

PAPER-MAKING.

An Interesting Sketch of one of the Most Useful of Arts.

In the review of a recent work—J. E. A. Smith's "History of Paper Making"—the New York Sun says: "If the term paper, in the narrow sense, is limited to a material manufactured of rags or other vegetable fibre reduced to a pulp, there can be no doubt that the credit of the invention belongs to the Chinese. According to some historians it was made in China as early as the year 156 B. C., while according to others the introduction of the fabric should not be placed earlier than the year 200 of our era. It is undisputed that four kinds of paper have been made in China since the later of these dates, and from that time to our own there has been but little change in the process of manufacture. These papers are known as rice, silk, bamboo and bark. The first is made from the pith of a leguminous plant, imported from India and from the island of Formosa. The pith having been prepared of the length desired for the sheet, is cut in a thin slice, which is then flattened, pressed and dried. This delicate material, which is used for writing and printing, as well as for painting, gets its name not from the substance of which it is composed, but from the sizing of rice water which it receives. The so-called silk paper of China is also a misnomer, for it is made from hemp, unmanufactured cotton and the like, sometimes mingled with wool pulp and bamboo pulp, and possibly with a little silk. But silk rags could not by themselves be reduced to pulp suitable for making paper. The cotton, and hemp are prepared by being cut and well washed; they are then bleached, and by a maceration of twelve days' duration are converted into a pulp. This is made into balls weighing about four pounds, which, after being saturated with water, are spread upon a frame with reeds, and pressed under heavy weights. The drying is completed by hanging the sheets upon the wall of a room and the process is finished by coating them with a gum sizing, and polishing them with some smooth hard substance. The sheets of this so-called silk paper, which, as we have seen is mainly cotton paper, are sometimes of very large dimensions, reaching, for example, twelve feet in length and in breadth. Of the so-called bark paper we need only say that it is made from the inner bark of the smaller branches of a variety of the mulberry tree. This bark is wrought into a pulp, and then moulded into a sheet, which, after compression and drying, forms a material which will take ink, though it is even more delicate than the "rice paper." The bamboo paper, as the name implies, is made from the fibre of the bamboo plant reduced to a pulp, which is formed into sheets and subsequently compressed and dried.

The art of paper-making spread from China throughout Central Asia, and it was found there about the beginning of the eighth century by the Saracens, who brought it to Spain. The material chiefly used by the Spanish Moors was raw cotton, and the manufactured products were accordingly yellow and brittle; but about the close of the eleventh century some Christian Spaniards, who had learned the art of paper-making, substituted cotton rags, and not long afterwards made the further improvement of stamping the rags into a pulp by water power. By the close of the twelfth century cotton paper had come into general use in Southern and Western Europe, but as it was then made it did not possess sufficient strength or solidity for many purposes, and by the close of the fourteenth century it was almost entirely superseded by paper made of hemp and linen rags. It was the introduction of this strong, and yet reasonably cheap linen paper which gave a powerful impulse to the introduction of printing by means of movable types.

Although it is known that a paper mill existed in England toward the close of the fifteenth century—there is, indeed, some evidence of paper-making there as early as the beginning of the fourteenth—it was long before the manufacture flourished in the island of Great Britain, and it was not until 1630 that some Huguenot refugees who had settled in England began the manufacture of white writing paper. Nor was it until the close of the eighteenth century that the English fabrics were equal to those of the continent. The first paper mill in America was established in 1630 by William Rittenhouse (anglicized into Rettenhousen) and William Bradford on a small stream near Philadelphia, still called Paper Mill Run. The second paper mill in the United States was built at Creffield, now a part of Germantown, and in 1728 the third paper mill in Pennsylvania was erected by some apprentices of Rittenhouse. By 1770 there were in Pennsylvania, New Jersey and Delaware—then the chief seats of the paper manufacture—forty mills, whose annual product was valued at \$350,000. Massachusetts, Rhode Island and Connecticut had five paper mills between them, and in New York there were at least two. Before the Revolutionary war American paper was usually made of linen rags. Every household in the northern colonies then spun and wove linen from the flax grown upon almost every farm, and it was used for the purpose for which cotton is now employed. After the Revolution paper mills multiplied, and at present the number of paper and pulp factories in the United States is 1,040. The principal seat of the American paper manufacture is now in the four western counties of Massachusetts a region whose flourishing

cities and towns are largely dependent on this industry for their prosperity.—Industrial South.

THE "HUB" IN TROUBLE.

The complacency of the "Hub" is sorely disturbed. Its good name, its history, its famous institutions are assailed in the recent Messages of Mayor Palmer and Governor Butler. It is rank heresy among all to the north born to doubt the proximate perfection of the modern Athens and of the Bay State; and malicious critics have affirmed that one of our literary leaders felt it to be a personal insult when the small-pox attacked him; and another maintained that birth in Boston obviated the necessity of a new birth. But now Mayor and Governor unite in assailing the good name of city and State, and in holding up to public odium Puritan institutions venerable with age. It is no wonder if some troubled citizens imagine that the foundations of the earth are out of course, and the Evil One, loosed from his chains, has come down in great wrath.—N. Y. Examiner.

