WIRELESS TELEPHONES FOR OUR BATTLESHIP FLEET.

Also Tongues That Talk Under Water and Eardrums to Magnify the Sounds.

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For Rear Admiral Evans to call up his captains at any time on the telephone and invite them over to the flagship will be possible while his great fleet is rounding the Horn. Telephoning from ship to ship in the great fleet will be as easy a matter as is the telephoning from room to room in a big hotel, say the experts.

Before pointing their noses southward all of the war vessels booked for the long journey will be equipped with transmitters and receivers. There will be no overhead wires or submarine cables connecting ship with ship; nor will there be any "click, clickety-click" or "dot, dash, dot" business about it, all of which means that the wireless telephone is now an accomplished fact, and that our navy is the first great institution in the world, public or private, to take advantage of it.

That it will transmit speech twelve miles was demonstrated the other day at the Norfolk Navy Yard, and the tests were so satisfactory to Lieutenant Commander Cleland Davis, the wireless expert of the navy, that he came back to Washington and reported that the new instruments could be successfully used even during battle, amid the roar of "cannon to right of them, cannon to left of them." There will not have to be any great ripping up and tearing out to install the wireless telephones. It will simply be necessary to add the new telephone transmitter to the wireless telegraph apparatus already installed on each ship. The helmet receiver already used to pick up the "tick" signals in wireless telegraphy will suffice also to take the voice signals of wireless telephony.

The best demonstration of their adaptability to their new function was made accidentally the other day off Cape Charles. The wireless telegraph operator on one of the Old Dominion steamers had his helmet on and had his ear primed for anything in the Morse code which might chance to be floating about in the salt air, when suddenly he was surprised to hear music and spoken words of a weird and uncanny distinctness. At first he supposed that he was in some manner crossed with one of the telephone transmitters of his own vessel. But arriving in port he learned that what he had heard was the battleship Tennessee sending test messages and other sounds to the navy yard at Norfolk.

SUCCEEDS WHERE TELEGRAPH WON'T.

That the wireless telephone will succeed where the wireless telegraph sometimes fails was indicated by another incident since these tests began the other day at Norfolk. The battleship Kentucky ran aground five miles from the navy yard, and the wireless telegraph station at the yard tried to hail her, but constant interruptions prevented. The Virginia, with its new wireless telephone installation, lay at the yard, and noting that the Kentucky could not understand called her up by telephone. Although the stranded vessel had no regular telephone equipment, its regular wireless operator caught the words in his helmet and signalled that he had received them.

In action the wireless telephone will be useful not only for communication between the admiral and his captains, but with torpedo boats, colliers and dispatch boats on detached service and with lightships, lighthouses and other shore stations. Except in actual battle there would be little danger of interference from the enemy, because, unlike the wireless telegraph, its range is limited to a radius of twelve miles. But even in close action it can be used to transmit messages in code words. If the mast carrying the web of transmitting wires—the "aerial" or "antennæ"—were shot away by the enemy a wire run up on an oar elevated on deck would give sufficient connection for the wireless telephone.

In fact, the whole nervous system of the navy is being regenerated and made more sensitive. The United States government is now the first to generally adopt for its men-of-war not only the wireless telephone, but another new wireless hearing equipment, now being fitted to twenty-five vessels of the navy, not to mention forty-six lightships and two army transports.

EARDRUMS FOR EACH SHIP.

These ships are having eardrums installed, and, some of them, tongues. Divers who have worked under the sea have known for many generations what a good and dependable conductor of sound water is. But, just as was the case with electricity, it was not until many years after the pioneer investigators had learned the law of the phenomenon that any one had the genius to make use of it. But in our generation no known force or phenomenon of nature is allowed to repose unharnessed. Some time ago Professor Lucien L. Blake, with A. B. Johnson, secretary of the United States lighthouse board, began experiments with the old frigate Constitution, and found that signals sounded under water from a point one-third of a mile distant could be heard through the old vessel's thick oak hull planks submerged fifteen feet. Other investigators followed into the field, and at last the navy is to profit by perfected apparatus which will transmit sounds through the water as far as the new wireless telephone will carry them through the air—twelve miles.

The eardrums now being fitted to the naval vessels are a pair of hollow chambers about the size and shape of ordinary wash boilers, fastened to the inner skin of each ship. One is against the port and the other against the starboard side, in the forepeak of the hull, as far below the water line as possible. In each drum there is, immersed in liquid, a delicate microphone—an instrument which magnifies small sounds as the microscope magnifies small objects. The microphone's magnification of sound is so great that the feet of a fly walking upon it will appear as loud as the hoofs of a horse upon a pavement. This instrument in each eardrum of the ship proportionately increases sound vibrations coming through the water and striking the vessel's hull. From each drum emanate, like nerves, electric wires, running to a battery box which supplies the power and thence to an "indicator box," where the sounds are reproduced for the guidance of the ship's navigator.

