

PAPERS BY THE PEOPLE

WHEN WE ENSLAVE THE SUN'S RAYS.

By Guglielmo Marconi, Wireless Telegraph Inventor.

In all ways science is more and more studying to perfect the practical comfort and well-being of the world. Of course there will always be ships upon the sea. The mysterious primal voice of the ocean will continue its spell over the human imagination.

But there will not always be steamships. They will pass the way of their predecessors, and before long we shall cross the ocean in ships run by electric power. There will be no black smoke, no sickly odor of stale steam, no blazing caverns in the hold, where human beings with staring eyes and blackened faces sweat their lives away that the pulse of the engines may not stop. This storage battery will take the place of coal and fire and water. Instead of eating, the great ship will quietly and cleanly renew its batteries at its journey's end, and if coal is used it will be far from the lives and noses of men.

In time coal will cease to be our only source of energy. In every land men of science are patiently studying the problem of utilizing the energy of the sun—storing it, in fact, so that the generation of electric force may be cheapened by its use to a point where the storage battery on a large scale will be an economic as well as an academic possibility. The wasted energy in coal as now used may in the interval be brought to do its work and be brought about the monster storage battery sooner than we now expect. But sooner or later we shall ensnare the sun's rays to our use, as we have the other products of his being.

SENDING A SON TO COLLEGE.

By Charles F. Thing, LL.D.

"Why did you send your boy to college?" I asked the president of a great railroad. "Because he will have hard problems to solve. The college training will fit him to solve these problems." The problems which American life is to solve in the future are of tremendous complexity, perplexity and comprehensiveness. They are social, financial, governmental, industrial. The massing of the great forces of life in the process of combination and consolidation is to be limited only by the finding of men who can guide and control these great movements.

The men who give most promise for such guiding and controlling are the college men. For they are trained men. They are trained to think. They are able to weigh evidence. They can see values, assets. They can reduce a multitude of discordant phenomena to the one truth which unites all into a harmonious whole. They are able to detect the irrelevant and to point out the essential and necessary. They can discriminate motives and show how motives become movements.

It is, of course, superficial, and I think it is almost superfluous, to say that college graduates have no monopoly of such conditions and forces. Greater men who

are not college graduates are found in the active work of the modern world than are most men who are college graduates. The college is not the only force that helps to form humanity and the individual. Let us be thankful that there are other forces, many and most influential. But it is to be said that the college is a force which, added to the natural force of many men, has helped to constitute their great worth. But I am only urging that the more complex conditions of modern life are making more imperative the need of men of the widest, deepest, highest, most enriching education, and of a most disciplinary training.

The great business men of the future are to be better trained than were their fathers.

Yet the father is sure to find that the college will give to his son something besides a capacity for commercial and industrial leadership. This something is a gift which not a few would regard as of importance superior to commercial or industrial mastery. The college will help a boy to a more satisfying life. It will open to him fields of meditation and reflection fresh and inviting which once would have seemed to him barren and brown. It will aid him in finding himself least alone when most alone. It will help him to clearer thinking, to purer feeling, to stronger will; but the thinking will also be richer as well as clearer, the feeling will be deeper as well as purer, and the will will be more gracious as well as stronger.—New York Independent.

MEN AND WOMEN FRIENDS.

By Octave Thanet.

Chivalry is an old-fashioned word; but the thing itself, though less in evidence, was never so much in action as in our very own time. Men show it in their whole attitude toward their women friends. They handle our feelings with their lightest touch, they walk among our prejudices on tiptoe; they take off their hats to our bigotry if we call it religion; they accept our squeamishness for refinement; and they grow gray before they discover that with certain women a fit of tears means no more than a fit of profanity for some men. They surely are patient in their own way. But neither can it be denied that in their choice of friends they are sometimes stupid to a heart-rending degree. In the main, an Anglo-Saxon man's friends are as little of his choosing as the shape of his nose. One can run over the list in the dark. His family friends, his wife's friends, the wives of his friends. Then come the inconsiderable residuum (in size), the friends whom he has chosen for himself. Here will be where blunders will show, but the worst are like to be birds of passage. Perhaps he made them during his college days when the haze was over every pretty girl whom he met. It is too much to expect a lad to pick the girl of really fine nature and sweetness. Nor does he; he admires the girl all the other fellows admire—a pretty, dainty little creature who isn't afraid to talk (usually he is!) and can dance like a dream. But will men continue to admire missy? I tro not.—Harper's Bazar.

FACTS IN TABLOID FORM.

Australian mines employ 120,000 men. The average height of the Laplander is less than five feet.

