

Photo by American Press Association.

The marvelous blind deaf mute is shown on the left in conversation with Miss Macy.

STARS IN THE UNIVERSE.

Enough to Allow One For Every Hu man Being on Earth.

For years the approximate number of stars visible to the eye, a matter of 3,000 or 4,000, according to the definition of average vision, has been known. By most persons, however, and by yet of a magnificence of dimensions present site of Richmond. and of a populousness far beyond all earlier conceptions. This assumption is a result of very recent investigations into the motions and distances of the stars.

The latest studies on the subject of the number as well as the light of the stars have been made at the royal observatory at Greenwich, England. The late Franklin Adams succeeded in making a set of 206 photographs covering the entire sky. After counts were made on these pictures, from which the brightness of the self luminous bodies between practically the twelfth and seventeenth magnitudes could be inferred, it was concluded that they recorded about 55,000,000 stars.

From this a formula was determined showing the change of number in passing from one magnitude to another. With these figures it was reasoned that the aggregate number of stars is not less than 1,000,000,000. probably not more than 2,000,000,000. and probably approximately 1,600,000,-000, the estimated present population of the earth.

In making computations it was inferred that there would be as many stars fainter than magnitude twentythree or twenty-four as there are brighter. - From September Popular Mechanics Magazine.

KILL LOBSTERS KINDLY.

Put Them In Cold Water and Slowly Bring Them to a Boil.

Boiling over a slow fire is the happiest death a lobster can meet, so it has been determined at the Jersey marine biological station. The experiments were carried out by Joseph Sinel, a well known biologist, for the tion of Cruelty to Animals, whose members associated the prevalent method of killing lobsters with medieval tor-

Lobsters, says Mr. Sinel, are exbrain does not seem to cause the lobster more than temporary annoyance. since his brain is a mere nerve ganglion the size of a hemp seed. He has to be killed all over. To throw him into boiling water fails to do the work either mercifully or quickly since he struggles violently to escape for about two minutes.

The pleasantest way to end a lobster's troubles, Mr. Sinel finds, is the old fashioned way of placing him in cold water and bringing him to a boil. As the water warms he becomes lazy and rolls over as for a sleep. By the time the water reaches the comparatively mild temperature of 70 degrees Fahrenheit he becomes comatose, At 80 degrees he is dead. To use a human illustration, the biologist says it is like a person succumbing to a heat wave, with loss of consciousness and a painless end.-London Cor. New York Post.

Tips and Tips.

"The Scotch caddie is the best caddie in the world." said a famous player. "only, like all his race, he's a little near, a little tight across the chest. 'Bang goes sixpence,' don't you know.

"A friend of mine spent his vacation golfing on the famous St. Andrews links in Scotland. My friend had a very fine Scotch caddie, a notoriously fine Scotch caddie, and he said to the man the first day on the course:

"'Dugald, my man, I expect to get some good tips from you during my stay here.'

"'And I expect,' said Dugald dryly, 'the like frae you.' "-Exchange.

Velocity of Sound.

The velocity of sound depends upon the medium through which the sound has to travel. The mean velocity of sound in air is 1,125 feet per second. while the velocity of sound in water is given at 4,708 feet per second, being about four times quicker than in air. Cast iron conveys sound at the rate of 16,822 feet per second, or about sixteen times more quickly than air.-New York American.

Extravagance. Extravagance in thought is as bad as extravagance in living expenses .- E. W. Howe's Monthly.

Overheard.

"Tinker has placed an old railroad sign, 'Stop, look and listen!' at the en dreadfully. He-How? She-You see. rance to his driveway." "What's the idea?"

Our First Sawmill.

car."-Judge.

It is said that the first sawmill in many scientists, the total number of the United States was at Jamestown, and deep sea food producing countries stars in the heavens has been con- from which sawed boards were ex- of the world. The total yield of fish sidered countless, if not limitless. The ported in June, 1607. A water power is well over \$8,000,000 worth a year, universe is now declared to be finite. sawmill was in use in 1625 near the but even this great supply is not equal

He. Mean Brother.

She-Aline's twin brother annoys her everybody knows they are twins, and ty!-Exchange.

Russia's Fisheries.

Russia ranks third among the fish to the needs of the population.

HENRY SHRAPNEL.

THE PATRIOT

Inventor of the Deadly War Missile and His Reward.

