PAPER AND PAPER MAKING.

(*From the Scientific American.*)

In 1854, when printing paper increased in price two and a half cents per pound, owing to the difficulty of obtaining a sfficient supply of cotton and linen rags for its manufacture, it so affected the publication of newspapers in our country and Europe that a number of them were forced, for a period, to curtail their dimensions. This excited the public mind, and appeals were made to chemists and inventors to institute experiments, and endeavor to discover a cheaper substitute; while the proprietors of the London *Times*, who had lost $100,000 by the rise in its price, offered a reward of $5,000 for a new, cheap, and available material. In a very short period after this, scores of persons were reported as having discovered methods of making white paper from a great variety of materials, such as different grasses, plants, woods, &c., and these achievements were sounded forth as notes of victory—that the great object had been accomplished. These were great mistakes, for the great object to be accomplished was not the production of paper of other materials than cotton or linen rags, but *cheaper* paper, .of equal, if not superior quality—from any material. The price of paper has fallen somewhat since 1854, but the impetus given to the public mind to produce a substitute for rag-made paper has not yet ceased to exert its influence, nor have mistakes ceased to be repeated.

By the number of the London *Engineer* of the 4th July, ult., we find the record of two new patents granted for manufacturing paper; one to Joseph Barling, Eng., for making paper from the roots of hop vines, and the other to W. G. Plunket and John Bower, Ireland, for manufacturing it from the leaves, stalks, and roots of beets and burdocks. These patents are not of the least value whatever, as paper cannot be manufactured as cheap from these materials as from pure cotton, even before it is made into rags. These patentees have made the same mistake that scores of others have, who supposed they had accomplished the grand object by merely substituting one material for another. There are many persons who know how to manufacture paper from almost every tree and plant that grows, and the process of doing this is neither complex nor secret. It simply embraces the well-known method of treating those plants or woods first with a caustic alkali to remove the resin in them—as from pine wood shavings—or the silica from them—as in straw,—and then pursuing the same processes that are commonly employed in making rag paper, viz., washing, bleaching, and reducing to pulp. And it cannot but be somewhat mortifying to many recent inventors of paper, from what they supposed were new materials, to be told that there is nothing new about them.

A neat pamphlet on "Paper and Paper Making," got up *con amore* for presentation only, by Mr. Joel Munsel, Albany, N. Y., throws a vast amount of light on this subject, and presents a very clear and condensed history of paper-making. We learn from it that in the sixth century the Chinese made paper from rice straw; in 1751, M. Guettard, of France, produced specimens of paper made of the bark, leaves, and stalks of various plants, shrubs and trees; in 1756, during a scarcity of rags in Germany, attempts were made to make printing paper from straw. The circumstances of that period were very similar to those among ourselves in 1854. In 1765 Jacques C. Schoeffer, of Rattisbon, published a book upon Paper Making, which was printed upon different kinds of paper made without the use of rags, such as cotton of the poplar tree, hornets' nests, sawdust, moss, beech, willow, aspen, mulberry, and pinewood, and also of hop vines, the very material for which Mr. Barling mentioned above has secured a patent; also from burdock, the very material of Messrs. Plunket's and Bowers' patent; it also contained paper made from broom corn, thistle stalks, cabbage, and barley and wheat straw. In 1776—at the time of our Declaration of Independence—a volume was printed in France upon white paper made from the bark of bass wood, and at the end of it, were twenty specimens of other paper made from as many different vegetables.

From these facts we are inclined to the opinion that very little that is new, if useful, has been discovered in paper-making during the recent excitement on the subject. We know that some very good white paper has been made from straw, and that the Philadelphia *Ledger* and Saratago *Whig* have been printed on paper mostly composed of straw pulp, yet when we find that Matthias Koops made good printing paper of straw alone in 1800, and that he was the first who made printing paper from old, waste, written and printed paper—a great invention—we think that straw paper must undergo some further improvements before it will supersede rag-made paper, which still holds its place in the printing art.

