

# TOPICS OF THE TIMES.

Self-reliance is the name we give to the egotism of the man who succeeds.

A bad memory is what keeps us from forgetting things we want to.

Building a battleship is easy as compared with the work of keeping it in repair.

Schwab got \$25,000,000 and paroled. It would be money in his pocket to lose them both.

Maybe the prophets received with stones in their own country were weather prophets.

That open door in Manchuria will wear out its hinges presently opening and shutting so much.

The age waits, and with vast impatience, for the crowning blessing, that of a lawless mother-in-law.

The man who grows around the whole blessed time ought to be made to wear a dog tag and pay license, too.

It is easier to save a soul than to keep it saved, says Rev. Mr. Cranfill, and most of us will agree with him.

A man's choice for a nomination is never absolutely hopeless until his friends begin to insist that he is the logical candidate.

The speed of the Kearsarge, it should be emphasized, is intended for getting after, not getting away from, possible enemies.

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couragement to that class of men who make bankruptcy a factor of their business calculations. It compels caution and handicaps dishonesty. It will be remembered that another amendment reversed the order of the original bill whereby creditors who had received payments on account were required to surrender those amounts before they were permitted to prove the balance of their claims. This frequently caused confusion and embarrassment. Now, when a payment on account has been honestly received without knowledge of the debtor's insolvency, it can be retained without affecting the creditor's rights to an equal share with other creditors. The measure seems to be at least reduced to a practical working basis which will benefit legitimate business generally.

A fine old phrase, which under the new methods in education has fallen into disrepute, is that of learning "by heart." Half a century ago learning by heart was the chief feature of the ordinary school course. Pupils learned their English and Latin grammars by heart; they committed to memory whole pages of history and geography, long lessons in natural philosophy and endless passages from the English classics. Above all, they learned, word for word, chapters, and sometimes books, from the Old and New Testaments. Doubtless in those days many a pupil with a facile memory slipped through his course, or let it slip through him, and gained little in mental fiber and power. Yet, after all, there are few better possessions than something of the world's best treasure of wisdom or beauty learned by heart. One of our greatest naturalists was compelled in his boyhood to commit to memory the entire New Testament and a large part of the Old. Without that early training he would not have gained the clear and vigorous and beautiful style by means of which he has been able to open the eyes of others to the wonders of nature. There is no such model of style as the old Book of our fathers. Lucy Larcom, enjoying to her last days the verses learned in her window-seat library in the mill; Madam Willard, finding delight in her eightieth year in the treasures committed to memory in her girlhood; Whittier, cheering sleepless nights with the rich stores of his memory—these and hundreds of others bear witness to the value of wisdom learned by heart. But it must be by heart. The treasure must be used and loved and cared for, not put into storage and forgotten. So used and loved, the words of the masters reveal deeper meanings as the years go by. They become enriched to us by a thousand associations—days of gladness or sorrow to which they have ministered, times of trouble or danger in which they have stood as beacon lights. They have become part of the very fiber of our lives. Not only have they given us wisdom and counsel and delight, but also something, at least, of the culture of a high friendship.

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# EDITORIALS

## OPINIONS OF GREAT PAPERS ON IMPORTANT SUBJECTS

### The Rest Cure.

**A**FTER work comes rest. When they alternate perfectly a man may prepare to enjoy real happiness. When they alternate perfectly a man will enjoy both the work and the rest that follows it.

Nature is a just old lady. She seldom gives a man more than he needs. If he elects to live a lazy life she lets his muscles get flabby and his brain go sleepy. She never permits him to long possess a faculty or a nerve or a muscle or a sinew that he does not use.

The proper way to keep your muscles or your brains is to use 'em up and let nature provide you with a fresh supply. Nature is assisted in this work by rest. One may rest sometimes by seeking a change in labor. Labor thus becomes a recreation—recreation.

