

3,000 MILES IN FOUR DAYS.

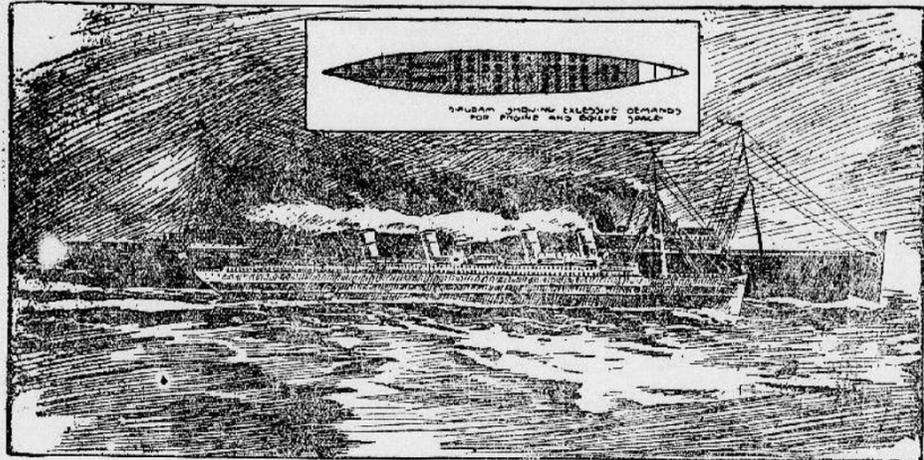
A ship to cross the ocean in four days, a monster 930 feet in length, with a total horse power of 110,000, travelling at the rate of thirty knots an hour. Think of it. Such a ship is contemplated by foreign builders. Regarding the possibilities and practicability of such an ocean grayhound the Scientific American says:

"To drive the Deutschland, the biggest vessel afloat, at thirty knots would require about 83,000 horse power,

and will displace about 40,000 tons. Engines of 110,000 horse power would be required, and even if triple screws were used, it would be necessary to develop 37,000 horse power on each shaft—a task that would stagger the best of the world's engine builders of today. Forty-four double-ended Scotch boilers would be required to supply the steam, and during each day's run of twenty-four hours 1,710 tons of coal, costing \$7,700, would have to be fed into the 352 furnaces.

ther strengthened by carrying up the side plating to the promenade deck, which is placed one deck higher than in the Deutschland, and by doubling the plating at the bilges and at the promenade deck, as shown in the mid-ship section of the ship.

"In conclusion, it is safe to say that such a vessel as this will never be built. We shall cross the Atlantic in four days, but not with a vessel of this type. The higher speed will be attained, not by multiplying engine



PLAN OF THE FOUR-DAY STEAMSHIP COMPARED WITH THE DEUTSCHLAND, THE LARGEST STEAMER NOW AFOAT.

er, two and a quarter times as much as she now possesses. If Scotch boilers and slow-revolving engines were provided in the design of a thirty-knot Deutschland, it would be impossible to put into her shell more than one-half of the necessary amount of power. Evidently to secure thirty knots a larger boat would be required, and a larger boat means increased power, however, would not be directly proportional to the increase in the displacement, the longer ship being ton for ton easier to drive, because of the refinement of her lines due to her greater length.

"Nevertheless, by the time we have designed a boat large enough to carry the power corresponding to a speed of thirty knots, we shall have upon paper the mammoth ship represented in our drawings. She will be 930 feet over all, 87 feet in beam, and 30 feet in

It would require 7,300 tons of coal to carry the vessel to Plymouth and 8,550 tons to take her to Hamburg, the cost of the fuel alone being \$36,000. The ship would have to stow 9,500 tons of coal in her bunkers for a single trip across the Atlantic.

"To anyone who has watched the reverse bending strains to which a ship like the Deutschland is subjected when she is being driven across the Atlantic seas, it is evident that we have come to a point where it will be necessary to give increased longitudinal strength to any vessel that exceeds the present length of 700 feet. In a four-day liner this might be provided for by running a longitudinal stiffened bulkhead, extending from the keel to the promenade deck, through the vessel between the after engine room and the forward boiler room bulkheads. The vessel might be fur-

and boiler weights, but rather by multiplying pressures and speed, and utilizing every refinement in the way of economizers, superheaters and feed water heaters, as is being done by Mr. Mosher in his forty-knot craft, the Arrow. If a thirty-knot transatlantic steamer makes its appearance within the next few years, it is safe to say that it will be driven by the combination of water tube boilers, using hot, forced draft, with fast running reciprocating engines, using superheated steam, or with turbines of the Parsons type. So great will be the reduction of weights and saving of space achieved by this change, that it will be quite within the possibilities to produce on a displacement not much greater than that of the Deutschland a thirty-knot ocean steamer that shall have equal accommodations for passengers."

