

DEVICES USED ON THE SEA

Marvels of Skill in Appliances to Protect Life

SAFETY COMPARTMENTS

Submarine Telephone — Wireless Telegraphy and Automatically Operated Bulkheads — Recent Built Atlantic Liners Practically Non-Sinkable.

The dangers of travel by sea have become infinitely less than by land. The "human element" has less play here, and whereas the safety of the broad train depends largely on the eye of the engine driver and the clear brain of the operator, the modern steamship is kept true by mechanical devices, one checking another, till the margin of possible disaster is reduced to a minimum. Should a leak spring in the hull no human eye need notice it, but the watertight door in the compartment affected will automatically close; should a light go out at the mast-head or on the port bow or elsewhere an indicator will ring a bell in the wheelhouse and a dial will tell where the trouble lies; should a dangerous coast or another steamship, hidden by the fog, be in close and unknown proximity a submarine telephone attachment will give warning, and by wireless telegraphy may knowledge of the presence of an iceberg or a derelict be gained from a passing ship, or a crippling of the machinery be communicated.

Probably the most important of the devices to insure safety to the ship are water tight compartments formed by heavy bulkheads, or partitions of steel, running from the keel to the upper deck, the doors of which can be closed instantly in case of accident. The compartment itself is not a new device, but until a few years ago, when a Scotch engineer named Stone discovered a way to close the doors both automatically and by hydraulic pressure controlled from the bridge, it was not always effective. To close all the doors separately by hand required considerable time, and it not infrequently happened that the firemen deliberately jammed them open lest in the hour of peril they should find themselves locked in some watery trap.

Now not only can the doors be closed simultaneously by the simple turning of a handle, but the doors will shut of their own accord as soon as the water in the compartment rises two feet above the bilge keel. In addition, should an explosion occur in the engine room the doors may be immediately closed, the steam prevented from escaping into the rest of the ship. Construction of coal or anything else to prevent the doors shutting, and all motive for jamming by the firemen is removed by a mechanism which permits of the opening of the door by any one caught in a compartment after it has been shut, by means of a handle at the side to reverse the hydraulic pressure. The door will then close again automatically.

The working of the system is accomplished by the supplying of pressure to all the vertical sliding doors—there are twenty-five of them on the newest boats—by a main running the whole length of the vessel. This main is in communication with four steam hydraulic accumulators, which are of sufficient capacity when charged to supply a pressure of from 500 to 700 pounds a square inch. The accumulators and the hydraulic pump which supplies them with the pressure fluid are above the water mark, so that the water in the hold would not interfere with their working.

Hydraulic power instead of steam, electricity or compressed air is used for operating the doors because of its greater safety under differing conditions. For instance, the bursting of a steam pipe would render inaccessible the room in which the break occurred; a breakage of electric installation or of the conducting wires might pass undetected, and pumps to provide compressed air would be unduly expensive and less reliable than the hydraulic pump.

A system of communicating through the water between ships at sea and the shore, by means of which the sound of submerged bells anchored off dangerous points on the coast can be heard on shipboard, is another of the notable safety devices which is being put in universal application. An extension of this system will permit of submarine telephone conversation should there be occasion for it.

The receiving apparatus on the ship, which picks up the sound of the bell and enables the pilot to determine its direction, consists of a pair of sensitive electric transmitters placed on the inside of the hull, against the outer plating, below the waterline. One transmitter is on the port side and the other on the starboard, and both are connected by wires to a telephone receiver box in the pilot house.

The modern liner has its rudder, which weighs about twenty-five tons, entirely under water, and there are two distinct sets of steering gear, one for ordinary work and the other below the water line. Should an accident happen to either set the other would be immediately available. By means of an instrument called a telemotor, operating hydraulically on a pressure fluid of glycerine and water, the helm can be put hard over within thirty seconds.—New York Herald.

BELOW DECKS ON A LINER.

Why the Chief Engineer Has Heavy Responsibilities.

One of the monthly magazines printed a fiction story whose purpose was to show that when a great Atlantic liner makes an unusually fine record the captain gets the credit, while the chief engineer is overlooked entirely. Praise of the officials of the line, it was contended, invariably goes to the men on the bridge instead of to the men below the decks, to whom it belongs rightly, and further on the point was made that the public knows only the captains of the ships, while the chief engineers, really of equal or of more importance, are lost in anonymity.

Before the ships sail about 3,000 tons of coal has been dumped into the bunkers through chutes, and nearly as many tons of fresh water for use in domestic purposes and also for making steam. Before the voyage begins the men who are to care for the machinery and those who handle about 330 tons of coal a day report.

