

From the Log of the Gazelle

The late ex-Empress Eugenie left a beautiful and extremely valuable painting to Col. Sir John Burgoyne "in remembrance of the chivalrous way in which he came to her assistance on September 6, 1870."

He was chivalrous indeed. His stanch little yacht, the *Gazelle*, chanced to be lying in the harbor of Trouville on the fateful day when Eugenie, flying from the Tuilleries before the invasion of the mob, reached the coast under the protection of her American dentist, Dr. Evans, who with his nephew came on board to beg the owner to convey the imperiled fugitive to England. At first Sir John would not believe the story; but Lady Burgoyne presently recognized Dr. Evans, and then he placed the *Gazelle* unreservedly at the service of the empress. She, with one lady in waiting, was at a lodging house where Dr. Evans had passed her off as insane. Just before midnight Dr. Evans escorted the ladies, closely veiled, to the dock. In the log of the *Gazelle* Sir John described the meeting:

"Went on the quay and met shortly afterwards two ladies, walking together, with a gentleman who carried a bag after them. One of the ladies came up to me and said: 'I believe you are the English gentleman who will take me to England. I am the empress! She then burst into tears, and I told her my name and offered her my arm, which she took and walked on board the *Gazelle*, where I presented Lady Burgoyne to her. She at once asked for newspapers and tidings of the emperor and prince imperial.'"

At a quarter of two o'clock in the morning Sir John, who had been ashore, entered in the log book: "Mob at the cafes began making a great

noise, singing the *Marseillaise*. Woke up men and got ready to slip. Went myself to the cafes and found drunken soldiers."

As the party had already seen a spy prowling round the wharf they felt that an attack by the demoralized soldiers was quite possible. Sir John determined to tell his crew the name of his passenger, and that they might be called upon to defend her. They promised eagerly to do so. At dawn the little vessel left the harbor.

It was a terrible passage. "Made but little way. Sea too heavy for yacht. Took another reef in sail and triced up tack," is one entry in the log.

That was the storm in which the British battleship *Captain* foundered; but the *Gazelle* came through it. Many times poor Eugenie gave up hope. But Lady Burgoyne remained cool, cheerful and matter-of-fact through it all, and Eugenie, though terrified, was courageous; once she even mustered a smile and managed to observe that she had just come through a worse storm in Paris.

At three o'clock in the morning the danger was over. At breakfast the empress was even gay. When the little company drank her health, she responded with a short speech of gratitude, closing with a request that she be allowed to present some little token to the crew. Accordingly, the abashed but delighted sailors were summoned to the cabin, where each in turn received from her hand a gold Napoleon.

At half past seven o'clock, attired wholly in clothes borrowed from her hostess, Eugenie ex-empress of the French, landed in England, the country that became thereafter her refuge and her home.

Growing New Forests.

Citizens who read of the inroads of fire and the amount of cutting in Canadian forests frequently inquire anxiously of foresters what the different government forestry departments are doing in the way of planting trees. This anxiety is a very healthy sign and shows the progress Canada is making in forest conservation, but at the present time the question is not so important as this one: "What are we doing to protect our forests?" This is not begging the first question, for a forest is not a dead thing like a quarry or a mine, but a living thing more akin to a flock of sheep. If the flock is protected, it increases in numbers, and if the forest is protected it grows new crops of trees on the burned-over lands and replaces the trees cut for lumber. Lumbermen take the mature trees but, fire takes mature trees, saplings, seedlings, and even the soil in which the trees grow. In a country with such great areas of forest land and with such a climate as Canada, nature will grow new forests rapidly if only given a chance. But even if it were not so and planting were an absolute necessity to preserve Canadian forests, what would be the good of planting if our fire protection were so poor that we allowed those seedlings to be burned up a year after they were planted? Planting both in Europe and Canada is necessary in certain cases, but it cannot be undertaken until there is reasonable assurance (as there is in the settled districts of the older provinces) that these plantings will be protected from fire. The first duty of Canadians is to protect their mature timber and their young forests from fire.

British farmers make about \$1,500,000,000 a year more now than they did in 1914.

What is Man?