We have presented the foregoing for the benefit of those who may still be directing their attention towards improvements in paper making. Let them ever keep it before their minds, that the grand desideratum respecting such improvements is not merely the application of a new material, but mainly the production of good and cheap paper. We do not present such views for the purpose of checking or restraining efforts to improve the art of paper making, but to direct efforts for such improvements to the right point of action. We conceive—and it is demonstrable—that no greater benefit could be conferred upon intelligent nations than some discovery whereby good printing paper could be produced in abundance at one half its present cost. Such a discovery would lead to an astonishing diffusion of cheap information; it would lead to greater intellectual activity, and as a consequence, a further advancement in learning and knowledge. Will such a discovery yet be made? We think it will; and it is worth laboring for by all those interested in paper making and paper using, and who wish well to their fellow-men.

There are **750** paper mills in the United States, producing annually 250,000,000 lbs. of paper, which at 10 cents per pound amounts to $25,000,000. If reduced in cost to 5 cents per pound, the saving would be $12,5000,000.—To produce this quantity of paper, it requires 405,000,000 lbs. of rags, valued at $16,2000,000. Great quantities of those rags are imported from abroad, and oftentimes infectious diseases with them An improvement in paper-making that would at once supersede the necessity of importing rags would be a great blessing to our country.

THE BRAIN IN SPIRITS.—Hyrti, the anatomist, used to say, that he could distinguish, in the darkest room, by one stroke of the scalpel, the brain of the inebriate from that of the person who had lived soberly. Now and then he would congratulate his class upon the possession of a drunkard's brain, admirably fitted from its hardness and more complete preservation for the purposes of demonstration. When the anatomist wishes to preserve a human brain for any length of time, he effects his object by keeping that object in a vessel of alcohot. From a soft pulpy substance it then becomes comparatively hard. But the inebriate, anticipating the anatomist, begins the indurating process before death.

BOILING A TEA-KETTLE.—Mrs. Jones hired the other day a Miss McDermott just from Cork. Miss McDermott was ordered to "boil the tea-kettle." "The what?" "The tea-kettle." "An' do you mane that?" "Certainly; if I do not, I would not have ordered you to do it; and be quick about it." "Yes, marm." Miss McDermott obeyed orders. In about half-an-hour afterwards Mrs Jones resumed the conversation. "Where's the tea-kettle, Bridget?" "In the dinner-pot, marm." "In the dinner-pot!" "You told me to boil it, marm, and I've had a scald on it for nearly an hour." Mrs. Jones could bear no more.

A RULE WITHOUT AN EXCEPTION.—There never yet lived that young lady who did not like to be told she was pretty.

RATHER AMBIGUOUS.—An Indiana paper announcing the death of a gentleman out West, says that "the deceased, *though a bank director*, is generally believed to have died a Christian, and was much respected while living."

ABOUT GIRLS' NAMES.—If you are a very precise man and wish to be certain of what you get, never marry a girl named Ann: for we have the authority of Lindley Murray and others, that "an is an indefinite article."—*Exchange*.

If you would like to have a wife who is "one of a thousand," you should marry an Emily or Emma; for any printer can tell you that "ems" are always counted by thousands.

If you do not wish to have a bustling, fly about wife, you should not marry one named Jenny; for every cotton spinner knows that jennies are always turning.

If you have a wife named Cordelia, you should never drop any of your old acquaintances; for he who has the deals never cuts.

The most incessant writer in the world is he who is always bound to Ad a line.

You may adore your wife, but you will be surpassed in love, when your wife is a Dora.

Unless you would have the evil one for a father-in-law, you should not marry a lady named Elizabeth, for the devil is father of Lize—(lies.)

If you wish to succeed in life as a porter, you should marry a Caroline, and treat her very kindly for so long as you continue to do this, you will be good to Carry.

Many men of high moral principle, and who would not gamble for the world, still have not refused to take a Bet.

