

# Science AND Invention

Before the Technology Club in New York recently Dr. W. J. Morton of the New York Postgraduate Medical School and Hospital explained many of the uses to which radium may be put in the treatment of internal diseases. He exhibited a fluid containing quinoline sulphate which had been exposed to the action of radium, and had acquired the property of fluorescence, so that when placed in the path of a strong X-ray it became luminous. He suggested the possibility of employing such a fluid for treating internal disease. After being absorbed in the body of a patient, X-rays could be sent through it, thus producing internal radio-active effects. He regarded radium as a promising agent in the treatment of cancer, and thought that the curative powers possessed by some spring waters might be due to radium contained in them.

Recent discussions on the laws of heredity in scientific journals refer to the "Oregon wonder horse," an equine family which was famous not many years ago, the last representative of which is said to have been exported to Europe a few months ago. One of these horses, known as Linus I., had, at 14 years of age, a mane 18 feet long and a tail 21 feet. A son of this horse, Linus II., which was owned at Wadlington, N. Y., in 1890, had at about 5 years of age a double mane trailing 2 feet on the ground on each side. His tail trailed 6 or 8 feet on the ground. The mother and the paternal grandmother of Linus II. were also remarkable for the length and abundance of their hair. One of them was known as the "Oregon Beauty." These horses are said to have belonged to the Morgan breed.

Electricity plays many parts on the Baltic, the new White Star liner. An electric collision-preventer registers even the beats of the screws of an unseen steamer, another electric device shows the proper burning of the ship's lights, an electric log gives the speed, an electric lead indicates the depth of the water, and one electric apparatus registers all signals including steam sirens. Food needs are served by electric refrigeration as well as electric cooking.

The magnet has been shown by C. Gutton, a French physicist, to cause a brightening of phosphorescent zinc sulphide similar to that produced by X-rays. It seems to be capable of giving this effect only where the lines of magnetic force are not parallel, but no explanation is given.

Sir Hiram Maxim and others are said to have found that non-magnetic metals may be separated by rapidly drawing a series of electro-magnets past the metallic dust. Copper, for example, is attracted by the electric current set up.

## NOBODY WANTS THEM

### Hundreds of Patents for Window Fasteners

There is a class of inventor who always manages to hit upon some invention that nobody wants and which, from the very nature of things, is foredoomed to failure. An idea that is often brought to us is that of a self-lighted cigarette. This is attained by attaching to the end of a cigarette a small portion of composition such as is used on safety matches. The invention has been patented by different people many times, and crops up with aggravating persistence. Some people bring cigars with a blob of phosphorus stuck on top, regardless of the fact that not only would such a composition in contact with good tobacco entirely spoil it, but the effect of drawing in the lighted chemical would probably half suffocate the user. At other times the igniting composition is stuck at the side of a cigarette; and frequently a match head is fixed on a wire let into a cigar. The inventor of a self-lighting cigar is always a nonsmoker, we need hardly add, and always falls to see why his is one of the inventions which nobody wants.

Probably no article has even been more persistently taken up by the inventor for improvement and alteration than the window fastener. Many hundreds of patents have been applied for, practically identical in design, and all intended to prevent a knife being used from the outside to push back the catch. Elaborate and expensive, some of these fasteners are quite impossible and impractical. One inventor brought a remarkable weighing machine for fixing just underneath the coal hole to ascertain the correct weight of each sack of coal delivered. Apart from the fact that no one would pay £20 for such an appliance, one might easily imagine the feelings of the housewife who was bold enough to argue with the coal heaver when he found the coals would not go down the hole through being short in weight.—British Inventor.

## LENDING A HAND.

### Real Meaning of an Old Exhortation to Mutual Helpfulness.

"You brought your work; that's right!" cried Jolly Miss Gordon, as she led her guest into the parlor. "We'll have the coziest kind of an afternoon. Oh, those beautiful dinner napkins!" she ran on, while Mrs. Milburn was opening her sewing bag. "You're hemming them, aren't you? I'm glad you brought enough so that we can all help."