TONGUES THAT SPEAK UNDER WATER.

At the same time a tongue that will speak under water is being fitted to each lightship on the sea, Gulf and lake coasts of this country. This is the clapper of a bell of very high pitch lowered over the side of the vessel by davit, windlass and chain. It is set beating by pneumatic power supplied through a hose or by electric power transmitted by cable. In the lightship is a "code ringer" which automatically tolls, on the bell, the code number of the lightship. In other words, each lightship gives a certain number of beats, by which it is known to the navigator. These beats, on reaching the eardrums of the passing war vessel, are magnified by their microphones and transmitted to the "indicator box." This, placed on the wall of the pilothouse or the charthouse on the ship's bridge, looks like a clock with a telephone receiver on either side.

One receiver connects with the port eardrum and the other with that on the starboard side. By means of a switch either the port or starboard microphone can be connected with the receiving telephones. On the dial there is a "direction indicator," showing to which side the telephones are connected. The two earpieces are always connected together, either to the port or starboard microphone, and when the sound of the distant lightship's submarine bell is faint and it is desired to shut out all other noises, both are used at once, or in ordinary cases either may be used separately, as in the accompanying photograph.

The position of the lightship is estimated simply by a comparison of the sounds coming from the two microphones. If the port microphone gives a louder sound of the distant sunken bell than does that to starboard then the lightship beating its code number is on the port side of the ship. When the navigator gets the same intensity of sound from both port and starboard he knows he is head on for the lightship. Direction can thus be obtained within a half point of the compass. Hence in black weather each lightship may be distinguished and located by its bell, just as in clear weather it can be distinguished and located by the number and arrangements of its ligt.

HEARING A DISTANT SHIP'S SCREW.

Submarine whisperings other than those of the sunken bell are picked up by the delicate microphones. The sounds of the propellers of passing vessels are often plainly audible. If the neighboring ship is crossing from starboard to port her screw will be heard more clearly in the starboard than in the port microphone.

Ships without receivers can hear the bell. It is distinctly audible to those who put their ears to the inner surface of the hull, well below the water line. Thus it will be possible for a light vessel to signal to any deep draft ship, even when it is well outside the range of aerial fog signals.

These air signals, hitherto depended upon during black or foggy weather, frequently are not heard at all, and even when heard are frequently misleading as to direction, even at one or two miles. A vessel failing to hear them may be on a safe course and in her estimated position, yet she must stop or anchor or alter her course because she is uncertain.

The submarine bell can be heard in thickest fog as far, approximately, as a light vessel's light can be seen on the clearest night, according to the recent report of the commander in chief of the British navy, which is making tests. Thus does the fog demon, to whom hundreds of thousands of innocent lives have been paid as tribute, appear to have been practically conquered. Not only every lightship, but every turning point and danger spot on the sea, can be equipped with a means by which every passing navigator can obtain location and direction within a half point and which will give constant warning in all conditions of sea and wind. Indifferent to hurricane or tempest, to blinding snow, milky fog or inky night, it repeats underneath the silent waters a musical note of guidance to the ship which may be heading to destruction.

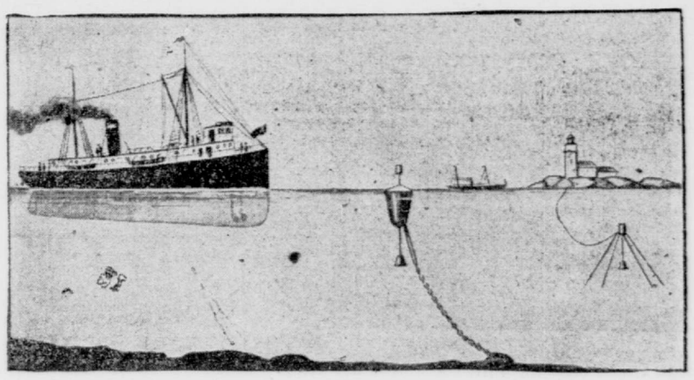
THROUGH TWELVE MILES OF WATER.

These bells have been heard through seven, ten and twelve miles of sea during this autumn's official tests. The record has been twelve miles, made both on the Atlantic and the lakes.