BOSTON PLANS FAIR.

Exposition of Two Hemispheres Will Be Held in 1903.

Boston is to have a world's fair. The hospitality of ancient New England is to be extended to the universe. Even Chicago, with its breezy boastfulness of having presented the world the greatest exposition of modern times, will be taught an object lesson when Dame Boston throws open her hospitable gates and bids the multitude come and take part in the magnificent symposium of latter day advancement which she will prepare with particular deference to the critically pre-eminent. The summer of 1903, during the months of June, July, August, September and October, has been selected as the most opportune time for holding the exposition of "two hemispheres," as the affair has been appropriately titled. All features of the exposition are to be in place when the great exposition opens its gates. In the prospectus of the exposition association, which was made public recently, there appears a well-defined series of arrangements, all of which are calculated to insure the ultimate success of the undertaking. That the affair is to be the largest of its kind ever held in the eastern section of the country is aptly demonstrated by the several facts in relation to acreage, buildings, forms of amusements, naval displays and military details. Briefly summing up the prospectus, there will be more than 300 acres of ground covered by the exposition, twenty-five buildings—administrative, industrial, educational, mechanical and agricultural—a tower of chimneys nearly 1,000 feet in height, and arrangements of an elaborate nature for the reception and entertainment of the various naval and military deputations who are scheduled to take part in the general festivities. The "exposition of two hemispheres" is the outgrowth of the original endeavor to hold an exposition in Boston in 1899.

A BAD STYLE.

Is Henry James Slave of a Noxious Literary Influence?

In one of the criticisms on a recent story by Henry James the remark was made that it was really worth translating into English. One of the most inexplicable things in modern literature is the detestable style that Mr. James has developed in recent years. He used to write with the utmost clearness and simplicity, and no one could for a moment doubt that his style was his own. Now he is more involved and complex than George Meredith and one can hardly resist the conclusion that he deliberately set to work to cultivate the style that now afflicts him and distresses the reader. There is no excuse for this lapse into English which is not only obscure, but sometimes positively bad. Many attempts have

been made to account for it. But the only one that seems to have any probability is that Mr. James has come to prefer darkness rather than light. It seems impossible to believe that a man of such keenness and vigor of mind should have allowed himself to become the slave of a noxious literary influence. But whatever the explanation, the fact can not be gainsaid. Whereas it used to be a pleasure to read Mr. James, it is now a painful and perplexing task.—Indianapolis News.

Cold Does Not Kill Bacteria.

It is a common fallacy that impure water becomes sterilized at a temperature of 32 degrees. One of the most curious facts about bacteria is that while a single ray of sunlight will extinguish the life of the innumerable hordes, and while a very moderate increase in the temperature around them will have the same effect, they are absolutely uninjured by any degree of cold. Bacteria in a liquid containing bacteria or bacteria germs and all are destroyed, though there may have been millions to every cubic centimeter of the liquid. But freeze the liquid and not one of them is harmed. To follow out this question to the furthest limits, experiments have lately been conducted with liquid air as the refrigerating agent. Tubes containing bacteria have been left for hours in contact with liquid air, and even immersed in liquid hydrogen, and at the end of the ordeal they have been restored to the temperature at which their growth is favored, with the result that in all cases they have prospered as merrily as if nothing had happened.

Blarney Castle Story.

A Blarney castle story involving a pretty little Irish girl is being told in Dublin. Several visitors were exploring the famous castle, and on reaching the top became somewhat nervous owing to the great height. Presently a young man appeared and, being a stranger, asked to have the real Blarney stone pointed out to him that he might follow the ancient custom and kiss the ancient relic. This process of kissing the stone is a rather dangerous one, and the young woman, in her nervous state, not caring to have the feat attempted in her presence, exclaimed: "Oh, please don't kiss the stone while I am here." The stranger, it is hinted, politely acceded to her request, but not exactly in the way she meant.

Little Clara Smoked Company.

Little Clara was out with her mother, taking dinner at a neighbor's house, and the hostess, in an attempt to be entertaining, asked her if she liked kittens. The little miss shocked those gathered at the table by looking suspiciously at the chicken pie, and exclaiming, "I'd rather have cake."—Exchange.

FAITH IN FIGURES.

Lord Kelvin, Scientist, Astonishes a Class of Students.