"But I didn't bring them for that, dear!" protested Mrs. Milburn, with a visible shrinking that Miss Gordon

must have noticed if their friendship had been of long standing. Everyone who knows Mrs. Milburn well knows that fine table linen is her passion, and that every stitch she sets in it is done with scrupulous workmanship. "I was afraid I'd be late if I waited to cut them apart; so I tucked them all in my bag and ran along."

"So much the better," Helen Gordon persisted, forcibly drawing the napkins out of Mrs. Milburn's hands. "I'll cut and crease the edges; mother and Margaret shall hem; Frances shall read aloud, and we'll make things fly!" "But, indeed, I'd rather you wouldn't, really," entreated Mrs. Milburn. "Won't you get your own work instead?"

"Indeed we won't! I can't abide working on my own things when there's a chance to help somebody else."

Then away went Helen's scissors, slashing Mrs. Milburn's napkins apart, in reckless disregard of the dividing line that she always follows so cautiously. In five minutes a hem three times the width sanctioned by Mrs. Milburn's fine sense had been folded and passed over to Mrs. Gordon, who was waiting, needle in hand.

"I see you're making a French hem," she observed, casually, with a glance at the half-finished napkin on which Mrs. Milburn was working. "I can't get on so fast with that over and over stitch. I suppose you don't mind, though, as long as the effect is the same."

"Gentle Mrs. Milburn murmured, "Of course not?" for which she prayed to be forgiven.

"Perhaps you like the hems broader than Helen is folding them?" asked Mrs. Gordon, pleasantly, a little later.

"Oh, no! In fact," with a brave effort at frankness, "I usually make them a little narrower."

"Oh, then, we're all right," was the easy reply. The reading aloud began.

The afternoon sped away. In spite of the fact that Mrs. Milburn went early, seven napkins had been hemmed before she started, and the Gordons stood in a happy semi-circle to receive her gratitude as she said good night.

Seven, that meant fourteen edges to fit out, and, long as the stitches were, it took Mrs. Milburn most of the evening to do it. When she had cut the last thread, trimmed all the uneven edges, and was beginning to coax the stiff linen into narrower hems, she glanced to look up at the calendar hanging by her desk. She had read its daily quotation hurriedly that morning, without giving it a thought. Now it took on a new meaning.

"Lend a hand suggests pulling a drowning man out of the water. It does not suggest—as some people seem to think—seizing a man who is enjoying a peaceful swim, hauling him out on the bank despite his protestations, and then standing off to accept his heartfelt thanks."—Youth's Companion.

## A RACE FOR FAME.

Robert Barr, the novelist, who is now a resident of England, was one day at Euston Station, London, to say good-bye to Dr. McKenzie of McGill University, who was taking the steam-train for Liverpool, thence to sail for the United States. As they walked up and down the long platform together, says a writer who tells the story in Leslie's Magazine, Dr. McKenzie said jocularly:

"Let us go to the book stall and see if any of your immortal works are there. If they are I'll buy one to take across with me. If they are not, I'll tell all your friends on the other side that your supposed British reputation is a sham."

The two walked to the book stall and examined it carefully, but nothing with the name of Barr was found.

The novelist was annoyed and would have entered a protest, but the doctor claimed that that was against the rules of the game. Time was short, and Dr. McKenzie took his place in the train. Mr. Barr bade him good-bye, and then made direct for the book stall to give the dealer a piece of his mind; but as he glanced casually at the array of books, in the most prominent place he saw a row of one of his novels.

The whistle had sounded; the train was in motion. There was no time for paying anything, so Mr. Barr grabbed his book and ran like mad up the long platform. The energetic railway officials thought he was a belated passenger, and determined to throw him into the train. Doors in the moving carriages were flung open, and officials yelled frantically, "Jump in anywhere!"

