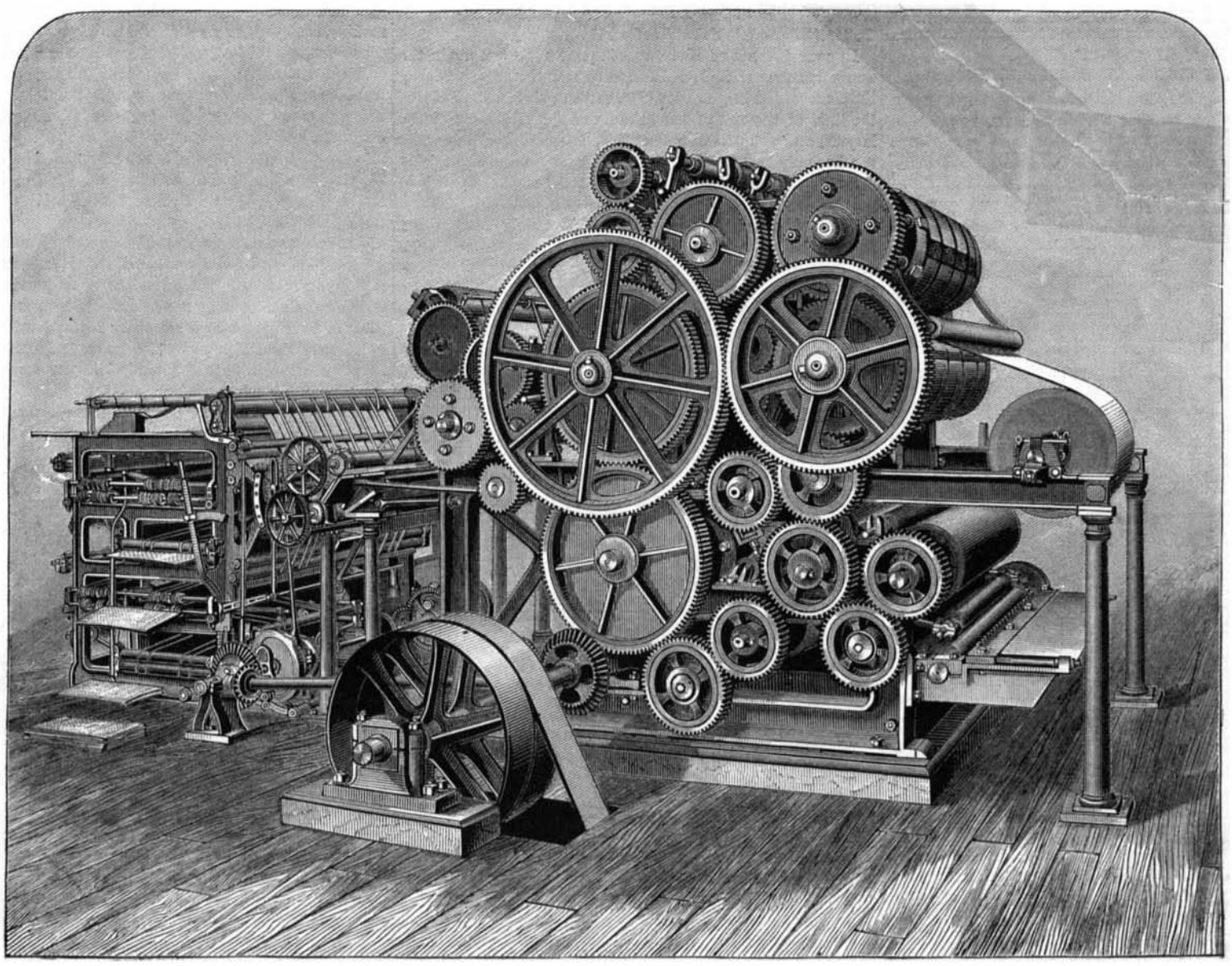

INGRAM'S ROTARY MACHINE FOR PRINTING ILLUSTRATED NEWSPAPERS.