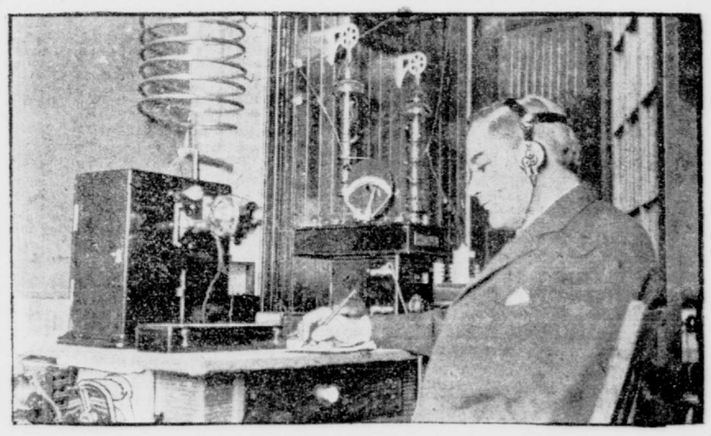
When operated from shore stations they are mounted on tripods of heavy I-beams securely fixed to the sea bottom at any distance from shore, to which connection is made by armored submarine cable, supplying the electricity for moving the clapper. The lighthouse board will install the first such electric shore station at Detour, at the mouth of St. Mary's River, through which steam vessels enter Lake Superior. Later six other such turning points on the Great Lakes will be equipped.

There is also a submarine bell attachment for buoys, the clapper being uniformly actuated by a combination of ratchets and springs which store up power obtained from the motion of the waves.

Both sending and receiving apparatus have been installed upon our submarine boats Octopus and Cuttlefish, also on the tender which keeps track of them during the trials. These vessels communicate with one another by striking off the Morse telegraphic code on their bells or by using other prearranged signals.



LIGHTHOUSE KEEPER TALKING TO A SHIP BY MEANS OF THE SUBMARINE BELL.



RECEIVING A WIRELESS TELEPHONE MESSAGE ON REAR ADMIRAL EVANS'S FLAGSHIP.

The ability of submarine boats to talk while under water, while engaged in an attack on an enemy, renders warfare all the more diabolical. Yet in times of peace it removes the greater dangers of submarine navigation. The other day, when one of these tests was being made with the Octopus, which had been a long while under water, her tender, using its new submarine bell, signalled:

"How are you?"

"Everything O. K. Eating," answered the Octopus from its hiding place somewhere down under the whitecaps.

JOHN ELFRETH WATKINS.

THE TIPPING HABIT.

Does It Undermine Integrity and Lead to Graft?

A dispatch from Washington states that the United States has given official recognition to the tipping evil, issuing official instructions as to the amount of tips that can be paid by our naval officers. Thinking people recognize the tipping evil as simply an unobtrusive form of bribery, which is doing much to undermine the high integrity of mankind.

If you tip a waiter in order to secure good service; if a waiter is compelled to tip the chef in order to secure the best cuts of meat for his customers; if the head waiter must be tipped in order to secure a good seat and waiter; if a Pullman porter is tipped in order to secure better service than your neighbor, what is the difference in principle between these acts and the acts of a railroad in tipping you, providing you give it favors in the way of more freight? What is the difference in principle between these first named and a tip to the public official for convenient blindness that will be a personal favor? Railroad rebates, official bribery and many forms of business dishonesty are all traceable to the general principle that I must have advantages not enjoyed by my neighbor, regardless of how they are obtained. A noted judge has recently fined a certain corporation because a railroad paid them "tips" for extra business. We wonder if this same judge could not have himself arrested and fined because he had paid waiters and porters "tips" in order to secure better service and better meats than his neighbor at the next table? If the principle is wrong for one, why is it not wrong for the other?

We believe that the general system of "tips" in this country leads people, gently and unconsciously, into the frame of mind where rebates, rake-offs, political bribery, etc., look harmless and proper.

If you go to a hotel you pay high rates, which should insure you good service and a square deal. If the man at the next table slips the waiter $1 and secures what he is not properly entitled to and what you cannot receive without the same inducement, then that man is encouraging a system that naturally and rapidly leads to rebates and rake-offs in all commercial life. Why not kill the system at its fountain head, instead of trying to kill it by plucking a few hairs from its tail. Just as long as the "tipping system" is recognized and officially and socially encouraged, just that long will the foes to honest commercial life, rebates, rake-offs, political hold-ups, etc., kill and throttle fair and honorable dealing. If you bribe waiters, porters, etc., by giving them money as "tips," in order to secure something your neighbor cannot have, are you entirely free from the sin of "tips," full grown to rebates?—Illustrated World Life.

LESSONS FROM ITALY.

How Much Better Some Things Are Done in Cities There than Here.