Shrapnel was originally the name of a British general who, about a hundred years ago, was begging the board of ordnance of his native land for some substantial recognitio, in respect of the new and deadly missile he had placed absolutely at their service and was being told that the institution in phone & Telegraph Company, Thomas A. question "had no funds at its disposal for the reward of merit."

Henry Shrapuel's invention was probably first employed at Sarinam in 1804 and was then "favorably reported on," but eleven years later Sir talk was the same crude instrument George Wood, who commanded the ar- which transmitted the first message, and tillery at Waterloo, declared that shrapnel had won that famous battle. Without it, Wood asserted, no effort of the British could have recovered the farinhouse of La Haye Sainte.

In 1814 the government granted Shrapnel a pension of £1,200 a year membrane of gold-beater's skin for life, but this was interpreted by stretched taut for a diaphragm, is still his paymasters to cover all the inventions Shrapnel had given to the army, no one familiar with the telephone of including an ingenious gun mounting whereby the recoil was utilized to bring one gun into action at the same poor Aline can't pass for only twenty- time as another was put under cover. use and discarded in the process of evo-"His wife is running the touring four because he tells people he's thir- Shrapnel was thus placed at a disad- lution to the efficient instrument of tovantage, though he had the satisfac- day, seventy-three styles of transmitter tion of drawing his pension to a ripe and fifty-three types of receiver. old age. He died in 1842, aged eightyone.-Argonaut.

> Very Temperate. "He was very temperate. He got drunk only once a week," remarked a witness to a Liverpool coroner.

coast. In this way he was able to converse with Dr. Bell and Mr. Watson and thus three men who have contributed much to the making of telephone history were all "present," although separated by hundreds of miles, at this significant event.

place at Jekyll island on the Florida

"Ahoy! Ahoy! Can you hear me?" asked Dr. Bell, and instantly there was a murmur in the receiver audible to cisco in the offices of the Pacific Tele-Watson had heard the voice of his oldtime associate signalling in the manner they had employed in their earliest experiments, and had answered: "I can hear perfectly."

The telephone used by Dr. Bell in his there was an added touch of sentiment in the fact that there had been spliced to the line some of the wire which was used in the first sustained talk almost

40 years ago. The original telephone which is a curious-looking contraption with a thin capable of transmitting the voice, but to-day would have called this crude instrument by that name.

It was stated that since the first telephone of Bell there have been placed in

The new line is the culmination of a constant progression towards longer and longer distances in telephoning. J. J. Carty and the other engineers of the Bell System, to whom the credit for this new triumph of science is due, can point out no single phase or invention which has made trans-continental telephoning possible. Constant improvements in lines, cable, switchboards, receivers and transmitters, and a multitude of other ap-

tension of the lines a few hundred miles further from the Salt Lake City point life-time. reached a short time ago, on to 'Frisco was all that was necessary. But that is not true. In almost every step that has the trans-continental telephone service been made in the development of longdistance telephony from the first twomile line reaching out of Boston to Cambridge on through all the advances, first to Providence; then New York in 1888; then New York to Chicago in 1892; then Omaha: then Denver, and finally the coast-in every added span new difficulties have had to be met-new problems have arisen to be overcome.

The new coast to coast line has only been constructed after the expense of a vast sum of money and the taxing to the utmost of the powers of the 550 or so engineer and scientists who solve the telephone problems of the Bell System.

The line itself has required over 130,-000 poles and 6.800 miles of very heavy hard drawn copper wire were used for each of the two circuits. To preserve and guard the diminutive telephone current used tolking which is so small

OCEAN TO OCEAN TELEPHONE SERVICE

everyone in the room. Out in San Fran. First Message From New York to San Francisco

> Historic Event Celebrated With A. G. Bell at Atlantic End and T. A. Watson at the Pacific End of Line

NEW YORK, January 25 .- This afternoon the voice of man was made to leap across the continent-New York and San Francisco were connected by telephone. Impressively, almost solemnly, Alexander Graham Bell, a big whitehaired man whose full white beard gives iim a typical, patriarchal look, spoke the first words over the span of 3400 miles. 1: San Francisco there sat, listening to this first trans-continental message, the man who almost forty years ago heard Dr. Bell speak the first words that ever traveled over a wire. This man was

