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Accidents.

Our country has acquired a most unenviable notoriety for what are termed *accidents*,—such as destruction of life and maiming, by explosions and burnings, on steamboats; collisions on railroads and steamers. Now if an accident simply means a calamity, against which human care, knowledge, and foresight could not provide, then very few such occur in our country; and the term in general is wofully misapplied. Year after year, since the introduction of steam navigation and railroads, the press has teemed with accounts of dreadful conflagrations, explosions, and collisions, and the remorseless destruction of human life and property. The press, the pulpit, and the forum have thundered against these calamities, and have characterized them as crimes; but they still go on. The groans of the dying and wounded, and the sighs of widows and orphans have gone up against them from every corner of our land; but they do not cease. Are we a reckless, stupid, and cruel people? We would not like to be so charged by the people of another country, but if we abnegate our pride, we shall soon see that we are justly liable to these charges. What would we think of the man who in his great haste to reach the end of a journey, overlooked all the difficulties in his path, and made no provision to obviate or overcome them, but rushed recklessly onward, in sunshine and darkness, tumbling down precipices and falling into rivers, bruising or perhaps drowning himself? We would look upon him as one both reckless and stupid. And is this not equally true of our methods of traveling by steamboat and railroad? It is; we cannot deny it. We are not a cruel people—very far from it—for no people have deeper sympathies for the distressed and suffering; but then the impunity with which we have allowed persons to escape just punishment who, by misconduct and recklessness, have been the cause of dreadful calamities, leaves our conduct open to one of two charges, viz.—sympathy with crime, or disregard for the injured and suffering.

Two weeks since we published the account of a railroad collision and the burning of a steamer, by which about one hundred persons lost their lives, and more than that number were wounded; and now we have to record an explosion on the steamboat *Empire State*, on the night of the 20th ult., on Long Island Sound, and the burning of the steamboat *John Jay*, on the 29th, on Lake George, by which casualties, no less than twenty persons have lost their lives, and a number of others have received dangerous injuries.

From reading the accounts of these catastrophies, we are convinced they could have been prevented by care and forethought, and so could most all accidents. Last year the number of accidents were comparatively few, but this year, those who have charge of the public means of travel, seem to be actuated by an increase of recklessness and a greater disregard of life. When a great public accident, so called—occurs, a great excitement usually exists for a short period against those who have been the cause of it, but it soon dies away,—the public mind becomes callous, and those who have caused it are suffered to escape punishment, for nobody looks after them. Thus it is that year after year, the same round of tragedies are repeated, and will be repeated until the public awakens to a true sense of its duty. No strange and wonderful apparatus are required to make public travel more safe; the means to do so are well known, but not generally applied.

It is for the people, who are the makers of the law, to apply the remedy. The people of Europe feel a conscious security, when they travel on their railroads and steamboats; our people do not. The means of travel can be rendered as safe in the United States as in England, and it is criminal in us not to render them so. The lives of our citizens are as valuable as those of any other nation.

Paper and Paper Making.

In 1854, when printing paper increased in price two and a half cents per pound, owing to the difficulty of obtaining a sufficient 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 a *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. Plunkett 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 silicon 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 Rattisbone, 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, hornet's 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. Plunkett'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 *Saratoga 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 \$12,500,000.—To produce this quantity of paper it requires 405,000,000 lbs. of rags, valued at \$16,200,000. Great quantities of these 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.

Drigg's Pianoforte Improvements.

Several weeks since we illustrated and described the above invention in our columns, and chronicled at the same time the fact that English and French patents had been applied for. As soon as the valuable qualities of the invention became known in England, an onslaught was made upon the patent by interested parties, resulting in a vigorous attempt to prevent the grant of the great seal. This opposition was, of course, strongly resisted. Testimony was required and given before the Patent Commissioners, and they have given a decision in Mr. Drigg's favor. He has come off with flying colors. The great seal having been granted, his invention may now be considered as fairly planted on the other side of the Atlantic.

Recent American Patents.