To live happily in this world it is not enough to know how to work; a man must also know how to rest. The man who knows only how to work will soon wear out. If he doesn't wear out immediately his work will suffer in some way. No man can do his best work unless he alternates it with a little play or a little rest.

A man who can't drop his work from his mind as readily as he can drop his tools from his hands had better take a few weeks off to study the rest question. His nerves are not what they should be.

If a man wishes to keep his nerve let him avoid nerves.—Pittsburg Dispatch.

### Education.

**E**DUATION is good for any man or woman who accept it simply as intellectual enlightenment and as a means of intellectual pleasure. But education has an economical as well as an intellectual aspect. It gives a man or woman an appetite as well as pleasures. It creates in the individual a need and desire for brain work and a distaste for manual labor. It arouses a wish for luxuries and social position that only wealth can bring. It drives men and women into those few occupations which social prejudice leaves open to educated persons. There is no room in these professions for the crowd. Consequently, a multitude of the less competent among college graduates fail in their work and become dissatisfied.

It would be well if the higher education were confined to those only who through superior powers of mind seem fitted for it and give promise of being able to employ it in the intellectual professions. Every graduating class at every university contains a large percentage of students who barely pass the tests and who have no natural aptitude for intellectual occupation. These are dumped upon the market with lofty ideas and insufficient ability to back them up. Education to them is a curse instead of a blessing. It makes them take up work at which they cannot succeed, and despise and shun work for which God made them. Even if they find out their mistake after leaving college, it is commonly too late to mend. The years in which they might have been learning a trade or a business are gone. They can do everything in general, but nothing in particular; and the man that succeeds to-day is the one who can do something in particular and do it especially well.—San Francisco Bulletin.

### Forest Fires.

**I**T is estimated by the United States Department of Agriculture, in its Bureau of Forestry, that the annual loss from forest fires is above \$25,000,000. The probabilities are that the present year will show an exceptional loss reaching nearly or quite double those figures. Last year, within two weeks, over \$12,000,000 worth of timber and property was destroyed by forest fires in the two States of Oregon and Washington alone. This year the loss from fires in the Adirondack region reached nearly \$10,000,000, and probably much more. The Bureau of Forestry has recently undertaken a thorough study of the fire problem, hoping to show that these terrible losses are not inevitable. The whole country has been divided into districts, and these have been assigned to investigating

### FAMOUS WESTERN CHARACTER.

"Calamity Jane," Noted Woman Feat, Who Recently Died.

"Calamity Jane" is dead. She was a border character whose exploits have furnished material around which the novelist has woven Western romance. She is said to have inspired Bret Harte to write his popular story, "The Luck of Roaring Camp," in which she is alleged to have been the original of the character of Cherokee Sal. She bore the scars of a dozen



"CALAMITY JANE."

bullets, received principally in encounters with the Indians.

"Calamity Jane" was born in 1832 in Princeton, Mo. Her father, J. Canary, went to the gold fields of Montana in 1853, and during the five months' trip overland his daughter, whose name was Martha, became an expert rifle shot and a daring rider. In 1850 she donned the attire of a cowboy and joined the forces of General Custer as a scout. She was christened "Calamity Jane" by Captain Egan, of the United States Army, whose life she saved by killing an Indian at Goose Creek, S. D., in 1872. Captain Egan informed her that she was a good person to have around in time of calamity and he christened her "Calamity Jane, the heroine of the plains."

During her career as scout "Calamity Jane" took part in many engagements with the Indians and figured in a number of thrilling adventures. She fought in the campaign against the Nez Percés Indians in 1873, accompanied General Crook to the Black

agents. These agents will study the local dangers as well as general danger, and at the same time will co-operate with the Warden Systems of the States and the railroad protective systems. As soon as each section is thoroughly studied, and the problem well understood, the bureau will suggest forest-fire legislation requisite to the case in hand. At the same time the bureau is prepared to co-operate with large owners of tree lands to establish economic methods of forest cutting and forest growing.—New York Independent.