Thomas A. Watson, Dr. Bell's assistant when he invented the telephone in 1875. Small wonder that few of those who witnessed this formal opening of the new continent-spanning line could restrain their emotions. Here was history in the making as well as a confirmation of that oft-spoken phrase that history repeats !tself. Here were these two men who, in their youth, had conceived and created the epoch-making telephone-an achievement the greatness of which is reserved for the few-here were they, testing the crowning achievement of the telephone engineers who, following in the footsteps of the inventor and his assistant, took the first little telephone and created for it lines and switchboards and innumerable pieces of apparatus unal speech paratus, have brought about the ultimate can now be speeded across the entire nation from ocean to ocean. This indeed One would think that merely the ex- was a wonderful fulfillment to be crowded into the short space of a man's

Such were the thoughts of those who witnessed this impressive inaugural of in the office of the President of the American Telephone and Telegraph Company at 15 Dey Street. Among those who witnessed the formal opening by Dr. Bell, and who afterward talked to 'Frisci. were Mayor Mitchel, other city officials. members of the various civic bodies and other prominent persons to the number of about one hundred. There were besides a number of telephone officials including J. J. Carty, Chief Engineer of the Bell System, under whose direction the new line was constructed; B. Gherardi, another prominent telephone engineer, and Thomas B. Doolittle, who developed hard drawn copper wire.

In San Francisco, beside Mr. Watson, there were the Mayor, the President of the Panama-Pacific Exposition and a small group of other much-interested

At the White House President Wilson spoke into the mouthpiece of his telephone and his voice was whirled across thirteen States to the shores of the Pacific.

Theodore N. Vail, the President of the American Telephone and Telegraph Company, was unable to be present but special arrangements were made which permitted him to be connected with the trans-continental line from his stopping

Bravery and Cowardice. Cowardice is often ignorance. Are any men brave, more ready to take their lives in their hands, to reckon death as one of the daily encounters. than the deep sea fishermen? Yet a group of these men brought to London by one of their missionaries have been seen too terrified to cross the street. The police had to stop the traffic to allow them to cross. The quick, quarrelsome, fearless cockneys who laughed at them-how would they feel in a freezing storm in the North sea? A spider may terrify the most courageous of women and a veteran shrink from a cat. Every hero has his weakness. and we may believe every coward has a point where he turns and will fight the world.-London Outlook.

Bullet Wounds.

The entrance wound caused by the modern small arm bullet is not a grewsome spectacle. It is small, and its appearance has been compared to that produced by the bite of a certain parasite insect. Often there is but little external bleeding, but this is not to be taken as a danger signal, as might be popularly supposed .- London Telegraph.

Quite Enough. Penman-Did you wade through that last book of mine?

Wright-Yes, I did.

"Were you much stuck on it?" "Only a dollar twenty-five."-Yonkers Statesman.

Sporting Note. Speaking of mollycoddle games, how would you like to play cricket on the

JAPANESE RED CROSS NURSES



Photo by American Press Association.

This picture was made when the oriental maidens were en route to Europe to care for the wounded.

Wasted Generosity. "Oh, I'm so sorry I can't marry you. I had no idea you thought of me that

"Well, what do you suppose I've been letting your father beat me at golf all the time for?"-Judge.

Chrysanthemums of Japan. Although the chrysanthemum has reached its highest form of development in Japan, and is still reverenced as the imperial emblem, it was taken Isle of Jersey Society For the Prevento Japan from China, where it has been brought to its highest state of cultivation. At the imperial chrysanthemum party given by his majesty the emperor of Japan in November every year one sees the most marvelous tremely difficult to kill. Piercing the blossoms known to the floriculturist. The number of blossoms from one root is amazing. In one case no less than 700 flowers were seen growing from one plant. The festival of the chrysanthemum dates back to the Heian era, when the great ones of the empire used to call at the imperial palace and drink to the health of the imperial house from sake cups in which floated petals of the beautiful flowers.

Old Time Coining.

In the fifteenth century a skilled coiner, of whom there were but few, might be able to turn out by hand fifty or sixty coins a day, a result totally inadequate to cope with the vast quantity of treasure, chiefly silver, that shortly began to arrive from America. To multiply coiners was to multiply forgers, and thus the coining machine became a necessity of state. A laminating mill and screw coining press was invented in Italy 1547, Spain 1548, France 1553 and England 1561, reign of Elizabeth. After several trials and abandonments the mill and press were established permanently under Charles II., whose golden guineas, struck in 1662, were the first regular issues of machine coins made north of the chapnel.-Argonaut.