This ship has about 10,000 horsepower capacity and is a seven day boat. There are employed in the propelling departments about this force: 20 engineers, 3 electricians, 2 refrigerating engineers, 1 deck engineer, 18 oilers, 6 water tenders, 64 firemen and 32 coal passers, a total force of 140 men.

This ship has eight double ended boilers, each with eight furnaces, and at least two single ended boilers, each with four furnaces, making altogether 72 furnaces. These furnaces eat up the 330 tons of coal a day.

The coal passers take it from the bunkers which extend alongside the ship and wheel it in barrows, depositing it in front of the boilers. The firemen feed it to the furnaces, their skill consisting in so spreading it on the fires that the greatest number of heat units will result in making the steam. The engineers and oilers and water tenders all have their appropriate work to do, and they work in shifts of four hours each.

The one demand on a liner, constant and unceasing, is for steam. It is to make that product that fully 150 men are kept employed where the passengers never see them.

The responsibility for running all the complicated mechanical equipment rests with one man, the chief engineer. To be ready for emergencies, to watch every part, piston, valve, shafts and whatnot, and to keep all the parts at their highest efficiency, is far more complicated a job than merely navigating a vessel. It requires as much nerve and mental caliber as the captain's task, and yet the world almost never hears the name of the chief engineer of any liner.

New Tricks of Smugglers.

"Diamond smugglers are a constant source of worry to us," said the Custom House inspector. "Despite every precaution taken here and abroad to spot them, not more than ten per cent are caught with the goods. There seems to be no limit to the devilish ingenuity employed by these—I was going to say gentry—but there are quite as many women in the business as men.

"It is really wonderful when you come to think of it, that we are ever able to make a good haul when you consider how easily diamonds can be concealed. Hollow heels are a favorite receptacle for the precious stones, and I understand that there are places in Europe where you can buy shoes specially constructed with spaces in the heels.

"If we did not have agents in Amsterdam and other diamond centers to watch suspected smugglers and keep an eye on buyers of the precious stones we should never make a capture. Cakes of soap used to be a favorite medium in which to smuggle diamonds into the country, but since we got wise to that dodge it is seldom tried nowadays. Porous plasters have often concealed thousands of gems, and I suppose are still used. We can't stop and examine every arrival into the country who wears one of these sticky attachments.

"I remember one woman, she is still in the business, who displayed great ingenuity in smuggling diamonds. It was only by chance that we caught her at one of her tricks. She arrived in a very striking Paris bonnet which was ornamented with bunches of grapes. While we were examining her baggage this dream of a hat blew off and was smashed by a passing truck. I rushed gallantly to recover the hat and then saw that each of the grapes contained a diamond or precious stone. She got what was left of the hat but nothing more.

"What can a man of ordinary perception do with such people? They will beat him every time unless he's gifted with second sight. I never see a chap with long hair but I think of the day we picked ten thousand dollars' worth of diamonds from a fellow's head who wore a pompadour like a brush heap.

"No, we can't keep up with all their tricks and don't expect to. It's the behavior of the smuggler that generally gives him away. When we see a man or woman acting uneasy, nervous, betraying his guilt by gestures, we have him searched. One gets to know the smuggler's face after a time, and so captures are made."

Building Without Wood.

A firm of Baltimore architects has drawn plans for a building without any wood in its construction. It will be six stories in height, the entire structure to be of re-enforced concrete and steel. Even the doors, window sashes and door jambs will be of metal.

Mountain range—The miner's stove

GORGEOUS LIVERIES WORN.

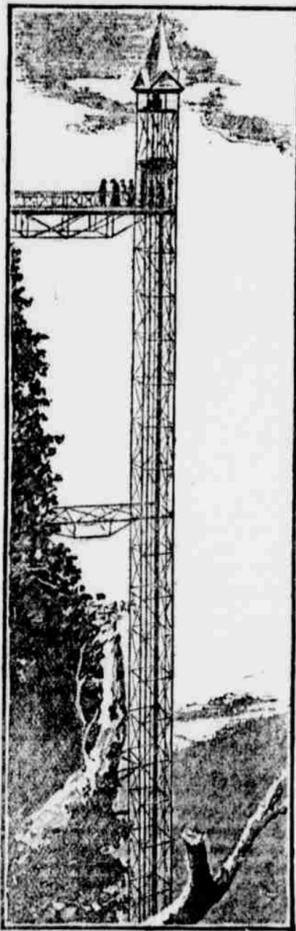
Servants of the Rich are Garbed in Fantastic Costumes.