What is man? What distinguishes man from other animals or vegetables? It cannot be his body. That is composed of certain chemicals distributed in the form of bones, nerves, muscles and various fibres. But so is the body of a sheep or porcupine or any other vertebrate. Man has a brain, sometimes. But so has a dog or a goat. Nature is just as careless of the human body as she is of any other form of life. No matter how exquisitely beautiful or powerful the "human form divine" may be it passes through the same life cycle as the body of the rattlesnake or rat. And when life leaves it nature breaks it up as she does all others into its component elements and redistributes them for use in some new form.

"Imperial Caesar, dead and turned to clay, might stop a hole to keep the wind away." The human body is of the dust and to the dust it must return like the falling leaves, or the dead grass of the field, or the humble, silent things that creep and hide in the dark places of the forest.

The workmanship of nature in the body of man is wonderful and beautiful. But not a whit more wonderful or beautiful than the workmanship displayed in the wing of a hummingbird, or the eye of a house fly, or the color scheme of a chameleon, or the poison sac of a cobra.

Many animals can do some things better than any man. No man, for instance, ever could swim like a fish, or fly like a swallow, or smell like a bloodhound, or see like a cat in the dark.

Why is it, then, that man sits upon the throne of the animal order, undisputed in his leadership over all other forms of life? The answer is

World's Strongest Rope.

What a wonderful contrivance is the spider's web-making apparatus! By means of it he can lower himself easily, rapidly, and safely a distance several hundred times the length of his own body.

No rope that man can make is, for its size, anything like so strong as the spider's web. The smallest rope that will safely bear the weight of an average man is one inch in circumference, or a third of an inch in diameter.

A spider only a quarter of an inch long will swing down from ceiling to floor, running out a line 500 times as long as himself. To equal the spider's performance a six-foot man would have to carry more than half a mile of one-inch rope! No man could carry the weight.

Spiders' webs are used for making the fine crossed lines of telescopes and other delicate instruments with which minutely accurate measurements are made.

The spider is placed on a tiny roller, which is shaken gently until he falls off and begins to descend. The roller is then turned so that the web is wound on to it, whilst the spider, who thinks he is dropping down, remains suspended in the air.

The amount of web that one spider can make is astonishing. Even if his entire supply is for the moment exhausted, he is very soon able to begin again.

There are thirty varieties of date-palms to be found in Egypt, which country contains neither woods nor forests.

Bears, especially the white species, are partial to bathing, and will comb themselves with their curved nails, and also lick themselves to obtain glossy coats.

because of his capacity for a larger relationship with the universe than that of any other sentient being.

Man is brother of the brutes. He feels pain and hunger, and thirst, as they do. He is born as they are born, and dies as they die. But his world is bigger and greater than their world because he can establish and has established wider and higher relationships than they.

Above his physical relationships stand the relationships of his mind. He goes out into the universe and discovers its laws, and applies them to his own life. His hearing is not as acute as that of many animals, but by the use of his reason expressed in knowledge, wisdom and creative skill, he has made for himself the telephone and telegraph, and thus his hearing extends around the world. He cannot see in the dark, but by the use of his intelligence he has made himself lamps and telescopes and microscopes, thus lengthening his eyesight. He is not as strong as the lion or the elephant, but he has used his brain to build for his use engines and guns so that he can move mountains and crush the mightiest brute like a moth.

But man does not stop when he has widened his relationships by invention and discovery and reason. Mounting still higher in the scope and scale of relationship, he has acquired a vocabulary of great and mysterious words—God, heaven, hell, right, wrong, duty, hope, faith, love, justice, law. He builds homes upon love; and he creates societies and institutions upon justice and faith; he plucks the sunset from the sky and imprisons it upon the artist's canvas; he gathers up the harmonies of the universe and redetails them into symphonies and songs.

—and the worst is yet to come



GREAT BRITAIN: CROWNED REPUBLIC

BRITISH THRONE MAY BE LIKENED TO A CORD

Which Keeps All the Pearls of Our Empire from Falling Into Discord and Helplessness.

The great Victorian poet, Alfred Tennyson, coined many happy phrases, but was never happier or more appropriate in his word-choosing than when he called the congeries of nations which form the British Empire a "Crowned Republic."

That is exactly what it is, both in principle and spirit, and if it ever ceases to be such, if it ever uses the "mallet fist" of the Hun instead of the "glad hand" of the Britisher, the end of unity and the beginning of dismemberment will have come.