Why They Don't Hear. 575 in the "Ancient and Modern" collection. Here is the fourth stanza:

They do not hear when the great bell Is ringing overhead;

They cannot rise and come to church With us, for they are dead. The list of things which "they" are unable to do might be indefinitely ex- to retire for the night. tended, and it seems a thing incredible that the author of the above verse should have written so beautiful and

hill far away."-London Chronicle. Canada's Size.

The area of the Dominion of Canada is 3.658,946 square miles. The area of continental United States is 3,025,000 square miles. Canada is as big as the United States with a territory to spare that is as large as three German empires and the state of New York.-New York American.

BLIND, BUT HAPPY FOR THE TIME.



Photo by American Press Association.

New York city annually gives a substantial sum in cash to each blind resident. This shows a blind couple, led by their daughter, after they had received their gratuity. The woman is counting her money.

Strenuous Love. "Do yer love me, 'Erb?"

"Love yer, 'Liza! I should jest think I does. Why, if yer ever gives me up I'll murder yer! I can't say more'n that, can I?"-London Punch. name. He was answered "Taylor."

Very Moving. Talk about moving things with a duke. "Cheer up, my men! Our Tayderrick-the most powerful thing lor will soon make a pair of breaches known to move man is a woman's eyes .- Florida Times Onion.

Good Cooks In Demand. "I've had my daughters learn to cook

so that they might get better hus- fortress.-London Answers. bands." "And did they?"

"No, they feel above marrying now." -Boston Transcript.

Professor Armbruster asserts that the reason very young children are relatively immune to infectious diseases is that their hearts beat so much more rapidly than those of older persons that the blood flows swiftly through Perhaps the limit of hymnic fatuity the arteries, and this swiftness of flow was reached by the writer of hymn makes it difficult for micro-organisms to gain a foothold in the blood stream. -New York World.

> One Danger. "Have you fastened the windows, dear?" she asked as they were about

"No. What's the use? I gave you the last dollar I had to buy that new hat, and we needn't fear burglars." "But they might sit down on the hat. moving a hymn as "There is a green you know."-Washington Post.

Between Citizens.

He was abusing things in general. "Have you registered?" asked the other man. "N-n-no."

"A citizen should always register. Your vote will do more to correct matters than your criticism."-Pittsburgh

Rather Too Light. Laughed and Won. The landlady who had not a reputa-When the British were storming tion for overfeeding her boarders asked Badajoz the Duke of Wellington rode her solitary boarder as he looked doleup and, observing an artilleryman particularly active, inquired the man's fully at his supper, "Shall I light the

in the walls!" At this sally the men forgot their

"A very good name too," said the

danger, a burst of laughter broke from them and the next charge carried the

His Definition.

"I'm not quite sure, Wilfred, but I

"Pa, what is an 'interior decorator?"

London Telegraph.

The boarder gazed at the scanty meal

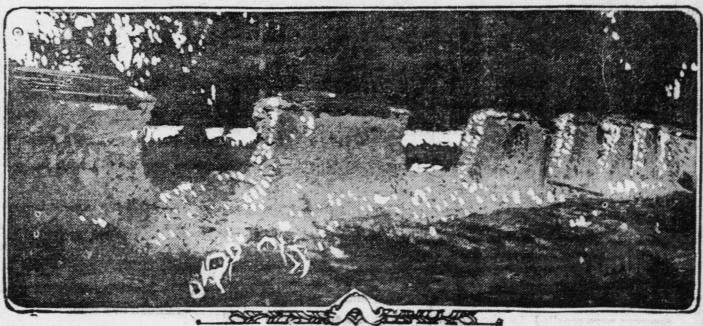
and replied, "Well, no, it isn't neces-

sary; the supper is light enough!"-

Two Puzzles.

Mrs. Bowns-How do you expect me to buy things for you to eat if you don't give me any money? Mr. Bowns -And how do you expect me to earn money for you if I don't get anything to eat?-New York Journal.

think it's a cook."-New York Times. AT THE HISTORIC CHATEAU DE MONDEMENT.



Pheto by American Press Association.

This estate, near the river Aisne, was often visited by Napoleon. It was taken and retaken by French and Gerpass several times. The cut shows a wall demolished by shell fire.