### The Pace That Kills.

**A**CCORDING to paragraphs that appear from time to time in the papers, sometimes backed up by more or less elaborate statistics, heart disease and paralysis are increasingly prevalent and fatal. It is not to be wondered at. This is a strenuous age, so strenuous that men are hurried along with its rapid current at so terrific a speed and with such constant application to work that body and mind are taxed beyond their powers of endurance. Our grandfathers, may, even our fathers, knew nothing of the stress of life as we feel it, who are engaged in its dire struggle to-day. No wonder that often the rupture of an engorged blood vessel in the brain, or the failure of a sorely taxed valve in the heart, suddenly puts a stop to it all, and the man who thought that business must be attended to, no matter at how great a cost of hurry and wear and tear, finds some day that business has to go on without him. There are physical sins as well as spiritual sins, and many men ruin their bodies, who would not dream of doing damage to their souls. The plea of necessity is not a valid one either, for no man is compelled to sin against either his body or his soul. And yet, as we said just now, in this strenuous age it is no wonder that heart disease and paralysis are on the increase. Men rush and drop. Other men rush past them a little farther—and drop in their turn. It would be better to slacken the pace, and hold out longer. We should get more done, and do it better.—Christian Guardian.

### Reforming Funerals.

**T**HAT there is great need of reform in funeral ceremonies is undeniable. While it is true that some of the costly excesses of earlier days, especially the endless processions of carriages that used to block street crossings and interrupt all travel, have been abandoned, there yet remains abundant room for the hand of the judicious reformer to work beneficently. This, at any rate, is the opinion of the Atlantic Evangelical Ministers' Association, and that body of clergymen is trying to do work on the reform line. What they propose is thus summarized:

"That funeral sermons and orations be discarded; that there be no eulogy of the dead, except in extraordinary cases; that there be less extravagance in the conduct of funerals; that the practice of wearing mourning be discouraged; that no funeral services or burials be conducted on the Sabbath except in cases of emergency, and that the removal of hats at the grave be discouraged.

Not all of these recommendations will meet universal acceptance, but it would be difficult to frame a strong argument in opposition to either of them. Except in rare instances, "funeral sermons and orations" are not conducive to any good end. Many of them are positively and seriously objectionable. There is greater solemnity and dignity in funeral services that omit preaching. Extravagance in funerals ought to be repressed, and the rich should set the example. It is unseemly to make a display of wealth on such an occasion. Only an ancient custom can be pleaded in support of wearing mourning. The Atlanta Constitution gives its unqualified indorsement to the entire program of the local league, and closes its comments thereon with the remark that "what the world needs is more independence of precedent and more common sense in such matters. There is no danger of a material, practical age declining to give death its due in the matter of the last offices, but there is every reason why an age that discards superfluities should adopt a more sensible, consistent funeral program.—Washington Post.

### DOCTORING A PYTHON.

The Big Snake, supposed, But Would Not Bite His Surgeon.

Those who happened to be passing a well-known bird store the other day might have witnessed the amusing sight of a surgical operation performed on a large python, a huge snake from the West Coast of Africa. Mr. Snake, so the dealer states, had run counter of a detached vein on the side of his cage and cut a deep gash in his forehead. This the dealer set about doctoring, administering a large application of Balm of Peru, an old remedy used a great deal by army and navy surgeons and animal dealers for healing purposes. The python was not, however, in a humor for being operated upon and tried to dig and crawl away from the proprietor, who finally caught him, and then the trouble began. The muscular and constrictive powers of these snakes is surprising, and the dealer had to call several others to his assistance before he could hold the serpent fast. Not once during the time the dealer was cutting away the loose patches of skin and flesh from about the wound and putting on the balm did he offer to bite, although he tried hard to get his coils around those who were "a-doctoring" him. Since the application of balm the wound has healed, and he is now a better snake.