It has been the genius of the British Empire, and, indeed, of the English-speaking peoples everywhere, to show the world that the truest imperialism is the imperialism of freedom, that the only lasting bondage is the bondage of affection, for it is only when hearts are united that all is well, whether in marriage or empire.

The war justified his British policy magnificently, and for all time. In the fateful year of 1914, the Germans, who had been reared in a very different atmosphere, counted upon nothing so surely as the disaffection of lukewarmness of the scattered units of our world-fung empire. Their disillusionment was the measure of their mistake.

For the Union Jack. Within a week, without any fiery cross being sent round, without any bargains being struck—out of pure unadulterated, self-sacrificing loyalty and goodwill, the Empire volunteered to help the Motherland. It is now a matter of history that, ere long, the subjects of King George, wherever the call had found them, were fighting for the flag.

This is not rhetoric, it is just the simple fact. The purblind imperialists of Germany, working in the darkness of intrigue, and secret and cunning schemes for undermining the fabric of this Empire, believed that they had all the strings of success in their hands. They made a colossal mistake, and though the war is over, it is well in these days of peace to emphasize the fact, and to point out the reason of their error.

We have said to the young nations which had sprung from the loins of the Motherland: "You shall govern yourselves. We will henceforth hold you by no more material bonds than are furnished by your goodwill and affection. If you wish to cut the painter, we will not lift a hand to prevent it. You may call yourselves Commonwealths, Dominions, Unions—what you will—and you can make your own laws, and work out your own destinies."

Bound by Their Freedom. We had said this not only in word but in deed, and it seemed a fool's policy to a certain type of mind, which scorned this sentimental and easy-going—as it seemed—method of empire building and preserving. Yet this lightly-held Empire of old lands and new, splendid offshoots from the vivid life of Britain, and empires grey with age, never hesitated as to which side they should support.

Being bred in the atmosphere of freedom, of perfect liberty, they felt through all their veins that they belonged to Britain, as Britain belonged to them, and that her cause was theirs.

Freedom was thus justified of her children, and our crowned Republic

has not only found a new strength and confidence, but this great rally will evermore stand as the world-example of the unshakable strength of free institutions and a kindly policy. The British Empire thereby proved that freedom is all that matters. Given freedom, all is well. It is the atmosphere in which union and unity flourish exceedingly.

Meanwhile the era which has seen crowns go down like skittles in an alley, has seen the crown of England take on a new and splendid youth. The same era which has seen the Hapsburgs and the Hohenzollerns flung like beggars from the gates of ancient kingdoms has seen the most democratic peoples in the world—the Canadians, the Australians, the New Zealanders—greet with unexampled fervor and loving loyalty a youth who is destined to wear his father's crown and become the titular head of the Crowned Republic.

Why is this? Because the throne is not the centre of power, but the bond of union, not the autocratic dictator of life and death, slavery and freedom, but the fount of honor and the shrine of empire to which all races and creeds turn with reverential affection in exactly the same manner in which the men of a regiment, differing greatly in education, ideals, temper, and status, salute the flag which stands for their honor, their patriotism, and their unity.

In Unity Lies Strength. Not only were many new words coined during the war, but many old ones assumed new meanings. One of the latter was the compound word "self-determination," which has come to mean the political wisdom of allowing every separate nationality to choose its own form of government irrespective of its effect upon its neighbors or the rest of the world. The word it superseded was "decentralization," another blessed word which was often used without knowledge.

But the sense of these words must not be forced into meaning that the priceless necklace of our Crowned Republic is to lose its connecting string, so that the pearls roll hither and thither, to find rest wherever they happen to cease rolling, whether it be in the gutter or elsewhere. Unity is still strength; disintegration is still weakness and futility.

The throne may be likened to a cord which keeps all the priceless pearls of our Crowned Republic from falling into scattered chaos and lost helplessness. Its intangible hold upon the free-moving democracies enables them to move in the paths of law, progress, and development.

The Problem of Bavaria.

