

Cranks are persons who do not see things as you do. Wisdom is often nearer when we stoop than when we soar.

Lipton's London tea stores made \$500,000 clean profits last year. Advertising.

A Frenchman has committed suicide because he was so homesy that no woman would marry him. Some people never do know when they are well off.

About the worst case of contempt of court is that of a paper which refers to the Supreme Court justices as "eminent gyps in Mother Hubbard gowns."

Emperor William is disappointed because his third son, whom he wanted to be at the head of the navy, cannot overcome seasickness. That seasickness does not obey his commands and spare his children is a matter of mortification to this ruler, who is under the impression that his wish and word should be respected by Neptune and the rest.

In the long continued discussion of the negro problem we seldom have been offered that is more fallacious than that the negro will gradually die out. The census reports show that during the last ten years the negro population has increased by 21 per cent. Another theory on the race question advanced by Booker Washington is that the negro is so affected by the tendency of the negro to remain or migrate to the farm, has been exploded by the late census. It shows that the negro has a growing fondness for the town.

"We now know that all the theories which the first class in Harvard College defended in 1642 are false," says Edward Everett Hale; "their astronomy was all wrong, their logic was all wrong, their metaphysics were all wrong, and their theology was all wrong. While we are trying to outdo ourselves upon the intellectual successes with which this century opens, it will be wholesome to reflect that the men of light and leading in 1642 were as sure that they had the right of things as we are to-day of our own science.

The "play" of the intellect, to use a vacation pun, constitutes the delight of learning, and is often its truest inspiration. A young girl at a hotel table, some years ago, undertook to quiet a restless child by making for him little figures which she modeled from bread-crumbs rubbed between her fingers. The rapidly growing processions of Noah's-ark animals attracted the attention of a gentleman opposite. It was the sculptor Thomas Ball, who afterward told the girl she had unusual talent, took her to his own studio, and taught her to work in marble. An interesting side-light on the pretty incident is that the young girl had modeled her figures undisturbed by a tableful of witnesses, and, on the other hand, Mr. Ball seated her in the studio with her back toward his own chair because she "could not possibly work while anybody looked on."

A certain married woman who "glories in her sex" confesses that there are times when she envies her husband. With a business suit and a dress suit, she says, he is "prepared for any occasion," and to choose such conventional clothing costs him hardly a moment's thought; whereas with every changing season she must completely rearrange her wardrobe, not to the gown alone, but to "giveaways to her children." The older she grows the more she envies her husband, and she says she would weigh upon her spirit. Although she is not a society woman, she meets many people; it seems a duty to array herself in the manner that the general judgment of the age approves, and to do this demands that she put on uniforms and accessories. She admits that she likes to feel well-dressed. Yet what a relief it would be, she adds, if, like the sisters belonging to religious orders, women would put on uniforms and make no change except, say, from thick garments to thinner, at the first thought. It seems a reasonable proposition. It would be so if applied to the other sex; for man already pays an aesthetic penalty for his efforts to save himself trouble in choosing his clothing. Members of secret societies evade the penalty for an hour or two when they decorate themselves with wigs, swords and feathers; but every other assemblage of men is necessarily a somber and cheerless spectacle. The members of any such gathering are clad so uniformly that one might logically demand that they put on uniforms. Happily woman's instinct prompts her to more original. Probably the only reason why one particular woman suggests a uniform is that some pernicious man has charged that she and her sisters finally waste their time and money on dresses. But that is not the case. Many dress women. For one family alone, a hundred are ruined by the husband's folly. Moreover, the woman who takes pains to show herself at her best does a good deed, since she adds just so much more to the charm of life.

Bob Fitzsimmons said a good thing the other day. He was showing a young fellow how to fight to win, and he said: "Take your chance when you see it, hit from where your hand is." "Why do I win fights?" Because I see the chance when it comes, and I take it." There is a sermon in these few lines of type, a text for millions of ambitious young men and women. It is every walk in life. In this country there are thousands of young fellows who are drifting. They are ambitious—in a mild way. They want better jobs and more money, and are always hoping that something—a hazy, indelible something—will turn up to better their condition. The right kind of a man will hunt for this chance. All the time he will be watching for it. He is working in an office he will be at his desk, perhaps ahead of time, but never late. The man who is around when the good many men have missed their chance because they were habitually good minutes late getting to work. And ten minutes late getting to work, or running a locomotive or laying sewer pipe. There is always a chance for advancement, and it is for the man who works to find it and deserve it. He must do the hunting. "Hit from where your hand is." Can't you apply that to your position in life, Mr. Toller? What do you make of it? Doesn't it

mean that you should always be ready to grasp an opportunity and make it your own, even though the opportunity comes out of every pore and you would much rather sit in a cool spot and dream about what you would do if you had as much money as Russell Sage? The man who "hits from where his hand is" is a worker, not a grumbler. He mixes brains and muscle and gets out a superb product. He doesn't put things off or seek for delays, or suggest to the boss that some other employe do a part of the work assigned to him. His motto is steady.