It took great agility, but Mr. Barr succeeded. Dr. McKenzie was leaning out of his window, thinking from the outcry that some one had been killed, when Mr. Barr came alongside and said, politely if breathlessly, "Mac, allow me to present you with a token of esteem."

Panting but triumphant, Mr. Barr stroled back to the book stall.

"Didn't some one buy a book from you a moment ago?" he asked.

"Yes," cried the indignant stakeholder, "and he's bolted off to America with it!"

"Why don't you telegraph a description of him to Liverpool? It will be hours before the train is there," suggested Mr. Barr, sympathetically.

"Description! I didn't see anything but his back and his legs."

"O well, let it go!" said Mr. Barr, airily. "It was a good book, for I wrote it myself, so I'll pay for it, and he laid down the money."

## ALL THAT'S LEFT OF THE RUSSIAN GUNBOAT KORITZ.



This is the funnel of the gunboat Koritz, the vessel the Russians found it necessary to sacrifice at Chemulpo in the early stages of the war in order to prevent her from falling into the hands of the Japanese. It was at first thought that the gunboat could be raised, but the Japanese naval constructors have since pronounced against the practicability of the project.

## COLLEGE MEN IN BUSINESS.

### Attitude of One Large Concern Toward Applicants for Positions.

In view of the present discussion of the value of a college training for business men, it is interesting to note the attitude of one of the larger concerns of the country towards young applicants for positions in the business, says the University of Michigan News-Letter. The following is the essential part of a letter received by a graduate of last year's class of the University of Michigan, from the chief engineer of one branch of a great construction company. This branch is itself capitalized at \$15,000,000.

Inclosed please find a sheet giving outline of information desired from college graduates. Statements generally may be brief, but some of the subjects should be treated sufficiently at length to give us, as far as possible, what we would get from personal acquaintance. Some of the subjects may strike you as decidedly personal, even as being none of our business, but you must remember that beginners almost invariably represent an investment—sometimes a long-time investment, sometimes a bad one. We have no use, as some concerns, have, for beginners as cheap labor. We take on but a few each year—try to secure only the best, and then feel a personal disappointment in failure. Applications are confidential. So far as you can prevent it, let no mock modesty, on the one hand, nor egotistical vanity on the other hand, enter into what should be a plain, manly statement of your candid opinions as Nos. 7 and 8.

The questions which accompanied this letter made up a remarkably searching examination. They are below:

1. Date.
2. Name and address, present and home.
3. College from which graduated and when.
4. Married or expecting to be soon.
5. Age, weight, height, complexion, nationality.
6. Health, past and present.
7. Habits, tastes, ideals, ambitions.
8. Disposition and temper.
9. Practical experience in engineering work.
10. Practical experience with machinery, tools or implements.
11. Experience in any kind of manual work. Have you a trade, what?
12. Experience in supervision or "bossing."
13. Why took college course?
14. Why took engineering course?
15. Why took electrical engineering?
16. Father's occupation.
17. Have you ever worked for wages? Doing what?
18. What have you contributed toward the expense of your education?
19. Do you want work or opportunity; i. e., have you debts or obligations to meet which you must sacrifice the future for the present or are you in position to begin at the bottom and receive promotion as you gain experience and find your work?
20. If convenient, inclose unmounted photograph and write essay equivalent to one typewritten page on one of the following:
  - "Assistant vs. Principal."
  - "The Art of Self-Advancement."
  - "Obedience vs. Initiative, a Basis for Compensation."
  - "The Art of Executive, a Basis for Valuation."
  - "Egotism."
  - "Vanity vs. Self-Reliance, a Factor of Success."
  - "Tabulation and Graphic Expressions in Practical Life."

Typewritten manuscript preferred. Treat subjects in above order by paragraphs numbered as above.

### "Heathen Chinese."

"After all," remarked the great observer, "I believe the Chinamen are our friends."

"Well," responded the man with the glossy shirt bosom, "they must be our bosom friends."—Chicago News.