"Servants' liveries are becoming more and more spectacular every day," said a prominent clubman, "and several families of New York's fashionable set rival Europeans in toggling out their servants in magnificent raiment. If they go much further their retinue will look like a mountebank array or comic opera chorus. Right here it is only justice to say that the glories of powdered wigs and var-colored livery are confined to their own homes, instead of being paraded on the coachman's box as in Europe. The New York juvenile with the ever-ready hoot, jeer and brickbat will keep Jeffersonian simplicity in public, you may bet.

"A young Fifth Avenue matron who entertains much has six men servants, who, on occasions of ceremony, are togged out in \$200 liveries. They wear coats of pale blue that taper down behind to absurd little coat tails that reach the knees. In a vivid contrast that would turn a burlesque stage manager green with envy come tight knickerbockers of turkey red. White silk stockings gird the menservants' ample calves, and they are held in place by golden garters. Gold buckles ornament a pair of old-fashioned pumps on the footman's feet while gold buttons with the family coat of arms and golden cords are sprinkled liberally over the servitors' kaleidoscopic raiment.

"On gala occasions a certain family of the newly rich have a uniform for their menservants which consists of claret-colored coats, maroon velvet breeches and black silk stockings. The costume is set off by epaulets, aguliettes and embroidery.

"The old families stick to the ordinary servant's suit of dark blue, brown, green or maroon, in which he can take his place on the family carriage. Miss Morosini affects black liveries with a slight touch of red; George Gould, claret-colored coats; with President Roosevelt a blue and white waistcoat is the distinctive feature. Wine-colored liveries, with red, blue and cerise collars, are the most popular, and while the Vanderbilts affect them, no one has their monopoly."—New York Press.



Mountaineering is made easy the present day. The top of Burgensstock, which overlooks the Lake of Lucerne, in Switzerland, is now accessible to everybody by means of an electrical elevator, which carries the tourists to the dizzy height of 2,713 feet.

Strength of Left and Right Hands.

That right-handedness and left-handedness depend not so much on a difference of strength in the two hands as on a difference of skill is shown by some interesting recent measurements made by Professor Caster of the Rennes (France) Medical School. He finds that in the right-handed the left hand has almost uniformly nine-tenths of the strength of the right, at all ages and in both sexes. Another curious point established by Professor Caster is that the movements called by anatomists "supination,"—namely, turning the palm upward by rotating the forearm, is always more powerful than the opposite movement of "pronation" or turning the palm down by outward rotation. This professor believes to be a peculiarity inherited from our earliest ancestors. Possibly the fact that our arboreal great-grandparents were more accustomed to collect objects by scooping inward and upward with the hands than disperse them by pushing outward may have had a good deal to do with it.

LIFE IN LONDON.

Some of the Things Which the American Visitor Soon Learns.

Americans sojourning in London are often puzzled in their first few hours there to account for the frequent blowing of mouth whistles in their vicinity, resembling the blasts of sound with which the New York postman accompanies the delivery of mail. A Yankee who arrived in the British metropolis one night this summer greatly fatigued by his journey retired early at his lodgings, but was kept awake until midnight by the unaccustomed and continuous blowing of whistles, which suggested to his drowsy brain that letter carriers were calling every few minutes at the adjoining houses.

At breakfast the next morning he remarked that he had often heard of London's frequent mail deliveries, but he had never supposed there were so many of them as he had heard the previous evening.

"Why, those were cab calls you heard. Every London house has a cab whistle. One blast brings a hansom, two a four wheeler."

Cabs are essential to London, where antiquated stages are the only means of going in many directions, and they serve as express wagons as well as conveyances. Few persons send their baggage ("luggage") it is called over the (in) advance to railway station or pier. A cab is called at the last moment, and the cabman puts trunk or valise on the roof of his vehicle. If one's parcels are numerous a four wheeler or omnibus is employed. On arriving with luggage, the same method is used to carry it to one's home or lodgings.

As the baggage covered hansom bowls along two or three ragged and dirty men and boys may be seen running beside it. If any distance is to be traversed it will be noticed that some of these drop behind one after the other, while others take their places. They are "runners," usually men on their "uppers," who earn an occasional shilling by following cabs to their destination and carrying the luggage upstairs for the arriving passengers.

One of the first inquiries made by Americans who settle in London is for a washerwoman. But it is soon found that this useful person is not to be had. Very little washing is done at home or taken out by the washerwoman in London, all the soiled linen being sent to the laundry. The result is that Americans, accustomed to the weekly visit of the family washerwoman at home, find their laundry bills not a small item of expense on the other side of the ocean.