It is stated that a considerable portion of London's petrol motor-omnibuses are to be changed to an improved system of steam traction.

Miss Mary E. Cheek, of Toboso, O., is the only regularly-appointed woman rural mail carrier in the State. She has served in this capacity for six years.

Proscott, Ont., has become an entering port for American coal. One firm loaded 300,000 tons there during the navigation period of last year. A large unloading and loading plant has been installed.

Mrs. J. M. Barrie, wife of the author, is said to be one of the most expert motorists in Great Britain. She owns three cars, in which she takes long tours with her husband, but she always manages the car herself.

In the Congo the extravagance of the average white man is astounding. Champagne is the invariable order of the day for men getting as low as a few hundred dollars a year, and the official usually lands in Antwerp after three years with enough money for a spree, when he must sign and go back.—World's Work.

The other day some 300 tons of waste paper were shipped out of this city to a paper mill in Michigan, to be ground into pulp, says the Washington Star. This stock represented the accumulations of four years of canceled money orders, totaling 2,500,000 sheets and once representing a value of \$1,500,000,000.

George Hayward, aged 91, who has just died at Needham Mass., lived nearly all his life in the same house. He never had a day's holiday and never saw the sea. Hayward was formerly in business as a butcher, and he was in the habit of wearing his apron at church on Sundays beneath his frock coat.—London Daily Mail.

Tom Reed and Jerry Simpson, the noted Populist Congressmen, were great friends. Their good relationship came after this incident: "Say, Jerry," said Reed, one day, "why are you a populist?" "For the same reason," said Simpson, "that you are a Republican. A majority of the people of our respective districts are of our way of thinking."

Conditions in the gold-producing industry of South Africa have greatly changed, especially in immense saving in working expenses. The total output of the sixty companies working on the Rand in July was obtained at an average cost of 17s 9d a ton. The expenses of the Robinson mine, worked out at 11s 11/2d a ton, compared with an average for that mine just before the Boer war of 22s 11d.—London Correspondence New York Evening Post.

A tale of an Australian native "boy" from a recent volume: "A boy accustomed to see his master, the owner of a station, jump his horse over the gate instead of stopping to open it, tried to follow. The horse centered up grandly, seemed to gather himself for the jump and balked. The boy shot out of the saddle and over the gate. As he picked himself up and shook the dust from his clothes he glared back at the horse, saying, 'You blurry liar!'"

One hundred and ten million cubic feet of gas were lost by leakage in London last year—and that by one company alone. It did not escape in a rush, and there was no explosion. It just filtered away, a little at a time. Every time a heavy van crossed the road under which a main lay a breath of coal gas forced its way through an infinitesimal crevice into space and freedom, until enough to fill 200 balloons such as that of Count Zeppelin's late airship had been lost.

The water in Lake Champlain during the recent drought reached the lowest point recorded in local history, nine feet below high-water mark. Steamers were obliged to abandon many of their trips on account of the impossibility of making landings at the docks. The mountain brooks became almost dry, and the beds of some of the largest rivers were mere threads of water. The drought and forest fires were ruinous to agricultural interests.—New York Sun.

An ingenious and amusing answer was recently given by a student in the natural philosophy class at Princeton University. An instructor gave the question, "Define transparent, translucent and opaque." "I cannot, professor," answered the student, "precisely define these terms, but I can indicate their meaning in this way: The windows of this room were once transparent, they are now translucent, and if not cleaned very soon they will be opaque."—Lippincott's.

Clubwomen of Chicago have been aroused over a recent case in the Municipal Court, where a woman was fined \$20 for wearing "jumpers." The woman was working as a hod carrier, and explained to the judge that she put on the "jumpers" because they hampered her less than skirts. Her explanation did not suffice for the court, and now the clubwomen have come to her assistance. "They wish the judge to explain in what respect the wearing of jumpers by a working woman is a greater offense to public morals than the pink tights of a ballet girl."

The island of Hokkaido is one of Japan's most valuable properties. Its mineral production (largely coal) increased from \$1,284,000 in 1895 to nearly \$7,600,000 in 1907, and this is with only a very small part of its mineral field exploited. In order, as named, the leading minerals are coal, sulphur, gold, silver and manganese. The coal is superior to that of other districts in Japan. Many ships from the Pacific coast of the United States call at the port of Muroran for coal. This is the foundation for the great Muroran iron and steel industry, now being formed by British and Japanese capitalists. In four mines in this locality the underlying coal is estimated at 600,000,000 tons.

Even when the unexpected happens there is always some fellow around to say: "I told you so."

EDITORIALS

Opinions of Great Papers on Important Subjects.