NEWSPAPERS AND TELEGRAPHS OF THIRTY-FIVE YEARS AGO AND NOW.—Thirty-five years ago the New York Associated Press was organized. It was composed of the seven morning journals, and its business was to collect the news of the world by telegraph to sell to the other papers throughout the country. This press monopoly made an alliance with the telegraph monopoly; but meanwhile the press of the West has been steadily increasing in wealth and power, and has organized a press service of its own. It now secures its European news, as well as the general news of this country and the world, through its own agents. It has broken loose from the New York city press monopoly, and hereafter we are to have free trade in news.

The monopoly has checked the growth of newspapers in the eastern States, and has injured the protected papers without the stimulus of competition newspaper enterprise is apt to lag. We have too many bad journals and too few good ones. A newspaper should be the history of the world for one day, and the time is coming when our journals will be larger, better and abler. People are reading books less and newspapers more. Some day the morning paper will have illustrated supplements, giving pictures of current events, which will be printed in colors.—Ex.

If North Carolina had a set of thorough energetic farmers that knew their power the old State now covered with worn out fields would soon be covered with herds of cattle and sheep and fields of waving grain. If the men who go West would do in North Carolina as they are compelled to do when they get to the West, they would succeed here quite as well as they do there. There are millions of acres in North Carolina, if treated as they treat land in New York and Pennsylvania. We mean to plow, pulverize and fertilize as land is in the North and West, better results would be obtained here than there. We have tried it both here and there and know what we are talking about. North Carolina is the most underrated State in the Union of States, and when her farmers learn to keep good stock and fertilize their fields in the only way that they can be fertilized to any purpose, she will take rank, yes, high rank, among the agricultural States.

To buy guano will not do; it is like borrowing money to replenish your bank account, in the end it is a curse to your farm and the farmer. A man cannot live on whiskey a great while, neither can the soil live and do duty with guano only. You found your farms with fertile soil years ago, how were they made fertile, by using guano? No, decomposed vegetation made the land rich. A resort to the same methods of carrying stable manure to the fields will make the land rich, will make the farmer rich, will make the State rich, and our corn cribs will be in North Carolina and not in Chicago.—N. C. Farmer.

The London Milk Journal cites instances where milk that has stood a short time in the presence of persons sick with typhoid fever, or been handled by typhoid before fully recovering from the small-pox, spread these diseases as effectively as if the persons themselves had been present. Scarletina, measles, and other contagious diseases have been spread in the same way. The peculiar smell of a cellar is indelibly impressed upon all the butter made from milk standing in it. A few puffs from a pipe or cigar will scent all the milk in the room, and a smoking lamp will soon do the same. A pail of milk standing 10 minutes where it will take the scent of a strong smelling stable or any offensive odor, will imbibe that taint that will never leave it. A maker of gilt-edged butter objects to cooling warm milk in the room where his milk stands for the cream to rise, because he says the odor escaping from the new milk, while cooling is taken in by the other milk, and retains it. This may seem like descending to the little things, but it must be remembered that it is the sum of little things that determines whether the products of the dairy are to be sold at cost or below, or as a high-priced luxury. If milk is to be converted into an article of the latter class, it must be handled and kept in clean, sweet vessels.

Know

That BROWN'S IRON BITTERS will cure the worst case of dyspepsia. Will insure a hearty appetite and increased digestion. Cures general debility, and gives a new lease of life. Dispels nervous depression and low spirits. Restores an exhausted nursing mother to full strength and gives abundant sustenance for her child. Strengthens the muscles and nerves, enriches the blood. Overcomes weakness, wakefulness, and lack of energy. Keeps off all chills, fevers, and other malarial poison. Will infuse with new life the weakest invalid.

37 Walker St., Baltimore, Dec. 1881. For six years I have been a great sufferer from Blood Disease, Dyspepsia, and Constipation, and became so debilitated that I could not retain anything on my stomach, in fact, life had almost become a burden. Finally, when hope had almost left me, my husband seeing Brown's Iron Bitters advertised in the paper, induced me to give it a trial. I am now taking the third bottle and have not felt so well in six years as I do at the present time. Mrs. L. F. Garvin.

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SCHEDULES. PETERSBURG RAILROAD COMPANY, OFFICE OF SUPERINTENDENT, PETERSBURG VA., October 13, 1882.

GOING SOUTH. Boston & Savannah Fast Mail (Stop only at Kelfield) Leave Petersburg daily at 4:09 p. m. Arrive at Weldon at 5:54.

GOING NORTH. Boston & Savannah Fast Mail. Leave Weldon daily at 12:05 A. M. Arrive at Petersburg at 2:23.

GOING NORTH. Express, Passenger and Mail trains. No. 47. Leave Wilmington daily, at 6:40 A. M. Arrive at Goldsboro, at 9:48 A. M.

TARBORO BRANCH ROAD. Arrive at Tarboro 1:10 p. m. & 8:30 p. m. Leave Tarboro 9:00 a. m. & 3:00 p. m.

SCOTLAND NECK RAILROAD. Trains on this road run daily as follows: GOING WEST. Leave Scotland Neck at 9 a. m. Arrive at Tillery's at 10 a. m.