### Production of Gold.

During the last year California produced twice as much gold as Alaska, and Colorado produced more than three times as much.

Many a first-class kitchen mechanic is made over into a thirty-third class actress.



# EDITORIALS

## OPINIONS OF GREAT PAPERS ON IMPORTANT SUBJECTS

### The Practical Joker.

THE practical joker, the person who laughs at the discomfort of others, who gets fun out of his neighbor's predicaments, who lays awake night planning some piece of devilry that will cause sorrow or at least chagrin, always has been with us, is now and probably always will be.

Last week a girl in a Scranton squire factory threw a squib into a stove, just to scare her companions. Result, six dead, as many more seriously hurt, and factory wrecked. It was in Pennsylvania also that a small boy lighted the escaping gas from the exhaust pipe of a natural gas line, to furnish light for a wedding serenade. Result, one life lost and valuable property destroyed.

These are only two of many cases taken at random from the news columns. Neither of the young people intended harm. The girl wanted to see her companions jump when the squib exploded. The boy purposed to surprise the serenaders by furnishing an impromptu bonfire. They were simply heedless. If everyone who is about to play a practical joke would stop to think about it, to study out the possible consequences, there would be fewer jokes of this sort perpetrated. It is ludicrous to see a man who is comfortably seated in a chair suddenly find himself sprawling on the floor, through the dexterity of the practical joker, but the odds are that the victim's spine has been injured and that the effects of his fall will cling to him through life. Play the same trick on the practical joker, and he would be furious. Strange as it may seem, the practical joker is the most ill-natured target on earth. He doesn't like his own medicine.

The fault lies largely with parents. They don't teach their children to respect age, to respect others' rights, to be thoughtful and considerate. There is innocent fun that hurts no one and causes no damage, but it is not strenuous enough to suit some people. They want to break a leg or burn buildings. Such as these are criminal in instinct and should be placed under restraint. The practical joker ought not to be tolerated in any community.—Toledo Blade.

### Eating into the Western forests.

THE reports of the lumber cut in the West show that the paper-making concerns of the country are turning their attention to Wisconsin and Minnesota as a source of supply of spruce timber. There are hundreds of thousands of acres tributary to Duluth, not reached by railway lines, which are covered by spruce timber suitable for pulp. Unquestionably there is enough spruce in this country, notwithstanding the enormous quantity used by the paper mills, to maintain a pulp supply indefinitely, provided proper reforestation is carried on. Here, however, is the rub. The customary method of the pulp-mill owner who is seeking a supply of spruce is to buy the stumpage and cut off the timber indiscriminately, allowing the denuded land to grow up with any species of wood that happens to be left. Hard woods commonly succeed soft woods on deforested areas, and vice versa, and, therefore, a spruce forest once cut down is not naturally renewed for many years. The experience of the Eastern paper mills, which have cut over most of the available area of spruce forest, is likely to be that of the Central West. The systematic attempt at reforestation has been insignificant compared with the tremendous slaughter of the forests.

The West should take time by the forelock and insist, by legislation if necessary, upon proper methods of cutting and reforestation. The State has an interest in the preservation of its forests which is paramount to the right of the private landholder. Here in the East what is being done is largely in the way of locking the stable door after the horse has been stolen. With the great forest areas in Minnesota and Wisconsin yet untouched these States

## JUST WORN OUT.

### Story that Wanted a Rest After a Very Hard Worked Life.

The worn-out story collapsed at the feet of the Father of Fictions.

"What's wanted?" inquired his Satanic majesty with his usual warmth. "Oblivion, please," gasped the wretched creature. "I never pretended to be a good story, but that doesn't justify the way I've been treated on earth. You will remember me if you happened to see a copy of last Sunday's Behind-the-Scenes. I was among the Gossip of the Stage, dressed this way."

"Blanche Walsh has a country home on Long Island and is occasionally bothered by tramps. One day a small, thin specimen of hobo honored her with a call. He told a hard luck story that would have brought tears to the eyes of a Japanese idol."