The former president of the West End Association, one of the strongest reform organizations of New York City, J. L. Brower, has just returned from a six months' sojourn in Italy. He spent several weeks in each of the four principal cities—Rome, Naples, Genoa and Florence. In the interest of his association he made a careful study of the physical conditions in those cities, and found that American cities have much to achieve in the construction of pavements, street cleaning and the collection and disposal of garbage before they can be favorably mentioned in comparison with the cities of Italy. In speaking of his experiences to a representative of The Tribune he said:

"In early boyhood I had been taught that Italian cities, above all others, were uncleanly in the highest degree, and, by inference, that American cities in general and New York in particular were practically immaculate.

"On my first visit to Italy, in the early '70's, my eyes were partly opened to the fact that my teachers might be mistaken. Every visit since then has confirmed this view, and I now know that they knew little or nothing about the real conditions in Italian cities.

"In the four cities mentioned block stone was used almost universally for the roadways, with the exception that on some of the heavier grades macadam was used. It was the rare exception that I found the roadways in any other than a perfect condition. I do not refer merely to the principal thoroughfares, but also to the side streets and alleys in the poorer districts. In fact, it was almost impossible to find any holes or breaks large enough to be dangerous to the traffic.

"In these cities all openings in the streets are made and closed by the municipality, and with the most satisfactory results. For example, I saw an opening made in one of the principal streets of Rome, and it was continued across the sidewalk for about twenty feet. The work occupied about two days, and then the opening was carefully filled and levelled and permitted to settle, and in less than one week the sidewalk and roadway had been restored to their previous perfect condition.

"In New York how differently would the work have been done! The opening would have been carelessly filled with all sorts of material, and a lot of rough stones would have been heaped on the top at from six to twelve inches above grade, and left in that condition until complaint after complaint had been made, supplemented by illustrated articles and scathing editorials in the daily papers, before the dilatory officials would properly attend to their work. I know of one case where a dangerous opening was permitted to remain in a prominent business street for almost two years before the roadway was properly restored. Such a state of affairs is unknown in Italy. All such work is promptly and properly done.

"The streets in these cities are kept clean; not only the principal ones, but the side streets and alleyways. One of the best proofs of this statement is that there is scarcely any dust, even on windy days. In New York, even on Fifth avenue, it is a common thing to see ridges of dust near the curb, but I have never seen such a thing in Italian cities.

"The methods employed in the collection and disposal of the garbage of these cities yield the most satisfactory results. The carts are carefully loaded and driven to the dumps, not only without giving forth offensive odors, but also without leaving a trail of bones, egg shells, tomato cans and other refuse, as is done in New York. While it is a common sight in New York to see hundreds of unsightly garbage cans filled with filthy refuse standing for hours on the sidewalks in front of the houses, I have never seen anything of the kind in Italian cities, and I do not believe that such practices would be tolerated.

"The cause of imperfect conditions in New York City and, doubtless, in other American cities lies in the fact that our whole system of civic government is permeated with politics. Until such influences are eliminated there is not much hope for any marked improvement. The conduct of civic affairs on a non-partisan basis would do much toward attaining the desired end."

MOTTOES ON COINS.

Many Devices Used by Popes—Use of E Pluribus Unum.

President Roosevelt has eliminated the motto "In God We Trust" on a United States coin. He says "that to put such a motto on coins, or to use it in any kindred manner, not only does no good but does positive harm, and is in fact irreverence which comes dangerously near to sacrilege."

The President, however, is not the only head of a government who in recent years has caused the removal of the motto on the coin of his country. The statesmen who are ruling France, in the earlier part of this year, decreed that the exhortation "Dieu protège la France!" (God protect France) shall not appear on the coin of the French Republic to be minted henceforth, as it does on the present coins. The explanation for France's action in the matter may be found in the fact that the European republic is at present under the absolute regime of radicals and anti-religionists, who have relegated everything pertaining to the Bible or religion to the background. President Roosevelt's action, according to a statement given out at the White House, was inspired by feelings of reverence for the words "In God We Trust" and his opinion that the placing of the same on coin tends to cheapen it.

LEGENDS ON PAPAL COINS.

In this connection it may be of interest to know that for centuries the Popes expressed in Biblical phrases or moral sentences lessons of charity and kindness in the legends stamped on their coins. These coins have been out of circulation for a long time, but the Popes evidently believed that the instruments of charity should be regarded as preaching a sermon on charity. It would be impossible to relate here more than a few of these brief sermons which the Popes preached to the people over whom they ruled and which undoubtedly contributed to the exercise of the virtue of charity which was thus so universally inculcated. The legends or inscriptions are all in Latin, and each almost fills the reverse side of the pieces, whether gold or silver. "There is no one wickeder than the miser" is the pronouncement made by a gold scudo (or crown) of Pope Innocent XI, who filled the Papal chair from 1676 to 1689. Another coin of the same Pontiff, a half scudo in value, says, "The miser will not be filled," and still another bears the phrase "The things preserved perish." Pope Clement XI (1700-1721) issued a silver coin on which it is said, "Silver kills many," and on a golden scudo he offers this counsel: "Obey not the empire of gold." "Do not desire money," is another counsel of his, and the suggestive phrase "It is not for avarice" is seen upon another of these coins. "Care follows increasing wealth" cries out a coin of Pope Alexander VII.