ONE ON THE DOCTORS.

STORY attributed to the Neue Freie Presse of Vienna is to the following effect: A dead body was found floating in an Austrian river, and its appearance was indicative of an atrocious murder. Popular interest in the case became keen, and an official medical examination of the remains was made with great minuteness, including an investigation of the contents of the stomach. The medical experts, according to the account, were sure that a murder had been committed, and they even went so far as to assert, apparently on the strength of the fact that the food found in the stomach was not such as a human being in his senses would eat, that the victim was insane. But the story was soon spoiled by a gentleman who declared that probably he could explain it. He went on to say that he had recently shot a bear and skinned it, whereupon his servant, disobeying his instructions, had cast the carcass into the river. Then the laugh was on the medical experts, and it resounded all over Austria. There is a possibility, however, that the bear story was a hoax, and, for the sake of our Austrian brethren, we incline to that opinion.—New York Medical Journal.

AERIAL ACCIDENTS.

THE popularity of aeronautics will tend for a time to increase the frequency of accidents, and it has been suggested that there is need of a law forbidding balloon ascents unless the aeronaut who makes them holds a license from one of the aero clubs of the country. In several ways the government intervenes in behalf of steamship passengers, and such legislation has no reference to the welfare of sea captains and chauffeurs. It is inspired solely by regard for those who may be the victims of their incompetence. Nor does the theory on which laws aiming to prevent suicide are based apply in the case of aeronauts. Additional reasons for not putting legal restrictions on aerial navigation are afforded by the difficulty of enforcing a law on the subject and the uncertainty regarding its operation.—New York Tribune.

WHAT AILS HIGH SOCIETY.

THE fact that the presses of publishers today are unusually heavy with books alleging to expose the sins of society betokens wrong somewhere. Either society has been indiscreet or the public demand for reading matter is depraved. The so-called exposures are nauseous enough, with their foolish wives, their faithless husbands and the shattered conventions. People of sound thought, however, will not allow themselves to be deluded into believing

that society is as black as these books paint, but it may be well, at the same time, for those with a better viewpoint to ask themselves if by permitting to go unrebuked the follies of an irresponsible few they have not invited criticism upon the whole?

Wealth brings responsibilities, but it brings liberties, too, and how one uses these reveals his real character. Were society less lenient with those irresponsible few, who live only for the flesh and are careless in their living, there could be little justification for the baths of exposure which is upon us.—Baltimore Star.

WORLD'S HOTTEST PLACE.

HE prolonged heat of the past summer has given rise to maledictions against the American climate; yet even in a crowded slum tenement existence on the hottest day would have been a welcome change from the conditions which prevail in a certain earthly place. In Kiehm Island, at the entrance to the Persian gulf, there is a spot so penetrated by the sun's rays that it is impossible almost for human habitation. From November to March only the sparse native population to be found in residence, and then they seldom leave their mud huts and live entirely upon fish. A cable station which it was attempted to establish at Kiehm had to be abandoned owing to the deaths among the employes from sunburn, while many of those who escaped became insane.

During the recent Anglo-Russian negotiations it was proposed to make use of the place as a penitentiary. But the suggestion fell through, no man being found willing, even at a fancy salary, to undertake the duties of governor and live in Kiehm.—Harper's Weekly.

THE UNEMPLOYED.

WHEN it is said that there is work for everybody, that statement requires some modification. It would be more correct to say that there is work for everybody who is in economic need of work and who can and will work. Many persons in economic need of employment actually cannot or actually will not work, but when these two classes are eliminated there still remain a number of persons who cannot find work, in spite of the antiquated notion, no longer held by any considerable percentage of students of social facts, that everybody can find work that wants it or deserves it.

Since it is impossible always to distinguish between the unemployed honestly seeking work and the unemployed who profess to seek, but who would be very unhappy if they found work, all persons in need of work who are capable of performing it are massed together in the classification of the social economist as "the unemployed."—Boston Globe.

QUEEN OF ANARCHISTS.

Emma Goldman the Most Troublesome Woman in America.

For more than half a decade the entire secret service of the United States, assisted by the postal authorities and a score of city police forces, has been striving without much avail to compel one little woman to hold her tongue. Laws have been made especially to deal with her and whole corps of detectives trained to enforce the laws. But espionage threats, arrests and imprisonment have failed to check the fanatical activity of this champion of posit, Emma Goldman, internationally known as the Queen of the Anarchists.