"And do you call yourself a man?" demanded Miss Walsh.

"No, ma'am, not entirely. Just now I'm only an outline. All I need is a little fillin' in."

"And he got it, too, after that admission of his incompleteness."

"When you turned to the Literary Chat, there I was again: 'Irving Bacheller, the author, has a country home at Sound Beach, and is occasionally bothered by tramps. One day a small, thin specimen of hobo honored the novelist with a call. He told a hard luck story that would have brought tears to the eyes of a Japanese idol.'"

"And do you call yourself a man?" demanded the writer.

"No, sir, not entirely. Just now I'm only an outline. All I need is a little fillin' in."

"And he got it, too, after that admission of his incompleteness."

The Woman's Page had me served in this style: 'Mrs. Roosevelt, when spending the summer at their simple country home at Oyster Bay, is occasionally bothered by tramps, etc.'

"I also posed among Anecdotes of the War: 'Owing to the scarcity of provisions at Port Arthur, begging is discouraged; but, having eluded the vigilance of the guards, a small, thin specimen of hobo the other day accosted Viceroy Alexiev, etc.'

"One page further on the Tokio correspondent had his little say: 'Notwithstanding the splendid discipline of the Japanese navy, a small,

should adopt a forest policy before it is too late to make it of any value. Denudation should be made impossible without some reforestation. The greatest benefit, however, will be derived from a control of the cutting in such a manner as to make denudation impossible, and the State can do this now better than later.—Boston Transcript.

### Asia for the Asiatics.

WE look upon it as a war between Japan and Russia—not so the Chinese, the Burmese, the Persians or the Siamese. To them this is a conflict between white and yellow, between the forces of the West against those of the East, between Europe and Asia. A Japanese victory would send a mighty wave of independence and pride throughout the populations of Asia, a wave of self-confidence, of contempt for their European rulers, which would bear fruits of which no one can foretell the exact consequences.

Furthermore, Japan would receive a great prestige, her influence over the Chinese Empire would become supreme, and no obstacle would lie in the way of the realization of her racial aspirations.

To any person who has even slightly followed the course of Japanese feeling and policy, there can be no doubt that these ambitions can be summed up in the phrase: "Asia for the Asiatics, under Japanese hegemony." For several years past Japan has been flooding with her agents the remotest parts of Asia, to rouse the sleeping patriotism of the people and prepare the way for liberation. Asiatic princes and statesmen have been flocking to Tokio; among them we might name besides several Chinese and Korean dignitaries, a deputation from Lhasa, the Siamese Prime Minister, the Persian grand vizier, a high priest from Afghanistan, and several Indian maharajas under British rule.

These men have had long conferences with the Ministers of the Mikado, and the object of these visits, in spite of all official denials, is well known to and in full sympathy with public opinion in Japan.—Westminster Review.

### The Black Man's Burden.

HERE has been a good deal said and written about the "white man's burden," and not a little of it has been pure cant. But there is another side to the picture, and this reveals that the dark man also has a burden, and a most grievous one.

In the Congo Free State he has been robbed, mutilated and murdered in a wholesale way that has shocked civilization. In German Southwest Africa his property has been seized, he has been flogged, imprisoned and shot, his wife has been made a beast of burden and his children have been tortured.

In China he has been robbed of his territory until his integrity as a nation is threatened. In America he has been enslaved, whipped, burned at the stake and lynched. In the Philippines he has been introduced to the "water cure" and other "civilized" inventions.

Look where you will on the native heath of the man of dark skin, or in foreign countries where he has sought asylum, and you will find the black man and the brown man carrying a burden compared with which the "white man's burden" is a featherweight. If the dark man has been the white man's burden, the white man has been and is the dark man's curse.

And if the dark man finds his burden greater than he can bear, and attempts to turn on his barbarous taskmaster, it is called a "native uprising," and soldiers are sent to show him his proper place in the white man's scheme of civilization and progress.