A PRETTY LONG NOSE.—The following incident we had from a friend who knew the party. Deacon Comstock, of Hartford, Connecticut, is well known as being provided with an enormous handle to his countenance, in the shape of a huge nose; in fact, it is remarkable for its great length. On a late occasion, when taking up a collection in the church to which the deacon belongs, as he passed through the congregation every person to whom he presented the bag seemed to be possessed by a sudden and uncrontollable desire to laugh. The deacon did not know what to make of it. He had often passed round before, but no such effects as these had he ever before witnessed. The deacon was fairly puzzled. The secret, however, leaked out. He had been afflicted for a day or two with a sore on his nasal appendage, and had placed a small piece of sticking plaster over it. During the morning of the day in question the plaster had dropped off, the deacon, seeing it, as he supposed, on the floor, picked it up and stuck it on again. But alas for men who sometimes make great mistakes, he picked up instead one of those pieces of paper which the manufacturers of spool cotton paste on the end of every spool, and which read:—"Warranted 200 yards long" Such a sign on such a nose was enough to upset the gravity of even a puritan congregation.

ANECDOTE OF ROBERT BURNS.—Burns was standing one day upon the quay at Greenock, when a wealthy merchant, belonging to the town, had the misfortune to fall into the harbor. He was no swimmer; and his death would have been inevitable, had not a sailor—who happened to be passing at the time—immediately plunged in, and at the risk of his own life, rescued him from his dangerous situation. The Greenock merchant, upon recovering a little from his fright, put his hand into his pocket, and generously presented the sailor with a shilling. The crowd, who were by this time collected, loudly protested against the contemptible insignificance of the sum; but Burns with a smile of ineffable scorn, entreated them to restrain their clamor, "For," said he, "the gentleman is of course the best judge of the value of his own life."

HASTY BURIALS.—It was formerly the custom, both in England and France, as it is at the present time in the United States, to inter those who die by cholera at the earliest convenient moment after dissolution; but warned by the many fatal consequences of this proceeding, the custom of hasty interments has ceased in those countries for many years. No one can now be buried there until a green tinge makes its appearance upon the abdomical muscles—the unmistakable sign of incipient decomposition, always first seen through that thin layer of muscles. A body might lie four or six weeks, or more, but if this color failed to appear, the body would be retained until this unequivocal sign became apparent, or the patient recovered.

TAKE CARE OF YOUR THOUGHTS.—Sin begins in the heart. If you can keep your thoughts pure your life will be blameless. The indulgence of sinful thoughts and desires produces sinful actions. When lust hath conceived, it bringeth forth sin. The pleasurable contemplation of a sinful deed is usually followed by its commission. Never allow yourself to pause and consider the pleasure or profit you might derive from this or that sin. Close your mind against the suggestions at once, as you would lock and bolt your doors against a robber. If Eve had not stood parleying with the devil, and admiring the beautiful fruit, the earth might yet have been a paradise. No one becomes a thief, a fornicator, or a murderer, at once. The mind must be corrupted. The wicked suggestion must be indulged and revolved in the thoughts, until it loses its hideous deformity, and the anticipated gain of pleasure comes to outweigh the evils of the transgression.

Master Gibbs is a phenomenon. He is only two years old, and yet draws pictures of all possible kinds. He does it with a stream of molasses on his mother's table-cloth.