NO USE AFTER DEATH.

And of how little use money will be when the curtain falls on life is brought home to the minds of most men by the warning that speaks from coins of Innocent XI: "They will not profit thee in the day of judgment." The pontificate of Innocent XI, though only thirteen years in duration, seems to have been rich in the variety and beauty of the sayings on the coins issued. "He that loves gold will not be saved" is the motto on a golden crown, and another reads, "He who trusts in riches will fail." The same Pontiff asks: "What doth it avail a man? What doth it avail a fool?" and the question, meeting you on a coin, has a special directness that one cannot avoid.

Innocent XII speaks touchingly to those whose hearts are fixed on the accumulation of wealth when, on a coin of about two francs nominal value, he says, "Let it not be to thy perdition." And the effect of avarice on the mind is admirably suggested by the words of another coin of the same Pope, "Money has no color for the avaricious." The money grabber is universally denounced. "Who is poor? The miser," is the question and answer which another coin gives. "What I have I give to thee," is the phrase on another coin on which is represented St. Peter healing the lame man. The bearer of the coin may not be able to heal otherwise than by giving what he has. Another pertinent question is asked on one of these pieces of money, "But these things which thou hast gathered, whose will they be?" Such a question must raise serious considerations in the minds of thoughtful men.

TO BESTOW WELL.

But the owners of money are recommended to bestow it well. Clement XI on a golden Julius says, "Let it abound to the glory of God." When rightly employed money may do much good, and this is declared by Clement X on the coin which bears this pronouncement, "It diminishes evil and increases good." And on another coin a generous giver is described, "He hath opened his hand to the needy." "Do not forget the poor," is the recommendation on the coins of two pontiffs. A piece of the value of a threepenny-bit bears this inscription, "A little to the just," and on a much smaller coin is the truism, "It hurts less." "Forbid that I should glory save in Thee," was the motto on the coin or medal of Pius V, which was made a memorial of the battle of Lepanto. "He who gives to the poor will not wait" is a consoling reflection, as it suggests that the reward of the just will be bestowed soon on the charitable man. "Use moderately like a man," is a saying that awakens universal response.

"That it may be given," tells the purpose for which the coin was struck—that is to say, to be passed on to those in want. "He lends to the Lord who has mercy on the poor," is the inscription on a silver piece of about eightpence nominal value. And so the series goes on in various phrases, all more or less directed to the objects already noted. These are the uses of wealth to which Popes called the attention of the possessors of money, and this throws light on the character of the Papacy.

"E PLURIBUS UNUM."

The motto, "E Pluribus Unum," never authorized by law to be placed on the coin of the United States, first appeared on an American coin in 1786. There was no United States Mint then, and, in fact, no United States, the Constitution forming the Union not having as yet been adopted. There was a private mint at Newburg, N. Y., and "E Pluribus Unum" was first placed on a copper coin struck at that mint. Few collections have specimens of this coin, and it is valuable. In 1787 a New York goldsmith coined a piece of money which was known as "the sixteen dollar gold piece," and upon it the motto was stamped in this form, "Unum E Pluribus." Only four of these coins are known to be in existence. They are valued at more than $2,000 each. New Jersey issued various copper coins in 1787 with the motto stamped upon them. A great many of the early coins, before there was any legal authority for national coinage, were made in England. Most of these were copper, and were coined for different states, and all bore the words "E Pluribus Unum." The United States Mint was established in 1792, but the use of the national motto on any of the gold, silver or copper coins was not authorized or directed by any of the provisions of the act establishing it. The motto remained on the early gold and silver coins until 1834, when it was omitted from the gold coins. In 1836 it was omitted from the 25 cent pieces, and in 1837 from all silver coins. It was not stamped on any coin again until it appeared on the nickel and the standard silver dollar.

The words "In God We Trust" were first placed on the 2-cent piece, which came into the subsidiary coinage in 1866. The motto was placed there by direction of James Pollock, then director of the United States Mint at Philadelphia, and not by any legislation of Congress authorizing the minting of the 2-cent piece. The motto was subsequently stamped on the silver half and quarter dollars.

FIRE LOSS BY CRIME

Property Worth More Than $200,000,000 Destroyed in 21 Years.