The white man's burden is largely a myth; but the dark man's burden is terribly real, oppressively heavy, grossly cruel and unjust. In a word, it is the white man's selfishness and avarice.—Chicago Post.

## TRADE IN THE WAR ZONE.

### American Commerce Now Amounts to Large Part of the Trade.

In his article in the World's Work on "Our Trade in the War Zone," O. P. Austin, chief of the bureau of statistics of the Department of Commerce and Labor, presents some striking facts and figures. He says: Japan's total commerce now amounts, in round terms, to \$250,000,000 a year, about equally divided between imports and exports, and that of China to a little over \$300,000,000 a year, of which imports considerably exceed exports. Korean commerce amounts to \$15,000,000 a year.

From 1883 to 1903 our imports from the countries named doubled, while our exports from China, Japan and Hongkong amounted to \$37,000,000; in 1903, to \$72,000,000. The amount from Korea and Asiatic Russia was a mere trifle. In 1883 our exports to these countries, including Korea and Asiatic Russia, amounted to \$50,000,000.

This makes clear that our trade interest in these quarters is very great. We buy a very large proportion of the unmanufactured silk and practically all of the tea exported by Japan and we also buy large quantities of raw silk and tea from China, as well as many other articles, such as opium, matting, rice, wool and manufactured silks. Of the exports of \$50,000,000 value in 1903, \$21,000,000 went to Japan, \$19,000,000 to China, nearly \$9,000,000 to Hongkong, and \$1,500,000 to Asiatic Russia. As regards our trade with the two countries now at war our exports to Japan in 1873 were \$8,000,000, in 1903 \$21,000,000; to Russia, our exports in 1873 were \$12,000,000, in 1903 \$15,000,000. Thus in thirty years our exports to Russia increased 25 per cent and to Japan 150 per cent.

Commerce of the United States with Japan, Korea, China, Hongkong and Asiatic Russia, 1843-1903, was as follows: Imports into the United States from the countries named: In 1843, \$4,385,000; 1853, \$10,573,000; 1863, \$11,044,000; 1873, \$30,445,000; 1883, \$37,150,000; 1893, \$49,349,000; 1903, \$72,294,000.

Exports from the United States to the countries named: In 1843, \$2,419,000; 1853, \$3,736,000; 1863, \$6,355,000; 1873, \$17,776,000; 1883, \$11,000,000; 1893, \$11,461,000; 1903, \$19,554,000.

Next to the United States comes Great Britain, yet its commerce with the territory in question has only grown from \$50,000,000 in 1883 to \$100,000,000 in 1903—that is, doubled.

## STORY MAY BE QUESTIONED.

### Diner and Dined-Upon Crawled Swiftly to a Creek.

Near the Canaan Creek a watersnake met a blacksnake. The reptiles did not immediately clinch, but hissed fiercely and circled around each other, as if seeking for an opening. The blacksnake pressed the argument, and in a few seconds succeeded in getting the tail of his opponent into his mouth, and, to preclude all possibility of escape, began to eat toward the head.

This was exactly what the watersnake wanted. It started on a straight line for the stream, and his consumer following him and dining upon him simultaneously, was, of course, obliged to travel a little faster in the same direction. The watersnake was a rapid mover and the blacksnake a quick eater, and for a short time it seemed doubtful whether one reptile or two would be visible when the stream was gained.

About half of the leading snake had been devoured, and the edge of the water was only a few feet away, when the blacksnake suddenly realized that a shabby trick was being played on him at meal time.

He hastily attempted to disgorge his repast, but the effort was made too late. Not more than five inches of watersnake had been yielded up when both reptiles plunged into the stream and sank at once. A hundred bubbles rose, and the only spectator of the contest is inclined to believe that the blacksnake's life floated to the surface in one of them.—New York World.

Self-made men and eggs are too full of themselves to hold anything else.