### WHY THEY GROW OLD.

Interests Are Too Narrow—Need for Broad Activities.

Women who grow old most quickly are those whose interests are the narrowest. Those who stay young longest are those whose minds and spirits are fed by action and by changing impressions. Those who are youngest at 30 are the most intelligent. Climate helps in the temperate zone, but that climate does little, without customs, is shown in the face of the bilged American woman who at 25 looks older than her free and enlightened compatriot at 40. One of the reasons that man has grown older later than woman is that he has had a more free and active role to play. One of the reasons that married women were formerly the only ones who had a chance of escaping early age was that when the unmarried passed a certain stage she was laid upon the shelf, and human nature tends to retain its sap and foliage. Another foreign visitor, this time an Italian, comes forward to congratulate America on the happy aspects of her youth. Late marriage, which is so often regretted by conventional philosophers among us, seems to this Italian educator the result not only of a healthy sense of responsibility, but of the ability of our women to remain young longer than is possible in some other nations. In this secret of extending woman's youth through some additional lustre, our foreign visitor finds the secret of our good fortune. "Some lustre" is a long time. It can hardly mean less than fifteen years, and yet it does not seem exaggerated. This extension of woman's youth is obtained partly by exercise and diet, but far more by widened opportunity, by the way to live long is to live much, and one of the wisest things young America has done is to throw open the doors of opportunity and of lasting youth to womankind.—Collier's Weekly.

Several days ago, however, the cages became somewhat congested, and to make room he placed one of his own canary birds in the unucky cage. The bird appeared to be in good health at the time, but he died before morning, since which event the dealer has been somewhat less cheerful about No. 13.

### Her Envy Was Natural.

"Why do you dislike that Bickerford girl so thoroughly?"

"Well, it's because her hair is curly."

"So is yours."

"But her's curls naturally."—Cleveland Plain Dealer.

After all, happiness isn't a question of riches, pie, a good complexion, or love and power, but of contentment.

# Science AND INVENTION

Certain spiders sail in airships made of silken threads, and now an insect that travels in balloons has been reported by two American naturalists. Small balloons, a quarter of an inch long and composed of tiny bubbles, having been observed, it was found that each carried a fly (genus *Euplis*), resembling the hornet-fly, with a dead fly, supposed to be food. As the males also attract females by the balloons, Henri Coupin suggests further study.

Easily fusible alloys for casts of leaves, fruits, insects, etc., must contain cadmium, according to a German authority, to preserve the articles from injury. Such an alloy is Wood's metal, which consists of two parts of tin, four of lead, seven to eight of bismuth, and one to two of cadmium, and which fuses between 66 and 72 degrees C. Lipowitz's metal, which softens at 55 degrees C., and becomes perfectly liquid at 66 degrees, consists of four parts of tin, eight parts of lead, fifteen of bismuth and three of cadmium.

Dr. W. W. Keen, in his presidential address before the Congress of American Physicians and Surgeons in Washington on May 12th, remarked upon "the immense advantages of a good hospital for the care of the sick. The poorest patient in a hospital, he said, is better cared for, and his case is more carefully investigated by bacteriological, chemical and clinical methods, than are the well-to-do in their own homes. In many instances lives that would be lost in homes are saved in hospitals, where the many and complex modern appliances for every surgical emergency are provided.

Experiments recently made on Erie railroad ferriesboats between New York and Jersey City have shown the practicality of transmitting speech by wireless telephone from one moving boat to another. Each boat carried in its pilot house a telephone connected with aerial antennae carried on the flagpole, and with copper plates dipped in the water. Messages were distinctly heard between boats passing at a distance of 500 feet. A. F. Collins, the inventor, believes the range can be extended to thousands of feet; but no great range is aimed at because the special purpose is to furnish river and harbor craft with a means of quick intercommunication for preventing collisions.