Lord Kelvin, otherwise Professor William Thomson, is a world-famous scientist, with fellowships and memberships in the learned societies of the civilized nations of the world. He is but little less than 80 years of age, but still retains the position that he has held for over two score years, of professor of natural philosophy in the University of Glasgow, the institution where he himself was educated. As a professor he has some peculiarities, and one of them is the habit of saying, when a doubting question is put to him as to the absolute certainty of some proposition: "Didn't I figure that out myself?" The question is not put irritably or egotistically, as a rule; it is merely the natural remark of a man who has been an acknowledged leader of world-wide fame for so many years. One day, when lecturing on electricity, he told his class that, while a voltage of 3,000 or so would be fatal to a man, a voltage of say, some 300,000 would be perfectly harmless. With a current of far more than ordinary voltage he was going to give them a practical illustration of the fact himself, right there before them. The students could hardly believe their ears, but as he stepped toward the electrical transformer a cry of dissent and horror went up. "Try it on an animal!" came from all parts of the lecture-room. Lord Kelvin turned in stiff dignity and cast a look of reproach over the class. These were his own pupils who were doubting him—it was his beloved University of Glasgow. To doubt on some minor point would not have hurt him, but to think that they could question the reliability of his carefully prepared figures on a matter of such moment was really painful. For a few moments he looked at them in silence. "Didn't I figure it out myself?" he said, at length; and then there was only silence as he continued on his way to the apparatus and safely turned the tremendous voltage into himself.—Saturday Evening Post.

Frigid Manners in England.

It is said that Lord Salisbury has never spoken to Mr. John Morley, one of the most prominent of the Liberal chiefs, and that he never saw Mr. Parnell—at any rate until shortly before the Irish leader's death, when the chances of their having met are exceedingly remote. The London Chronicle adds: "It would be incredible, if we had not been told by Mr. Gladstone himself that Mr. Gladstone never spoke to Lord Melbourne, whose contemporary he was for twelve years, and whom he considered a great gentleman."—Buffalo Commercial.

Too many men in this country vote as they pray—and they never pray unless it is to ask a personal favor.

GONE TO HER REST.

COLORED WOMAN WHO SERVED IN TREASURY.

Sophia Holmes, Who Died in Washington the Other Day, Left a Record for Heroism That is Truly a Credit to Her Race.

Old Sophia Holmes, the most interesting colored woman of her day, has left a little story woven around her memory which will long live, and a record of which her race may well be proud.

She died in Washington a few days ago, where she had won her mark of distinction as the first colored woman to be given a life position under the United States government, which was awarded by a special act of congress during Lincoln's administration.

She was at that time employed as charwoman in the division of issues department, a position to which she was appointed by President Lincoln. One evening in 1863, in sweeping up after closing hours she found a chest of bank notes, which had been carelessly overlooked by the employes and left out of the vault. Not knowing what to do and fearing to call the watchman, of whose honesty she was



SOPHIA, THE HEROINE.

not sure, she continued to sweep back and forth until it was dark, then she dragged the chest as noiselessly as possible to a place beneath a table and lay upon the top as a sentinel.

It was past midnight when General Spinner, then treasurer, made his nightly round. He had long made it a habit to sleep in the building and to make a personal survey of the department at midnight.

The negro listened and realizing whom it was called out to him and made her discovery known. Noted for his profanity, General Spinner is said to have made use of his powers upon this occasion, and expressed his wrath in fiery volume. The frightened woman, at his command, followed trembling to a room above, where at that unusual hour a committee meeting was called. She was absolved from all blame and allowed to return to her home, which she did rejoicing. Congress acted upon her deed of bravery and valor, and subsequently appointed her to a life position in the division of issues department, to carry packages of money from one employe to another, at the highest salary paid to the laborers in the government employ, which is \$60 a month.

This position she retained until her death, always carrying herself with dignity which won the respect of all her superior officers.

On another occasion she detected a man stealing \$47,000 from the counting room of the treasury and caused his arrest and the return of the money.

Sophia Holmes was born in Georgetown, Va., and was married to Melchior Holmes, whose freedom she purchased with her own earnings. He lost his life in the civil war.

Sophia Holmes was over 70 years of age, how much she herself was unable to tell, for as much as she was associated with figures she had no memory for dates.

Mr. Sample, now treasurer of the United States, requested her to sit for the accompanying sketch and as she did so she remarked "I'm gettin' ready to die now; 'pees it's most time, 'cause I'm gettin' my picture sketched. I've been honest, and I'm glad to give the world that record."

EDITH A. NOBLE.

Mourning for Ancestors' Portraits.