ANECDOTE OF JOHN SUNDAY.—"I understand," said John Sunday, the converted Indian chief, to a congregation which he was called to address at Plymouth, England, in the year 1837, "that many of you are disappointed, because I have not brought my Indian dress with me. Perhaps, if I had it on, you would be afraid of me. Do you wish to know how I dressed when I was a pagan Indian? I will tell you. My face was covered with red paint I stuck feathers in my hair. I wore a blanket and leggings. I had silver ornaments on my breast, a rifle on my shoulder, a tomahawk and scalping-knife in my belt. That was my dress then. Now, do you wish to know why I wear it no longer! You will find the cause in 2 Cor. 5 : 17, 'Therefore if any man be in Christ, he is a new creature: old things are passed away; behold, all things are become new.' When I became a Christian, feathers and paint 'passed away.' I gave my silver ornaments to the mission cause. Scalping-knife, 'done away.' That my tomahawk now," said he, holding up, at the same, a copy of the Ten Commandments, in the Ojibwa language. "Blanket done away." Behold he exclaimed, in a manner in which simplicity and dignity of character were combined, "behold, all things are become new!"

In Sweden, the floors of the stables are planked, and the planks are perforated with holes, so that wet will not lodge on them—the bare boards being the only bedding allowed. To this lodging the Swedes attribute the soundness of their horses feet, as it is quite uncommon to meet with a lame or foundered horse in Sweden which has been so stabled.

INHERITANCE OF TALENT.—A contemporary says that great men usually inherit their talents from their mother. This is the popular belief, but none the less erroneous. The mistake has arisen from attending only to those cases in which the mother had a superior mind, to the equal neglect of the equally numerous examples where the father possessed remarkable abilities. Every body quotes the fact, that Napoleon derived his genius from his mother. Nobody mentions that Burns owed his vast abilities to his father. A traveller would commit a similar blunder who should describe all Americans as light-haired, or say that every Philadelphian was a Quaker. The rule, for rule there is, lies deeper.

Great abilities, in a word, arise from such a fortunate union of the mental characteristics of the parents as renders the progeny a genius, though neither father nor mother, perhaps, were such. The catalogue of eminent men, if carefully made up and honestly scrutinized with a view to elucidating the truth, would establish this, we have no doubt, beyond controversy—For it is already known, that the child takes its mental nature in about equal portions from its parents, and this fact at once leads to our conclusion, as well as explains why brilliant parents often have dunces among their offspring.

Let us illustrate this. A man has the purely intellectual characteristics in great force, but is wanting in will: he is consequently, a dreamy philosopher, or a visionary speculator. He marries a woman who, with but ordinary intellect, has immense energy. One child of this pair may combine the weakness of both parents; and will be, in that event, an irreclaimable fool. But another may inherit the mother's will, with the father's intellect: and this child, unless ruined by a bad education, is certain to become distinguished.

Or take another example. A woman of no remarkable abilites, but with a fine moral nature, is married to a man without principle, but possessing shining abilities. One child of this pair may have the good qualities of both parents, and become a Bunyan, Nestor, or even a Washington, But another may inherit the deficiencies of both, and grow up, unless carefully guarded, to become but a brilliant villian. Or take a third instance. One parent may have much imagination, but little else; and the other nothing remarkable, but great perceptive faculties. The union of these two characteristics in a child will produce a poet. The transmission of either in excess, unless balanced by a strong reasoning powers may make only a human monkey or romantic fool.

This law explains also why so few eminent men belong to one family. There have rarely been twe distinguished poets, painters, generals or even statesmen, who were father and son, or even brothers. The elder and younger Pitt, though both Prime Ministers, and both famous speakers, were strikingly dissimilar in their mental constitution, so that this example which seems at first to oppose our theory, really sustains it. In fact, when we consider that the mind has so many and so distinguished ingredients, ideality, casuality, benevolence, reverence destructiveness constructiveness, and that they are combined in millions of varities in as many million persons, the wonder is not that two individuals even of the same family resemble each other so much. Given the score and odd of separate bumps into which phrenology divides the brain, and take the child of any two persons whatever—and who shall say in what exact proportions out of the ten thousand possible ones, these qualities ought to unite?

There is too much falsity taught for truth on this and similar subjects, not only in newspapers but in elaborate books. The reason is that few persons think soundly, or dare to deny the preconceived or popular ideas. We would, however have every man reflect for himself, "prove all things; hold fast to the good."—*Baltimore Sun*.