Most of the small London shopkeepers and their assistants take a half holiday on Thursday, instead of Saturday, as in New York, the butchers closing up Tuesday afternoons. This practice causes inconvenience to newcomers until guarded against by early purchases.—New York Tribune.

Uncle Sam's Troopers.

Before the "rookie" is given a horse that is a good deal more valuable to Uncle Sam than he is, he must learn what goes on the horse and how it must be placed there. He is shown how to fold his saddle blanket, how to put on his saddle and pack it with lariat, tin-cup, sidelines, horseshoes, horseshoe nails, extra ammunition, mess-kit, poncho, extra blanket, half a shelter tent, pole, and pins and overcoat.

The average trooper weighs one hundred and fifty pounds, while his horse when ready, carries two hundred and fifty pounds. He is not a big brute, this horse, but an active spirited animal of fifteen hands and two inches, weighing a little under a thousand pounds. The hundred pounds of saddle arms and equipment, in addition to the rider, must be packed and adjusted with intelligent skill if the mount is to be kept fit and to cover his twenty miles per day, week in and week out over all kinds of roads.

Thus far our promising recruit knows nothing about horsemanship. He must learn how to hold his reins always in his left hand, and never pull them. He finds that his horse responds with the pressure of the reins on his neck. He learns that the reins steer the front end of the mount and that the spur steers its rear to right or left, and that the saddle is the pivotal center of control. He requires facility to use the carbine, saber and pistol, while he keeps his horse perfectly in hand. The recruit is put on a troop horse that knows the bugle calls as well as veteran cavalry men, and when the new man forgets the way to turn, his mount snorts contemptuously and does the right thing "on his own hook."—Ralph D. Paine in *Outing*.

Obedy Specialist's Orders.

A celebrated Continental specialist, to whom time was literally money, and who was possessed of a fiery temper, made it a rule that all patients should address before entering his consulting room so as not to waste any of his valuable time. One day a meek looking little man entered with all his clothes on.

"What do you mean by coming in like that?" asked the doctor, in a rage. "Go and strip at once." "But I—" faltered the man. "I tell you I've no time to waste," yelled the doctor, and the poor man left the room in haste. When his turn came he re-entered the room. "Now, then," said the doctor, "that's better. What can I do for you?"

"I called to collect your subscription for the benevolent society."—The Tatler.

Effect of War on Camphor.

The Russo-Japanese war has so raised the price of camphor that a substitute is being sought for.

CASTORIA

The Kind You Have Always Bought, and which has been in use for over 30 years, has borne the signature of and has been made under his personal supervision since its infancy. Allow no one to deceive you in this. All Counterfeits, Imitations and "Just-as-good" are but Experiments that trifle with and endanger the health of Infants and Children—Experience against Experiment.

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Castoria is a harmless substitute for Castor Oil, Paregoric, Drops and Soothing Syrups. It is Pleasant. It contains neither Opium, Morphine nor other Narcotic substance. Its age is its guarantee. It destroys Worms and allays Feverishness. It cures Diarrhoea and Wind Colic. It relieves Teething Troubles, cures Constipation and Flatulency. It assimilates the Food, regulates the Stomach and Bowels, giving healthy and natural sleep. The Children's Panacea—The Mother's Friend.

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GROCCERS WANT A HEARING

They Demand that Certain Changes be Made in Pure Food Laws

They Object to Being Punished for the Crimes of Those Who Supply Them With Meats, Canned and Bottled Goods

The pure food laws of Pennsylvania were under discussion at a meeting of merchants held recently at the board of trade auditorium at Harrisburg, and a set of resolutions calling for the appointment of a committee to secure the repeal of the present law was adopted. The meeting was attended by a large number of grocers of the state who recently have been prosecuted by the state pure food officials for selling adulterated meats, and the entire evening was given up to the one subject. The grocers showed how they had purchased meats in good faith from large firms and how when samples were taken by the state officials and found to contain acids the retail dealers were prosecuted and made to pay fines while the producers are let go. They claimed that the notoriety gained in the prosecutions hurt their business and they want steps taken for a betterment of conditions. The resolution adopted calls for a committee of five to make a call upon the governor of the state requesting him to ask the special session of the legislature to repeal the present law and present a more equitable one.

Stamp Your Letters

Rural mail carriers have received orders from headquarters to refuse to take unstamped mail from the boxes. Heretofore, patrons have dropped unstamped mail in the boxes; also deposited pennies for postage. Hereafter such methods will not be permitted, and stamps must be procured from the carrier or elsewhere and be properly affixed by the patron to insure the service desired.