Emma Goldman was born in 1870 at Koenigsberg, Prussia. In 1884, her parents having preceded her, Emma, accompanied by an elder sister, Helen, came to America and settled with her relatives at Rochester, N. Y. Here she engaged in dressmaking, and claims to have been successful. She was married in 1886 to Joseph Kirshner, the ceremony being performed by a rabbi in accordance with the faith in which she had been brought up. This union, however, did not prove happy, and the couple soon separated by mutual consent, but remained friends.

It was about this time that Emma Goldman began to take an interest in anarchistic teachings. Then came the bomb-throwing episode in Chicago, for which Parsons, Spies, Engel, Fischer and Lingg paid the penalty on the scaffold, and Emma Goldman's course in life changed. She forthwith took up the preaching of what she calls with unconscious irony, "the higher doctrine of humanity," and has stuck to it since, through many vicissitudes. At 37 the "Queen" is still a well-preserved woman. She is only five feet three inches in height, and weighs about 122 pounds, but her youthful gait and carriage give no slight impression of nervous energy and determination.

In 1888 she opened a dressmaking establishment in New York, joined the "Brooklyn Liberty," the oldest anarchistic organization in the city, and soon made her powers of persuasive speech felt. It was during that year that she first met Alexander Berkman, whom she has since taken as her "husband," according to the teachings of anarchy. Berkman soon after attempted the life of Henry C. Frick, a Pittsburgh millionaire, and was sentenced to twenty-two years' imprisonment.

The next four years she spent in comparative quiet, speaking whenever the chance offered, and by persistent effort developed into a leader of considerable power and influence until she had won the title of "Queen of the Anarchists."

In 1892 the police of Newark and Paterson, N. J., broke up numerous meetings at which she was scheduled to speak. It was in 1892, while speaking to the unemployed at Union Square, New York, that the police swooped down upon the anarchists and arrested their "queen" on the charge of "inciting to riot." For this she was tried and sentenced to a year's imprisonment on Rockwell's Island. She was released at the end of ten months (the time at leisure for good behavior) and at once proceeded to Philadelphia. Here, as in New York, she was prevented from speaking by the vigilance of the police.

The next year of her in Austria, making Brown's speech in Vienna, be-

CONCRETE ON A NEW PLAN.

Method Followed by an Engineer on the Pacific Coast.

Particulars are given in the Engineering Record of a concrete wall that has recently been constructed in a rather unusual manner by J. F. Lyman of Modesto, Cal. Between the framing forming the outer and inner faces of the wall collapsible hollow cylinders somewhat less in diameter than the thickness of the wall were placed vertically at intervals, the cylinders having previously been perforated with several holes. The object of this was to drain the water from the fresh concrete as the latter was placed round the cylinders.

The concrete having been filled in round the cylinders, it was allowed to set during the night and the water which had collected in the cylinders was then pumped out and the cylinders were withdrawn, the space which they occupied being filled with concrete. It is stated that the hollow cylinders contained from two to six inches of clean water at the end of ten to twelve hours, the water having drained from the concrete.

The object in providing this extra drainage was to procure a uniform set throughout the mass of concrete. It appears that a large number of concrete structures have been built by Mr. Lyman in this way, including the head gates, waste weirs, drops and highway bridges on a large irrigation works. Concrete laid by this method is said to be unusually free from cracks and is very uniform in strength.

A Lemon Instead.

"Do you know," a pretty bride of three months said to a friend the other day, "I think all these jokes about young wives having so much trouble with butchers and grocers and being cheated and all that is just too foolish."

"Then I presume you are getting on all right with yours, dear?" her friend inquired.

"Why, of course I am! Anybody would if they would just deal at a reliable place," the young wife declared. "Now there is my grocer," she continued, "he is just as obliging and thoughtful as can be. The other day I ordered a dozen oranges, and when they came I found there were but eleven in the bag, so I went to the store again and told him so."

"Why, yes, ma'am," he said, "I know there were. I had put in a dozen, but I noticed that one of them was spoiled, and, of course, I wouldn't send you any but the best goods, so I took it out."

"Now, don't you think that was nice in him to be so thoughtful and honest?" she concluded.—Harper's Weekly

Complications.

"Yes," said the New York interborough engineer, "we were getting along nicely until our charter was revoked by the grand chief of our brotherhood."

"What will you do next?" asked the inquisitive one.

"Well, we haven't decided, but we think of boycotting the union."—Baltimore American.

It's a gay old world when you are gay and a sad old world when you are sad. It all depends upon the point of view.

Even when the unexpected happens there is always some fellow around to say: "I told you so."

THE OCEAN CABLE.

Methods Which Are Used for Sending and Receiving Messages.