The acquittal of Robert S. Fosburgh, charged with killing his sister, will be approved by all who followed the trial at Pittsfield, Mass. Fosburgh, a young man of prominent family, seems to have been the victim of an overzealous police official, whose anxiety to make a "case" placed the innocent person in peril of his liberty and brought into the public gaze those nearest and dearest to him at a time when the loss of a member of the family had plunged all into deepest grief. Fosburgh's sister, Miss May Fosburgh, who held the attorney's office, was shot and killed in her bedchamber one night last August, presumably by burglars who had entered the Fosburgh house. The incentive to the burglary was the knowledge that large sums of money were occasionally kept in the house to meet the weekly pay roll of Mr. Fosburgh's factory. The natural conclusion was that the burglars, intercepted by Miss Fosburgh, shot her with a pistol they had taken from another room, and which belonged to her brother. In the confusion resulting from the crime, the bewildered members of the family told stories of the chief of police declared were conflicting, and he evolved the theory that Miss Fosburgh had been killed during a quarrel between her father and brother. On this theory the younger Fosburgh was indicted and tried. There was no testimony, save the Chicago Intelligencer, to show that there was estrangement between any members of the family, and there was plenty of evidence that the house had been entered by a burglar. So slimy was the case of the prosecution that the presiding Judge at the trial characterized the proceedings as an "inquest," and instructed the jury to bring in a verdict of acquittal even before the defense had proceeded far with its witnesses. It would seem that he might have gone further and censured both the chief of police and the grand jury for acting upon evidence so slight as that which was presented. The disclosures, that the case was ever brought to trial, and stranger that the police official did not attempt to trace the thieves and murderers rather than to create a mystery about the affair that reflected on obviously innocent people.

WOMAN RIDES ASTRIDE IN NEW YORK HUNT. Mrs. Thomas Hitchcock, Jr., of the Meadow Brook Hunt Club, has introduced cross-country riding to the women of New York under circumstances where no other woman has dared to be a pioneer. Some weeks ago Mrs. Hitchcock, who is young, charming and the finest horsewoman in her set, appeared at a meet of the Meadow Brook Hunt Club riding astride and in a costume distinctly masculine.

SHE TRAINS CHICKENS. Curious Playmates of a Bright Little Girl of York, Pa. Iva Marie Long, the 6-year-old daughter of the Rev. Charles A. Long, pastor of the German Baptist Church, of York, Pa., has developed a fondness for training chickens to do odd tricks. She now has a large black Minnera rooster which draws a wagon, and an ancient hen which rides in the wagon as passenger. She has also taught the rooster to play "seesaw" with several of his feathered fellows.—Philadelphia North American.

Travel Over London Bridge. Twenty years ago it was estimated that 200,000 persons crossed London bridge daily, 130,000 on foot and the rest in vehicles. With the growth of population these numbers have almost doubled, in spite of the relief afforded by the building of the tower bridge, half a mile downstream. It has, therefore, become an urgent matter to increase the capacity of the older bridge, and it has now been decided to accomplish this by means of granite corbels which will carry the roadway on each side of the bridge.

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A few years after the Bessemer converter was introduced William Siemens produced steel of similar quality to Bessemer's, but in an entirely different method, using a large "open hearth" furnace, in which the iron was first purified previous to the addition of carbon. It is said that Abram S. Hewitt

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There are many steels besides those in which carbon is the principal agent, including manganese steel, chrome steel, Hartley steel, nickel, Krupp steel, etc. But these are manufactured for special functions only, and nearly all the steel made in the world to which civilization owes so much is insignificant in itself, turning up in various alloys. In the uniting form of iron and coke, in the flashing diamond, in charcoal, in the black lead pencil, in plumbago, it is the same essential element. We do not know in what way so slight a trace of this element works so tremendously a change in common iron, transforming it into most aristocratic steel. It is believed that iron holds carbon in solution, as sea water holds its salts.