Machine for Planing Iron.—By E. C. Cleveland, of Worcester, Mass.—Consists in the employment of a friction box connected by gearing with the screw which operates the tool stock, the friction block being provided with adjustable dogs. The above parts are so arranged that the tool may be adjusted or fed at varying distances as desired, at each stroke of the bed, according to the nature of the work.

Improved Rig for Sloops and Schooners.—By George W. Geran, of Brooklyn, N. Y., opposite New York City.—Consists in having the mainsail of triangular form attached to the lower boom as usual, and having a single block or halyard attached to the peak or upper end of the sail, for the purpose of raising it. The lower end of the topsail is attached to the outer end of the lower boom, the upper part being attached, as usual, to the topmast. By this arrangement the mainsail is made rather smaller than usual, and the topsail rather

larger. The gaff boom is dispensed with, and also one set of halyards, rendering the sails easy to manage or work, and materially reducing the expense of rigging fore and aft vessels.

Improved Valve Motion.—By William H. Guild and William F. Garrison, of Brooklyn, N. Y., opposite New York City.—This invention consists in certain novel, simple, and effective means whereby the valve is caused, as the stroke of the engine piston terminates in either direction, to have suddenly imparted to it the necessary movement to admit steam to act on the piston, to effect its return. The steam is made to act on a piston which is fitted to work perpendicularly to the valve in a cylinder forming a part of the valve driver or device employed to drive the valve. The piston is supported against the pressure of steam by a rocker, or its equivalent.

Improved Coal Scuttle.—By James Myers Jr., New York City.—The ordinary coal scuttles are made of sheet iron, and the bottoms soon rust off at the joint between the bottom and sides, owing to the accumulation of moisture or water at that point.

This invention consists in having cast-iron bottoms provided with flanches at their edges, to which flanches the lower part is riveted.—The cast-iron bottom is made concave, so as to receive the water which the coal contains. The water is thus prevented from reaching the joint, and the scuttle is rendered far more durable, without any increase of expense in the manufacture.

Improved Carriage Clip.—By Francis J. Flowers, of Brooklyn, N. Y., opposite New York City.—In our engraving the iron or goose-neck attached to the shafts, is indicated by A, and the iron which receives the goose-neck and fastens it to the axle by B. Bolt C is welded to and forms a part of A. B is made in hook shape, and receives A with the fixed bolt, C, in its center. A cap piece, D, is then placed upon B, which secures C, and completes the clip. E is a bolt for holding D. D is further secured by the cap nuts F, which fit over the shoulders formed on B and D, a washer being interposed. The nut screws upon the bolt, C, as shown. Fig. 2 is a sectional view of nut F.

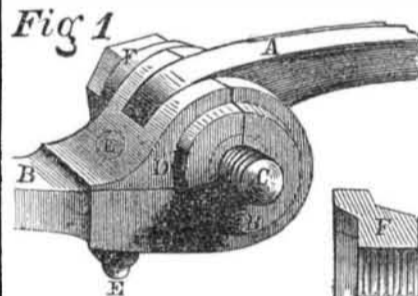


Fig. 2

This improvement prevents all rattling of the clip, which is a very common objection, and it forms a strong, cheap, convenient, safe, and durable fastening. The arrangement is such that there is little or no liability to accidental loosening or separation, although, when desired, it may be quickly taken apart. It is an excellent improvement. The inventor is a practical carriage maker, and a prominent contributor to *Salade's Coachmakers' Magazine*. Patented July 8, 1856. Address the inventor as above for further information.

Carving Machine.—By Nelson Ruger, of West Farms, N. Y.—This invention relates to a new and improved machine designed chiefly for carving portions of furniture, or ornamental pieces to be attached thereto. A drawing would be required to explain the parts.

Improved Printing Press.—By Thos. Parkes and Alfred Parkes, of Brooklyn, N. Y., opposite New York City.—Consists in the employment of rotating printing cylinders fitted in vibrating bearings, and connected by gearing with a cylinder having flat forms attached to its periphery, whereby impressions may be taken from flat forms on a rotating cylinder in an expeditious and perfect manner. Consists, second, in a peculiar means employed for presenting the sheets to the printing cylinders whereby both sides of the sheet may be printed