Bavaria is still the most perplexing element in the German enigma. Scarcely a day passes that there is not some rumor of starting things that are going to happen there. The Bavarians obstinately refuse to disarm their Home Guard. They say they will not do so until the exact amount of the reparation that Germany must pay, and the precise method of collecting it, are agreed upon; but most observers doubt that they would disarm even then. We hear that Marshal Poch has a plan all ready for marching his troops from Mayence—which is only thirty miles from the nearest corner of Bavaria—directly across that country to the border of Saxony.

That would cut Bavaria off from North Germany and might be taken as a step in forcing secession upon the Bavarians. But rumors persist that the party of secession is strong in Bavaria and that the presence of the French troops might serve simply to protect the Bavarians from outside interference while they put Repprecht on the throne of his fathers.

Among human beings alone are the feminine species the more brightly dressed; among all animals the female element is the more sober in appearance.

Solving a Mystery of the Sea

Until recently the manner in which eels breed was one of Nature's most profound mysteries.

For more than two thousand years scientists have tried to solve the problem without success. Mature eels were found everywhere in ponds, lakes and rivers; small eels were seen ascending the rivers in the spring; but that was all that was known.

Did eels lay eggs like other fish? No one could say, for no one had ever seen an eel's egg, or even a new-born eel.

Long ago people tried to solve the problem by all kinds of quaint suggestions. Many believed that eels were produced from horse-hairs, and some writers stated that they had actually seen the change take place. Others held that they were created in a magic way from dew.

Now the mystery has been solved, and we can answer the questions that formerly seemed so baffling.

The eel is born in the depths of the sea and passes about two years in the salt water; then, as a little eelver, he moves up the rivers; his growth takes place in fresh water, and he returns to the sea to spawn.

In autumn the full-grown eel undergoes a change. The greenish-brown coloring which harmonizes with the mud of his favorite haunts disappears, and in its place he puts on his silver sea-livery.

Within him, too, there is a change; Nature is calling him with her most insistent call. Wherever he is, he must forsake his present home and seek the sea. If he is living in a pond far from a river, he leaves it and travels like a snake over the meadows, guided by some marvelous instinct that leads him always towards the river.

Once in the flowing water he finds himself in the company of thousands of his kind, all making for the sea. Down stream they swim, hardly pausing on their journey. When the sea is

reached they join a vast company of other eels which have come from various rivers.

There is no hesitation, no wondering where they should go; they know. As though moved by a common impulse, the countless millions of eels from our waters set out upon a journey of over three thousand miles towards the deepest parts of the Atlantic Ocean.

There they lay their eggs, and once the eels have completed their task Nature has no other use for them. Every one of them dies; no single eel ever returns.

From each egg hatches out a tiny transparent, dish-shaped creature, which, as soon as it is born, starts swimming towards land. For nearly two years it must travel unceasingly, and during its journey, its shape is gradually changing.

Slowly it becomes longer and thinner, though for some time it remains flat. As it nears the fresh water its sides fill out, it becomes rounder; it is, in fact, like a transparent piece of string.

So far, we cannot discover that the baby eel has taken any food. But we may feel sure that it does feed, for without food it could not grow, nor could it supply the energy needed for its long journey. It is probable that it exists upon the microscopic creatures contained in the sea. As it approaches fresh water it begins to feed in real earnest, and solid food soon gives it color.

The little eelvers move in millions up rivers every spring, passing overland from running water to ponds and lakes. They will spend four or five years in their new homes, and during that time they have only one idea—to feed and to grow.

The eel is perhaps the most voracious inhabitant of our waters. He thinks nothing of attacking fish bigger than himself.

Dominie Joe's Practical Faith.

Up in the Catskill Mountains there lived a mountaineer who believed that he had been called to preach the gospel. He got a license, but he could get no church to preach in. Indeed, there was no church within many miles of where he lived.

For a while Dominie Joe, as he was called, preached in the schoolhouse, but, as he was always saying, what he wanted was "a real proper house of worship." During week days he was a hard-working farmer with meagre resources; and whenever he spoke of a church to his hard-working neighbors they would shake their heads as if they thought him a little queer.

But the dominie did not give up his plan. Indeed, as time went on he thought of little else. He even selected a site for the church—a pretty knoll at the edge of his farm. One evening when he came in from milking his face was shining. "Maria," he said to his wife solemnly, "the trouble with me is that I haven't had the real kind of faith. After milking this evening I kneeled down in the corner of the cow yard where I could see the little knoll, and with my eyes open I prayed and prayed, until I saw the church just as plain as I see your face. It was white with green shutters and had a tall steeple; and on top of the steeple, Maria, was a bright star."