Every one knows, of course, that an ocean cable is really a telegraph line, but few people realize that the rules for working land lines do not in any way apply to the cable. When the first long cables were laid, the greatest difficulty was experienced in sending through them a current of electricity sufficient to dispatch the messages rapidly. The methods used in overcoming these difficulties and which are in use at the present time are described as follows:

Keys which, when pressed, transmit positive and negative currents, are employed at the sending station in connection with the regulation battery. The current of the battery does not pass directly into the cable, but into a condenser, which passes it into the submarine line.

This greatly increases the force of the current used and serves to cut off interfering ground currents. The instrument first employed in receiving cablegrams was a reflecting galvanometer. Upon the magnet of this instrument is carried a small curved mirror. A lamp is placed before the mirror and behind a screen in which there is a vertical slit. Flashes of light moving across this slit as the needles moved from left to right, indicated to the trained eyes of the operator the letters in the messages being transmitted.

But this method of recording messages was found to tax the eyesight of the operator severely, a few years' work often rendering them almost if not totally blind. Recognizing the fact that there must be something wrong with such a system, inventors set about repairing the defect, which resulted in perfecting the sphyron galvanometer, which has all but superseded all other receiving devices.

In the sphyron receiver the movements of the needle are recorded by means of ink spurted from a fine tube. This tube is attached to a coil suspended between two fixed magnets, which swings to the right or left as the pulsations pass through it. The sphyron galvanometer is a great improvement, is not hard on the eyes, and enables the operator to receive much more rapidly than with the old flash receiver.

Legal Information

A state statute prohibiting the transportation without the state, through pipes or conduits, of the waters of lakes, ponds or rivers is held to be valid, and to infringe no constitutional rights.

The rule that a servant cannot recover damages for an injury he could have avoided by ordinary or reasonable care is held to apply to cases of negligence in law arising from the violation of a statute.

In a prosecution for homicide caused by a spring gun set by the accused, it is held that one has no right to take human life, directly or indirectly, to prevent a mere trespass upon or theft of property.

That a license of a right to use a device under a patent may be required to pay royalties on a device which is not in fact within the protection of the patent, so long as the parties treat it as within such protection is declared.

One who, because of misconduct has been prohibited from riding in a passenger elevator, is held not to be able to claim the rights of a passenger if injured by an accident to the elevator while on his way to do business with a tenant of the building.

A tenant in possession of a building is held not to be liable for injury to one passing upon an adjoining public way by the mere fact that something is thrown upon him from one of the windows of the building, without anything to show that the tenant, or any of his servants, were in fault.

That the name of the testatrix is incorrectly given in the attestation clause of a will is held not to affect its validity, not to prevent the probate of the instrument where the subscribing witnesses are clear in their testimony that all statutory requirements were observed in its execution.

Carried Out Instructions. Every sailor has his story of the mistakes which landlubbers make over the names of things at sea, which always

TESTING A LOCOMOTIVE.

ENGINE RUNNING AT FULL SPEED WITHOUT MOVING AN INCH.

We illustrate the railway engine testing plant of the Pennsylvania Railway, the general arrangement of which is obvious. The driving wheels of the locomotive rest upon specially designed wheels, which revolve as the driving wheels of the engine are set in motion. The resistance of the supporting wheels is regulated to correspond with the weight of a heavy passenger train on any particular gradient. The power of the brakes, the coal consumption and other important items connected with different types of locomotives can be ascertained while the engine is running at high speed without advancing an inch.—Illustrated London News.

A new boy had gone on board a West India ship, upon which a painter had also been employed to paint the ship's side. The painter was at work upon a staging suspended under the ship's stern.

The captain, who had just got into a boat alongside, called out to the new boy, who stood leaning over the rail. "Let go the painter!"

Everybody should know that a boat's painter is the rope which makes it fast, but this boy did not know it. He ran aft and let go the rope by which the painter's staging was held. Meantime the captain was worried with waiting to be cast off.

"You rascal!" he yelled. "Why don't you let go the painter?"

"He's gone, sir," said the boy bringing. "He's gone—pots, brushes and all!"—London Standard.

Great Differences. "So you are going to settle questions of household economics at your next club meeting, Mrs. China?"

"Oh, no, we are going to discuss them."—Kansas City Times.

Emma Goldman was born in 1870 at Koenigsberg, Prussia. In 1884, her parents having preceded her, Emma, accompanied by an elder sister, Helen, came to America and settled with her relatives at Rochester, N. Y. Here she engaged in dressmaking, and claims to have been successful. She was married in 1886 to Joseph Kirshner, the ceremony being performed by a rabbi in accordance with the faith in which she had been brought up. This union, however, did not prove happy, and the couple soon separated by mutual consent, but remained friends.

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