Fires started through crime or mischief have cost the people of the United States $210,352,546 in twenty-one years, according to official fire insurance tables. To these causes the fire insurance experts attribute about 31,000 of the 369,298 fires that have occurred in twenty-one years. Incendiarism, or, as E. R. Hardy, lecturer on fire insurance of New York University, described it, "the friction of a thousand dollar policy on $200 worth of goods," explained about 9 per cent, or $199,755,504 of the total loss of more than $2,000,000,000. Tramps, burglars, drunken men and lunatics are responsible for about $8,500,000 of the loss in 1,846 fires. Mischievous children, playing with matches or starting bonfires, in the period covered by the computation probably did more than $1,000,000 worth of damage—rather a tidy sum to pay for this form of amusement.

The fire bill for crime and mischief, however, is far less than the bill for carelessness in handling heating and lighting apparatus, matches, cigarettes and firecrackers. For their carelessness in playing with fire in the twenty-one years people of the United States have paid a bill of $266,340,058, or 12 per cent of the total loss, if the itemized percentages for the years given hold for the entire period. This source of fires is more than double the total fire bill for electric wires, lightning, cyclones and earthquakes prior to the San Francisco disaster. Even forest and prairie fires can be added without equalling the loss through carelessness.

COST OF CARELESSNESS.

The losses in twenty-one years in the United States due to different kinds of carelessness are:

	No. fires out of 369,298.	Total loss.
Careless use of matches	8,335	$15,314,558
Cigars, cigarettes and pipes	2,917	9,765,802
Lamp accidents and explosions	16,460	51,906,311
Oil stove accidents and explosions	6,795	7,546,401
Defective flues and smokestacks	20,652	93,662,920
Stoves and stovepipes	9,047	23,526,705
Ashes, hot coals, open fireplaces	2,263	3,329,250
Fireworks	3,102	3,551,200

In contrast with this loss of more than $266,000,000 through carelessness may be cited the fact that, excluding San Francisco, cyclones, floods, earthquakes and sun's rays caused not more than thirty-six fires and led to a fire loss of only $443,900 in twenty-one years. Lightning in a like period did only $4,573,395 of fire damage and started only 5,919 fires. To forest fires and prairie fires, with their disastrous sweep, a fire loss of only $92,000,000 is attributable, or less than the bill for defective flues, which a little forethought would have saved and for which carelessness was responsible.

In addition to figures such as these, the insurance people have kept such accurate account of all fires in this period that they answer offhand such questions as these:

"How many human hair stores burned in fourteen years?"

Answer: "Forty-three."

"How many bird stores went up in smoke in ten years?"

Answer: "Twelve."

They also know how many dwellings, boarding houses and hotels had fires in them; what the tendency of cider mills is to burn, and have actually recorded such queer facts as "thirty-five jails burned in 1895," "230 police and fire stations burned in twenty-one years," and that in eleven years seventy-two water tanks, which seem to be incombustible enough, have needed the attendance of firemen.

EXPECTATION OF FIRE.

Such exhaustive information as this is collected by fire experts who have been specially trained to analyze fires and their causes and to detect what changes in buildings would have prevented a fire or stopped its spread. On this information and the figures showing just how many buildings or businesses of a certain sort may be expected to burn to the thousand the companies fix their rates for the classes of structures and kinds of occupants. If a building has in it elements which make it less likely to burn a lower rate may be granted. The insurance people even need men who are expert psychologists and trained character readers to arrive at explanations for mysterious fires which may or may not be due to the policy's friction on a small stock of goods. These experts naturally are paid good salaries, and yet the insurance companies cannot find enough of them fitted for this delicate work.

The demand for such men, however, is now being supplied in some degree by the School of Commerce, Accounts and Finance of New York University which under the advice of prominent fire insurance men started a course to train fire experts under the direction of an expert of the Fire Insurance Exchange. About fifty men are studying in the course this year, learning how to find insurance data, inspect buildings and fires and to use this information as experts in arriving at statistical and financial conclusions; for fire inspection to-day, it is found, requires a great deal more than a nose for kerosene.

KENTUCKY SCHOOL FOR NEGROES.

To Be Established in Compliance with Law Forbidding Coeducation of Races.

Kentucky is to have a school for negroes, conducted on the same lines as Hampton and Tuskegee. It is to be established by Berea College, which until the passage of a law recently forbidding the co-education of the races accepted negroes, as well as the mountain whites, as students. The authorities of the college have been testing the law, and part of it has been set aside by the Kentucky courts. It is believed by the officials of the college that the remainder will fall in the Supreme Court. While the college might eventually find itself legally able to continue the coeducation of the two races, yet it is believed advisable, in view of public opinion and the probability of the adoption of other laws aimed at the same result, to carry out the intent of the present law.