A fire broke out recently in the palace of the emperor of Korea at Seoul and completely destroyed the sanctuary, where the mortuary tablets of the imperial family are kept. The residential part of the palace seems to have escaped unharmed. A financial question will be the issue of this calamity. Funeral rites, erecting of tombs and constructing of cenotaphs are immensely costly operations in Korea, and there is no money at present in the imperial exchequer. As a first step the Korean court went into mourning for three days because the portraits of the imperial ancestors were destroyed in the conflagration. All officialdom robed itself in white, and the inmates of the palace wore sackcloth and fasted roughly.—A. Belamy Brown, in Chicago Record.

English Lives on the River.

F. Hutchinson Smith has just returned from abroad. He says: "I went over in June for my annual jaunt. This time I printed on the Thames, in Holland and in Venice. The Thames is a new subject for me. The greater part of the work which I did on the Thames was done at Ocksham, an hour out of London. This is one of the prettiest part of the river. The trees overhang it on either side, and the life is interesting. We have no idea over here of the life on the Thames. The English live on the river. I wish we appreciated our rivers as the English do."

HEAD OF HOUSE.

Under Certain Conditions Prerogative May Belong to Wife.

The headship of the house is a question which on first thought would be decided in favor of the husband, but a United States court in Virginia has declared that prerogative, under certain conditions, to belong to the wife. It seems that Mrs. Richardson, who lives in New Kent county, Virginia, conducted a store and was postmistress of the village. In 1893 Mrs. Richardson made an assignment. The goods conveyed did not pay off the creditors, and in January, 1899, Mrs. Richardson asked to be adjudged a bankrupt. She claimed \$2,000 exemption under the "homestead" provision of the law. This Judge Waddill refused to allow on the ground that a married woman living with her husband is not the head of the house. Judge Parnell read a lengthy opinion reversing Judge Waddill. In closing he said: "Certainly there are decisions which might tend to a different conclusion, but the weight of authority is to the effect that where the wife is the owner of the property, where she trades as a femme sole, and is the debtor, and the husband cannot and does not claim the homestead exemption, the wife, though living with her husband, may be alone, or jointly with him, the head of the family, and as such claim the homestead exemption." This opens out a new field of opportunity for the wife, and will be an incentive to her to become the providing member of the firm. Judge Parnell, in supporting the decision which he had rendered, went on to say that "when an intelligent, frugal woman finds she has married a man who, instead of coming up to the standard of a husband, is a mere dependent, who acknowledges that he is only a helpmate to his wife, obeys her instructions, pours his little earnings into her lap, acknowledges her to be and always to have been the head of the family, and leaves to her its support, it would be contradictory of fact and an absurd construction of the law to say he, and not she, is the head of the family." All of which is straight, common sense.—Atlanta Constitution.

A DELEGATE'S IMPRESSION.

One of the ablest men in the ranks of organized labor in this country is Sidney J. Kent, commissioner of the Nebraska bureau of labor statistics and fraternal delegate to the British Trade Union Congress, 1900. Mr. Kent is a carpenter by trade and is a member of the United Brotherhood of Carpenters of America. In the current American Federationist Mr. Kent gives his impressions of the British Trade Union Congress. He says that "20 years ago it represented a very limited constituency and a still more limited influence. Today it represents some 2,000,000 of workers and essays to give voice to the aspiration and appeals and protests of the tailors of the entire United Kingdom. Its influence



SIDNEY J. KENT.

today is indeed far-reaching. Many of its demands have long since passed into law or become the custom of the land, for in this body sit 12 members of parliament, probably some 16 or 20 members of city councils, and almost as many justices of the peace or magistrates.

In Huddersfield, where the congress was held, he found that not only do the city own its own water, gas and electricity, public parks, baths, street railways, etc., but have a number of rail lines in Great Britain, it is entering into competition with the landlord, and up to the present time has built 150 workmen's houses. Mr. Kent says "the deliberations of this body were marked by a directness of aim and intelligence that cannot be surpassed by any deliberative body that I have ever seen."

Royalty Gives Old Toys.

The imperial family of Germany have a custom which is worthy of imitation. On Christmas day and on birthdays, when the royal children receive presents of toys they are taught to feel pleasure in giving them to others by reviewing all their old toys and sending those they no longer need to the children's hospitals. The present empress has made a point of not merely superintending the inspection of toys, but even of packing with her own hands those which are sent to the sick children. The little recipients of the discarded toys generally know where they came from and treasure them accordingly.

Deaths of Ex-het Men.