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equally apparent. Without cheap steel the ocean ferry between the United States and Europe could not be crossed in six days, nor that to the Antipodes in a month, because iron ships of the same strength and capacity would be heavier, and the cost of propelling the added weight would absorb the profit. At the present time, for one ship built of iron there are more than ninety-nine constructed of steel. A modern liner appropriates enormous quantities of steel. The Oceanic at the time of her launching contained in her hull, without any machinery, about 11,000 tons. The fifteen boilers in the Oceanic, each of which is sixteen feet in diameter, weigh 1,100 tons.

Without steel we should have no armored navy worthy the name. The weight of iron armor necessary to repel modern projectiles would be ten feet thick, and would nearly sink the ships. But, without steel the piercing power of projectiles would not be so great. Neither could the guns to fire them be constructed, for these are built wholly of steel. The torpedo boats and torpedoes would be heavy and clumsy in iron. The 40-miles-an-hour pace of the former is only possible with steel.

And yet, further, though steel is so greatly superior to iron, it would, apart from some special protection afforded in manufacture, and which intensifies its modern projectiles would be ten feet thick, and would nearly sink the ships. But, without steel the piercing power of projectiles would not be so great. Neither could the guns to fire them be constructed, for these are built wholly of steel. The torpedo boats and torpedoes would be heavy and clumsy in iron. The 40-miles-an-hour pace of the former is only possible with steel.

Without steel it would be difficult to haul the huge ships of the present time to their anchorages, to lift heavy machinery, to transport goods by cable, in ways in mountainous districts, to raise wrecks, to build huge bridges. For here the rope of wire comes in to take the place of the clumsy and risky chain and the clumsy rope of hemp. A steel rope an inch in circumference, as strong as a hemp rope 2 1/2 inches in circumference. The number of strands in a wire rope will range from 40 to 400, and a strand as large as a knitting needle will require a ton weight to tear it asunder.

The American tall buildings, the skyscrapers which are the architectural masterpiece of modern cities, could not have attained their present dizzy heights but for steel, because iron, to be of equal strength, would increase the weight on the foundation by one-third. A building erected in 1808 in Park Row in New York has thirty-three stories, and is 420 feet in height. The total weight of steel in this building is 15,738,717 pounds, or 7,027 tons! Astor's sixteen-story hotel in New York contains 10,000 tons of steel.

The great firm of Frederick Alfred Krupp is the property of one man. It gives employment to 34,000 hands, 2,500 of whom are burned and scalded every day (as much or more than the biggest Atlantic liner burns on a whole voyage), sixteen locomotives haul 600 trucks over forty miles of rails to serve nearly a thousand acres of factory. There are 1,900 furnaces of all kinds, 306 boilers, 485 of them of foreign make. Its rolling mills turn out enough steel rails in a month to carry a train from Berlin to Madrid.

The capacities of the modern steel works exceed those of any other firms engaged in manufacture. A pair of ten-ton Bessemer converters—very small ones nowadays—will turn out 30,000 tons in a month.

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Steel is king. To it in a large measure America owes her industrial and commercial supremacy. Yet only a few years ago steel entered very little into the world's manufactured products outside cutlery and numerous small articles. In the making of steel, America's primacy is recognized, and so rapid has been her progress in this field of activity, she is likely soon to put Great Britain out of business as an important source of the world's supply. Yet it was an Englishman, Henry Bessemer, afterward knighted by Queen Victoria, who discovered the process of converting cast-iron into steel at a nominal cost, and thereby revolutionized the world's industries; and it was to England that America had to go to learn the process and secure the right to use it.

The process is simple, but its discovery has aptly been characterized as the most wonderful single incident in the nineteenth century. It is an interesting story; its narration is timely, too, in view of the prominence steel has been brought into by its commercial triumph, the organization of the steel trust, and the industrial war in which the steel trust and organized labor engaged.

The Bessemer process of ready steel-making consists of mixing diamonds with cast-iron. That is a startling statement, but it is practically true. At least it is true in this sense: A diamond is so slightly softer than the chief of police and the grand jury for acting upon evidence so slight as that which was presented. The disclosures, that the case was ever brought to trial, and stranger that the police official did not attempt to trace the thieves and murderers rather than to create a mystery about the affair that reflected on obviously innocent people.