The trustees of the college, therefore, have decided "that the decision of the courts cannot be the controlling element in our problem. The real problem grows out of the unreasoning opposition to any 'mixed school' on the part of the dominant white element in the South, and the real preference of the colored people, under the circumstances, for a school of their own. While maintaining our teaching of the duty of impartial benevolence, we must make it our plan, in view of circumstances beyond our control, to establish a department especially for persons of color."

To meet the conditions up to the present time Berea College has paid railroad fare and otherwise assisted its former negro students to attend schools outside the state. The amount of funds in the treasury of Berea College whose income is available for work among the negroes is $300,000. It is essential, in establishing a new school, to have lands, buildings and other equipments. The amount needed to bring the plans to pass is $400,000. Two or three small, struggling Kentucky schools for negroes will probably be merged with the new school. Its object will be to train negro teachers for the negro schools of the South.

HEARING BOTH SIDES.

Last summer there died at Washington a lawyer who for many years had shocked a large number of his friends by his rather liberal views touching religion.

A friend of the deceased, who cut short a Canadian trip to hurry back to Washington for the purpose of attending the last rites of his colleague, entered the late lawyer's home some minutes after the beginning of the service.

"What part of the service is this?" he inquired in a whisper of another legal friend standing in the crowded hallway.

"I've just come myself," said the other, "but I believe they've opened for the defence."—Harper's Weekly.

STUNG.

A little girl was being put to bed one summer night, and after she had said her prayers her mother kissed her good-night, and said:

"Now, go to sleep, dear. Don't be afraid, for God's angels are watching over you."

In a short time, while the mother and father were at tea, a small voice from upstairs was heard.

"Mamma!"

"Yes, little one; what is it?"

"God's angels are buzzing around, and one's bitten me."—Harper's Weekly.

ANIMAL PETS OF NEW YORK'S FIRE FIGHTERS.

Anecdotes About Dogs, Cats and Monkeys That Live in the Engine Houses.

Alfred M. Downes, secretary of the New York Fire Department, has written a book about New York's firemen which is called "Fire Fighters and Their Pets," and by courtesy of the publishers, Harper & Bros., some anecdotes from the book are here retold.

Rags is the famous dog of Engine Company 72. She sleeps in the stall of Jim, the engine horse, and they are fast friends. If Rags doesn't go out of the stall when the alarm rings, Jim will take her up by the back of the neck and run to the pole with her. When visitors come to the house and give the horses sugar, Rags will seize hold of them by their clothing, and so present Jim's claims to the first and biggest lump. Should the horse drop the sugar, Rags will retrieve the lump, bring it to Jim in his stall, and place it so that he can reach it.

One of the famous cats of the Fire Department was Barney, of Engine Company 59. Barney's great feat was sliding down the pole in the firehouse, and he did it as gracefully as any member of the company. True, he did not come down with a rush, like the men, but he would wrap his four paws around the brass rod and let himself down with great rapidity. Sometimes the firemen would play a trick on Barney by placing a dog at the foot of the pole. The cat would immediately notice this and stop half-way down. He would carefully take his bearings, watch for an opening, drop on top of the dog, scratch him once or twice and then rush to the cellar.

One of Barney's friends in this firehouse is a fine Dalmatian. He will go into burning buildings, no matter how hot or smoky, and he is always to be found near the pipe where the men do their heaviest work. At one fire, a few years ago, it is a matter of record that he climbed a regulation Fire Department ladder. He went up one story, and then entered the building through a window, the sashes of which were burning on both sides.

DOG TO LEAD THE WAY.

There was a Barney dog as well as a Barney cat. The dog belonged to Engine Company 25, in East 5th street. He was a true pathmaker for the horses in his company. As soon as an alarm came in he would dash out of the house and down the street, yelping a warning that the engine was coming, and that man and beast must stand aside. His threatening bark caused absent minded people quickly to clear the way at street crossings, and the driver of this engine has stoutly asserted that the horses showed increased confidence and speed when Barney piloted their advance.

Among the firemen's pets are a few St. Bernards. One of them, Prince, is quartered in Engine Company 45. He knows his business so well that when an alarm sounds he darts out into the street and barks loudly to attract the attention of drivers and pedestrians, calling on them to clear the way for the engine. Then he returns, takes up his position in front of the quarters, and does watch duty until the company comes home. Under no circumstances does he allow anybody to enter the firehouse during the absence of the men.

The moment Bill, a Dalmatian in a downtown company, saw any of the visitors, or the firemen themselves, giving the horses lumps of sugar, Bill would jump on the back of one of the horses, and nothing short of main strength could get him off until he, too, received his share of the sweets. Just as soon as he received his first lump he was satisfied, and would chew away contentedly until he was called down. But he must get that sugar first.