Dominie Joe's wife was worried; she feared that his head "had gone quite wrong."

In the middle of the night the dominie awoke and exclaimed, "Maria! Old Josiah Sturgis's tannery! Some one told me that Josiah had sold the old

tannery site to a city man for a summer place. I'll bet that city man'll pay to have the tannery pulled down and carted away! And there's the stuff for our church!"

No one could withstand Dominie Joe's enthusiasm; that winter the farmers got together and carted the timber and the boards of the old tannery to the place where to-day stands as pretty and neat a country church as you can see anywhere. Dominie Joe himself was a fair carpenter. Country masons and carpenters gave their work. During the afternoon of the church "raisin'" word went round that the city man had offered to pay for a steeple and buy a bell.

A visiting fisherman who frequently passes Dominie Joe's church says that he never sees the big gilt star on the steeple without thinking of the mountaineer kneeling in his cow yard and gazing at the vision of his faith.

War by Wild Beasts.

There is a constant struggle in India between human beings and wild animals.

Last year fifty-five persons were killed by elephants, five by hyenas, 109 by bears, 350 by leopards, 853 by tigers, and 688 by boars and other animals. Poisonous snakes claimed no fewer than 22,478 victims.

More than 10,000 wild beasts of various kinds were destroyed and 91,000 snakes were killed. High floods killed off many of the small animals that are ordinarily the prey of wild beasts, and this probably accounts for the attention that tigers and other large animals have given to their human neighbors.

Musical Eyes for the Blind

To the numerous inventions designed to relieve the lot of the blind there is now added one more marvellous than any of its predecessors.

It consists of an instrument—the optophone—invented by Dr. E. E. Fournier d'Albe, of London, which enables the blind to see by sound.

Until it was invented the only means by which they could read was by a raised type system, such as the Moon and the Braille, involving the production of expensive and bulky books, and depending upon the sense of touch.

The quantity of literature open to the sightless was in consequence comparatively small. It was sometimes difficult, moreover, for an adult blind person to acquire the sensitiveness necessary to read such books.

These disadvantages are overcome by the optophone, since it can be used with matter in ordinary print, as well as with typewriting. It is dependent not upon the sense of touch, but upon hearing, which is usually acute in blind persons.

People who are armless, as well as sightless, can, for the first time, read any printed book or newspaper if it is placed on the optophone.

The wonder of seeing by sound is brought about by producing in a telephone receiver a series of musical notes forming tunes or musical motifs representing the various letters.

A blind person puts on a receiver and then places a printed page face downwards on the top of the instrument—a glass plate supported by a stand. Beneath the plate is a tablet of porcelain pierced with an aperture to permit the passage of light from a small electric lamp on to the paper.

The amount of light reflected or thrown back from the page varies ac-

cording to the forms of letters passed over in traversing a line of print, and in this way a selenium bridge in the instrument is exposed to successions of sets of light vibrations. Each letter is thus indicated in a telephone by a characteristic sound, which is conveyed to the ear of the blind person by the receiver.

White paper, as the space between two words, may be represented by a discord, and each letter will alter the succession of sounds.

But with the optophone now in use white paper is represented by silence, and notes are sounded only as the light passes over letters.

At first, of course, reading must be done letter by letter, as the characteristic sound of each is recognized. After a little practice, however, a blind person instantly and without conscious effort identifies the more extended motifs for syllables, and even frequently recurring words—such as "the," "and," "from," "of"—just as a telegraph operator interprets a succession of clicks in the Morse code.

The ease with which experts can read Morse makes it probable that equal if not greater speed will be attained with practice in reading optophone sounds. Already it has been found that some blind persons can read with the instrument at the rate of twenty-five words a minute.

Recently, too, a comparative novice accomplished a remarkable feat. A girl was tested with an ordinary novel and Sir Arthur Pearson's "Light in Darkness." Blind from birth, she had learned the alphabet of sound in about seven hours, and, after two months' training, read passages from the two books—with which she had had no previous acquaintance—at the rate of twenty words a minute.