List of Jurors for December Term

JURORS—SECOND WEEK

- Ash, W. S., Briarcreek. Betz, Miles W., Bloomsburg. Brobst, M. L., Mt. Pleasant. Chamberlain, James, Pine. Crawford, Clinton, Mt. Pleasant. Clossen, Pugh, Orange twp. Demott, Cyrus, Millville. Davis, C. W., Briarcreek. Evans, Abner A., Briarcreek. Evans, Warland, Montour. Grimes, B. R., Millville. Holden, George, Pine. Hess, H. G., Berwick. Iseler, B. A., Mt. Pleasant. Johnson, A. B., Pine. Kashner, Peter, Montour. Kerrigan, James, Conyngham. Kline, Henry, Mt. Pleasant. Kramer, Charles, Madison. Labor, George, Fishingcreek. Low, Zebin, Orangeville. Larish, C. L., Sugarloaf. Lazarus, Emanuel, Bloomsburg. Martenne, Clem., Berwick. Nuss, Henry, Millin. Rowan, Dennis, Conyngham. Ruekle, B. J., Mt. Pleasant. Stahl, Wm., Centre. Savage, John, Jackson. Shaffer, E. W., Mt. Pleasant. Trump, Jas., Orange twp. Van Liew, G. W., Fishingcreek. Welsh, Orval, Orange twp. Hartman, Pierce, Sugarloaf. Stiller, Sylvester, Centre. Zaner, Wm. P., Main.

The Only Survivor

of the Hayes Arctic Expedition, Mr. S. J. McCormick, now U. S. Deputy Mineral Surveyor, Bliss Station, Idaho, says: "For years I have suffered from severe pains in the hip joint and back bone, depriving me of all power. The cause was Stone in the Bladder and Gravel in the Kidneys. After using Dr. David Kennedy's Favorite Remedy, of Rondout, N. Y., I was completely cured."

QUICK CHANGES from hot to cold and back again try strong constitutions and cause among other evils, nasal catarrh, a troublesome and offensive disease. Sneezing and snuffing, coughing and difficult breathing, and the drip, drip of the foul discharge into the throat—all are ended by Ely's Cream Balm. This honest and positive remedy contains no cocaine, mercury, nor other harmful ingredient. The worst cases are cured in a short time. All druggists 5 c., or mailed by Ely Bros., 56 Warren Street, New York.

Every maiden effort doesn't result in matrimony.

"Have by some surgeon Shylack on thy charge to stop his wounds lest he do bleed to death." People can bleed to death. The loss of blood weakens the body. It must follow that gain of blood gives the body strength. The strengthening effect of Dr. Pierce's Golden Medical Discovery is in large part due to its action on the blood-making glands and the increased supply of pure, rich blood it produces. It is only when the blood is impurified and impure that disease finds a soil in which to root. The "Discovery" purifies the blood and makes it antagonistic to disease. When the body is emaciated, the lungs are weak, and there is obstinate lingering cough, "Golden Medical Discovery" puts the body on a fighting footing against disease, and so increases the vitality that disease is thrown off, and physical health perfectly and permanently restored. It has cured thousands who were hopeless and helpless, and who had tried all other means of cure without avail.

Twenty-one one-cent stamps to cover expense of mailing will obtain a copy of Dr. Pierce's Common Sense Medical Adviser 1008 pages, in paper cover. Send thirty-one if cloth binding is preferred. Address Dr. R. V. Pierce, Buffalo, N. Y.

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75,000 Envelopes carried in stock at the COLUMBIAN Office. The line includes drug envelopes, pay, coin, baronial, commercial sizes, number 6, 6 1/2, 6 3/4, 9, 10 and 11, catalog, &c. Prices range from \$1.50 per 1000 printed, up to \$5.00. Largest stock in the country to select from.

Entrance through Roy's Jewelry Store.

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produces the above results in 30 days. It acts powerfully and quickly. Cures when all others fail. Young men will regain their lost manhood, and old men will recover their youthful vigor by using REVIVO. It quickly and surely restores Nervousness, Lost Vitality, Impotency, Nightly Emissions, Lost Power, Failing Memory, Wasting Diseases, and all effects of self-abuse or excess and indiscretion. All effects of self-abuse or excess and indiscretion, which unite one for study, business or marriage. It not only cures by starting at the seat of disease, but is a great nerve tonic and blood builder, bringing back the pink glow to pale cheeks and restoring the fire of youth. It wards off fatigue and Consumption. Insist on having REVIVO, no other. It can be carried in vest pocket. By mail, \$1.00 per package, or six for \$5.00, with a postage written guarantee to cure or return the money. Book and advice free. Address: ROYAL MEDICINE CO., Chicago, Ill. For Sale by Moyer Bros., Bloomsburg, Pa.