JOCKO GOT THE MONEY.

Down in Arverne, Long Island, one of the companies had for its mascot a monkey named Jocko. He was quite a favorite in his way, and he did some very interesting tricks. When his master wanted his plug of tobacco he used to touch his waistcoat pocket, and immediately Jocko would jump up, take out the tobacco, and proudly hand it to the fireman. This was regarded as a great trick, and was particularly appreciated by his master, until one fine day when the joke did not seem so funny. The fireman made the usual motion to show Jocko that he wanted his tobacco, but he had quite forgotten that an hour or so before he had placed a roll of bills, amounting to $62, in that same pocket. This time Jocko seized the money instead of the tobacco, and away he sped like a flash of lightning up through the sleeping rooms. By the time the firemen caught up with him Jocko was quietly eating a $10 bill, and that was all of the roll that the fireman could find.

There was formerly a pair of monkeys in the 9th Battallion headquarters, 48th street and Eighth avenue. It was not many days after their arrival at the house when the firemen began to look at one another in great astonishment. A windfall of silver suddenly descended upon the engine house. Where were all the silver backed brushes and the silver backed combs coming from? To whom did the new hand mirrors belong? And the silver napkin rings? What had they to do with the fire house equipment? These articles were found in various places—on the men's beds, in the officers' rooms, in the chief's quarters, in the lockers, in the recreation room, and on one occasion in the wagon of the chief himself. The situation became very much strained in that particular engine house. Men eyed one another suspiciously. They all wore a worried look. Some of them began to lose sleep over the situation. For some days their efforts to solve the mystery were unavailing.

WHENCE THE SILVER CAME.

Finally the discovery was made and the mystery cleared up in the most accidental way. One day a fireman happened to be sitting with his feet up on the windowsill in the recreation room, the windows of which looked down on the back yards of the neighboring houses. He was taking his afternoon siesta, when suddenly a flash of light directly in his eyes made him blink and sit up. His back was to the sun, so that he could not account for the bewildering light. He chanced to look into the back yard of a nearby house, and there was the whole explanation of the silverware mystery spread out before him. Betsy, the bigger of the two monkeys, was cautiously making her way down the rain leaderpipe of the house, carrying in one of her paws a silver backed hand mirror which had caught the sun and so thrown the light into the fireman's eyes. The whole thing was clear. A very little investigation was all that was needed to show that Betsy and Bob were regular "second story" thieves. They had been pillaging the houses of the neighborhood, by night and by day, and stealing every bright article that they could lay their paws upon. Betsy and Bob were put behind bars, not the prison bars, but the bars of the cages in the Central Park menagerie.

PET OF HOOK AND LADDER 11.

PET OF HOOK AND LADDER 20.

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MONKEY GAVE THE ALARM.

One of the pets of Hook and Ladder Company 20, in Mercer street, the old headquarters of the Fire Department, was a monkey named Jenny. The men had come back from a fire on a cold winter night, after they had been wet through and their clothing frozen stiff. One of them put his clothes over a radiator on the top floor of the building to thaw them out. There were some matches in the pockets, and the heat of the radiator set fire to them, and according to this story the fire soon spread to the woodwork. Below, all the men, except the watch on the ground floor, were sound asleep. But Jenny was on watch herself upstairs. She saw her duty and did it. Seizing some pool balls from the pool table on the recreation floor, where the fire was burning, she hurled them down the iron stairway into the dormitory and shrieked a warning. Her chain would not allow her to go farther than to the top of the stairs. The men were aroused. They saw the danger, and instantly attacked the fire with extinguishers and put it out.

Then there was Jocko the Monk, whose alias, when he was on his bad behavior, was Crowski.

A weakness that the firemen endeavored to correct in Jocko was his constant effort to clean out all the peanut stands in the neighborhood. The monkey would first make friends with the proprietor of the stand, and then, after having secured his full confidence, he would proceed in a leisurely way to rob the stand. Naturally the firemen did not wish to see the peanut seller lose his stock in trade, and they decided upon a measure to make Jocko reform. They suggested that some fresh roasted peanuts, as hot as possible, should be put in Jocko's way. The peanut man followed the advice so thoroughly that Jocko never again attempted to secure goods under false pretences. But Jocko, when he felt the newly roasted and burning hot peanuts, looked at the man with an injured expression, and promptly hurled the nuts back into his face. Then he fell upon him, striking and scratching with his paws. The only thing that saved the poor Italian from being so marked up that none of his friends would know him was the prompt action of an alert fireman, who, seeing the danger, pulled Jocko away and sent him to the engine house hayloft to meditate upon his sins in solitary confinement.