Without the small bit of carbon, iron would be nearly as useless as gold as an element of construction, for cast-iron also contains it, only in different proportions from steel.

There are many steels besides those in which carbon is the principal agent, including manganese steel, chrome steel, Hartley steel, nickel, Krupp steel, etc. But these are manufactured for special functions only, and nearly all the steel made in the world to which civilization owes so much is insignificant in itself, turning up in various alloys. In the uniting form of iron and coke, in the flashing diamond, in charcoal, in the black lead pencil, in plumbago, it is the same essential element. We do not know in what way so slight a trace of this element works so tremendously a change in common iron, transforming it into most aristocratic steel. It is believed that iron holds carbon in solution, as sea water holds its salts.

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Revolution of 1853. It was not until 1853 that the age of steel began to dawn. But it dawned slowly, and the world was reluctant to welcome it. In the year mentioned, "Bessemer read a paper before the British Association at Cheltenham, which, though the most important technical contribution of the nineteenth century, provoked only murmuring among the members. On the morning of that day Mr. Bessemer, when at breakfast at his hotel, overheard an ironmaster, to whom he was unknown, saying to a friend: "Do you know that there is someboddy coming down from London to read us a paper on making steel from cast iron without fuel? Did you ever hear of such nonsense?" To these ironmasters the thing was a huge joke. It is useless to search for that paper in the report of the year—it was not deemed worth printing. "And yet," says an English writer, "in the year 1860, by that outrageously nonsensical process of Bessemer's, this country made over 4,000,000 tons of steel, while the United States produced a trifle of 5,500,000 tons—made from over 12,000,000 tons of cast-iron without fuel." Continuing, the same writer says: "In 1865, ten years after his invention, Bessemer and his partners, for was not a wealthy man at that period, were receiving royalties in Britain to the amount of \$1,000,000 per annum. Enormous profits were also made in those years by the steel manufacturers who secured the right to manufacture under royalties. They obtained from \$200 to \$250 a ton for steel, which cost them only about \$50 a ton to produce. Trade rolled in in huge volumes, until in 1872, when the first fourteen years' partnership into which Bessemer had entered expired, it was found that his firm—Henry Bessemer & Co.—had divided in profits fifty-seven times the capital invested in the business, or 100 per cent for every two months for the first years, while the works, which had been largely extended out of the

amount of the whole subscribed capital. In all, the fortunate partners received eighty-one times their original capital in fourteen years." Great Britain, until the United States detoured her, was the greatest iron and steel producing country in the world. Yet in 1855, when Bessemer announced his discovery to the incredulous world, Great Britain produced only 50,000 tons of steel. But in 1890 she produced 4,855,900 tons, or over nine-seventeen times the quantity made forty-four years earlier. In the same year the total production of the world was 26,505,000 tons. But it was long years after Bessemer made this output possible before her late grandson, majesty the Queen rewarded him with knighthood. "Steel," says a trade writer, "is the most precious material which is used by engineers, for it is the greatest triumph of the latter half of the closing century, as steam locomotion was that of the earlier."

And yet, the basis of steel is cast iron, to the extent of more than 90 parts in the 100 in most specimens. Thus, 28,000,000 tons of pig iron were used in 1890 in the manufacture of the world's steel. The steel of which your knives are made, though strong, breaks off abruptly in use, and the steel with which the little car, though strong, can be bent and tied into knots, and it will stretch one-fourth of its own length before it parts in two. The first is so strong that a bar of an inch square will support a load of sixty or seventy tons, the second will sustain half as much. The first kind is termed cast, because it is prepared in crucibles; the second is called mild steel, because it is so accommodating and yielding a nature, enduring almost any amount of hammering and twisting—even doubling close, without breaking. The first kind has been made for more than a century, the second only since Bessemer and Siemens—those modern magicians—showed how to do it. In 1869 Hayley went from America and purchased the Bessemer rights for this country for \$50,000. Immediately previous to that time \$125 a ton had been paid here for imported steel rails, and the duty on iron was about \$38 a ton. To-day rails are made and sold in the United States for about \$30 a ton, and the country, in which so many gigantic fortunes have been made by the Bessemer process, has honored the inventor by naming seven towns and cities after him.



An Impossible Doctrine. The National Economist, the national organ of high protection, which has recently been demanding the defeat of Speaker Henderson for re-election for the reason that he has dared to agree to reappoint Congressman Balloch of Wisconsin on the Ways and Means Committee, contains the following from George