Prof. A. W. Anderson, of the United States National museum has sent from New Zealand fifteen numbers of the long extinct Man. They are part of a considerable number that the professor found in a cave of the North Island at Earnslough.

Young ladies should set good examples if they want young men to follow them.

TRAGEDIES OF SOUL.

Danger Made a Stranger in New York Became a Scour.

There are tragedies of soul and body in fortune telling. The story of one of the craft is something like this: What precedes his arrival in New York you need not be concerned with except that it shows a capable, a learned and brave man. But New York is a hard city to get a footing in. Sickness came; two pupils in bookkeeping, the only ones he could get, should have paid each a fee of \$25. They didn't. The man and his wife came down to making neckties at 80 cents a gross. One week he reached the high water mark of \$8.50. They paid \$5 a week for a room and lived on a dollar or so. One day they overheard a man laugh: "I'll have to live on liver for a month to make up for this extravagance." The wife pinched her husband's arm and whispered: "Liver! Strikes me that's pretty luxurious." The landlady said one day: "Mrs. So-and-So, you don't go out often enough for your meals." They had been smuggling loaves of bread and such things into their room. After that they went out and shivered in the parks with nothing to eat, but staying out long enough to have gone to the restaurant. He knew something of palmistry, and read up more. A saloonkeeper that he knew advanced him the money to furnish up a soothsayer's flat, and now fortune smiles on the rogue that frowned on the man trying to be honest. And yet need he be a rogue? Is there not a legitimate impulse to seek counsel from a stranger, advice as to the conduct of life and on matters which one does not wish to lay before a lawyer, which do not come within the province of the physician? The priest used to hear such, but it is not absolute that is sought, and anyhow, a large part of the population of America fears the confessional. Besides, the clergyman is not a man of the world and takes a view of things which, rightly or wrongly, is not shared by many others. How many there are that would be glad to go to some one and open their grief and there receive an answer to the question: "What ought I to do?" They do not find any such now that process to gratify this impulse. All have something to do with the occult, and it is the experience of those who have seen much of life that the occult world, like fallen Babylon, 'is become the habitation of devils and the hold of every foul spirit, and a case of every unclean and hateful bird.'"—Ainslee's Magazine.

HE USES BAGS.

An Inventor Devises New Scheme to Prevent Ships from Sinking.

French engineer, M. Henri Mariolle claims to have invented a system by which the sinking of ships can be prevented. M. Mariolle proposes to attach to the sides of the vessel a large number of bags. Each of these bags is to have a capacity of 15,000 litres, and will be covered by several coats made of a mixture of wool, cotton and Indian rubber, the latter preponderating. These bags are to be placed all around the ship, a trifle above the water line, and can, when empty, be placed in holes in the ship's sides. A strong iron sheet then shuts up the holes containing the bags. From the lower part of the bags a tube leads down almost to the surface of the water closed up at the bottom by a little valve which opens inward; in each bag there is a certain quantity of calcium carbide. In case of an accident and when the ship begins to sink, it cannot dive to more than to one-third of its size, for the water, rising around the vessel, opens by means of pressure, the valves of the above described tubes, penetrates the bags, wets the calcium carbide, and a quick development of acetylene gas takes place, whereby the bags are inflated, thus removing the sheet iron cover. This process is performed within a few seconds. As all bags work simultaneously, the vessel is considerably lightened and kept above water. Mariolle has calculated that a big ocean steamer can in this manner be saved from sinking if it is provided with 150 of these bags, each containing fifty kilograms of calcium carbide.—Boston Post.

Women Suffer to Retain Beauty.

Nowadays the profession of the beauty doctors ought to be a very lucrative one, when every woman considers it her duty as well as pleasure to keep young and youthful looking as long as possible—and sometimes longer. Many are the wonderful skin and wrinkle cures, some of them extremely painful, which these seekers after beauty undergo with wonderful heroism, the result in many cases justifying the suffering; but, unfortunately, the result is always in doubt, as even the beauty doctor will tell her patients, and to endure the pain and discomfort of having a new skin provided for one, only to find that it is no improvement upon the old, must be bitter indeed, especially as the fee for this particular process is a very large one.

New Theory of Calve-ton's Ruin.

It is believed by the engineers who are repairing the Galveston-Mexico cable, which was broken by the Galveston hurricane, that the storm was accompanied by a submarine eruption. The evidence of this eruption is found in the twisted condition of the cable. The twisting is found to have been reversed, and the wires binding it to the core turned the wrong way.

Pankake—To yure long letter or three pages and two postscripts, in which you ask me if horse trotting and horse racing has improved the breed of horses, I answer out loud, I don't think it has.