Not only natural productions but sometimes manufactures are largely dependent upon peculiarities of climate, and are consequently almost confined to particular parts of the earth. An example in point is furnished by the manufacture of anhydrous paper, which forms the best dielectric for underground telephone cables. This paper was formerly made in England, but experience has demonstrated that to obtain the best results the paper must be manufactured in a drier atmosphere than that of the British Isles. Accordingly this industry has forged ahead in America, and has fallen into disuse in England, although the use of anhydrous paper there is very extensive.

### HOW BANK NOTES ARE MADE.

Details of the Intricate Process—Guard to Prevent Counterfeiting.

First in consideration in making a bank note is to prevent others from making a counterfeit of it, says the New York Herald. Therefore, all the notes of a certain denomination or value must be exact duplicates of one another. If they were engraved by hand this would not be the case. Hand engraving is more easily counterfeited than the work done by the process actually used. "Every note," said an official of one of the leading bank note companies, "is printed from a steel plate, in the preparation of which many persons take part. If you will look at a \$5 greenback you will see a picture in the center, a small portrait, called a vignette, on the left, and in each of the upper corners a network of fine lines with a dark ground, one containing the letter and the other the figure 5. To make a vignette it is first necessary to make a large drawing on paper with great care, and a daguerrotype is then given to the engraver, who uses a steel point to make on it the outlines of the picture. The plate is inked and a print is taken of it.

"While the ink is still damp the print is laid down on a steel plate, which has been softened by heating it red hot and letting it cool slowly. It is then put in a press and an exact copy of the outlines is thus made on the steel plate. This the engraver finishes with his graver, a little tool with a three-cornered point, which cuts a clean line, leaving no rough edge. Now, this plate is used to print from. It must be made very hard, and this is done by heating and cooling quickly. A little roller of softened steel is then rolled over it by a powerful machine until its surface has been forced into all the lines cut into the plate. The outlines of the vignette are thus transferred to the roller in raised lines, and thus makes in them sunken lines exactly like those in the plate originally engraved. The center picture is engraved and transferred to a roller, like the vignette, but the network in the upper corners and also on the back of the note is made by a lathe. This machine costs \$5,000—a price that puts it beyond the reach of counterfeiters. Its work is so perfect that it cannot be imitated by hand. The lathe engraves the network on softened steel, and the figure in the middle is then engraved by hand. It is now hardened and transferred to a roller like the others.

"The plates from which notes are to be printed are of softened steel and large enough to print four notes at once. Four engravings of the note must, therefore, be made on it, and this is done by rolling the hardened steel rollers containing the raised pictures over 16 in their appropriate places until the pictures are

pressed into its surface. The fine lettering around the borders of the note is transferred in the same way, but the other lettering is put on by hand. This process saves a good deal of time and it secures absolute uniformity in the four engravings on the plate. The back parts of the note are printed first, and when the ink is dry the green back is printed, to be followed by the red stamps and numbers. It is then signed and issued. For greater security one part of the note is engraved and printed at one place and another part at another place, when it is sent to Washington to be finished and signed. But, needless to say, after all this care and all these safeguards, many skillfully executed counterfeits have been made and issued, some of them so good as to deceive expert judges of money."

### IN THE DEPTHS OF THE EARTH.

Scientist Suggests Establishment of Subterranean Observatories.

A proposal to install several hundred subterranean observatories at depths of anywhere from a few hundred yards to a mile or so may appear sufficiently startling. It ceases to be so, however, when we learn that the observers themselves are to be on the earth's surface; it is only their instruments that it is proposed to place so far underground, and these may be lowered into borings such as are now made for artesian wells. The principal measurements would be of temperature; but it is claimed by M. A. Laisant, who advocates the plan, that its results would add greatly to our knowledge of the earth's crust and its phenomena, both normal and abnormal. M. Laisant, for his plan in La Raison, as follows:

"While astronomical instruments involve considerable expense on account of their high precision, the apparatus in use for meteorological observations cost much less, and this would also