

HAT HOLDER FOR TRAVELERS.

This hat holder is designed to be temporarily adjusted for use by travelers in railroad cars and other public conveyances. The device as shown in Fig. 1 is made of a continuous piece of wire bent to the form indicated. The free ends of the spring arms are bent toward each other, and pointed to enable the device to be readily secured to a moulding or other projection, by a slight pressure of the fingers. Passing through the spiral portions of the wire is a cross bar, which lends stability to the device and acts to steady it when fastened in position ready for use. The enlarged ends of the cross bar prevent it from being freed from the holder. The wire used is not very heavy, but possesses sufficient strength to allow the loop to be borne down to a suitable angle by the weight of the average hat. The spring action of the spirals is sufficient to return the loop to its normal position upon the removal of the hat. In Figs. 2 and 3 are shown modified forms, in which the spring arms and loop portions are made of separate wires bent to the shapes clearly indicated in the drawings.

This device, which is the invention of Mr. William H. Atwood, of Kinderhook, N. Y., forms a very reliable and convenient hat holder, which is especially useful for travelers, as it may be easily carried in the pocket when not in use. It is also well adapted for temporary use in theaters, restaurants, etc.

The Skeleton Industry in France.

A correspondent of the *Medical Press*, of London, communicates to that journal the following account of a skeleton manufactory which he recently had an opportunity of visiting. The establishment is located in the plain of St. Denis, France, and consists of large wooden buildings, comprising one main structure and several annexes.

The large hall contains two rows of immense kettles, the emanations from which are, as might be supposed, far from agreeable, even to an olfactory apparatus used to the atmosphere of a dissecting room. These kettles serve for ridding the bones of their adhering tendons, through boiling. The disarticulation of the skulls, which is performed separately, constitutes the most delicate part of the operation. In the case of children or young adults, it is effected through an ingenious process consisting in filling the cerebral cavity with dry peas, and then immersing the skull in water. Through the effect of such immersion, the peas swell and bring about a dislocation of the most delicate sutures.

A certain number of the kettles are reserved for carcasses of animals designed to furnish skeletons of a lower price than the human ones, but indispensable for the study of natural history, and forming an important article of Parisian export.

After the bones have been submitted to a prolonged boiling, they are carried to tables, where young women carefully scrape them, in order to free them perfectly from the soft tissues that adhere to them. Certain specialists obtain very high wages for this work, especially those who prepare very delicate bones, such as those of frogs, lizards, etc.

The fat that swims on the surface in the kettles is skimmed off with care, and put into a special vessel in one corner of the hall. What is its destination? That is a mystery.

After being scraped, the bones are bleached, either through the action of chloride of lime, for cheap skeletons, or that of the sun for high-priced ones. Finally, they go to a special work room, where they are assembled, mounted upon brass, and articulated.

These final operations require a profound knowledge of osteology, along with an artistic eye. In fact, it is necessary to select, from a collection of all sorts of bones, those that can be well enough assembled to look as if they came from one and the same individual. The others are sold singly, for the use of students of limited means, who are content with a portion of an unmounted skeleton. It is curious to find that sex has a great influence on the market value of the bones, a beautiful female skeleton being usually worth 20 or 25 per cent more than a male one of corresponding quality.

Special kettles are devoted to children, from those of the most rudimentary age up to those of two or three years. These skeletons are arranged in show cases, in ascending series, from the miniature three or four inches in height up to the baby of twenty or thirty inches. These little skeletons have proportionally a greater value than those of their adult brothers.

It may naturally be asked whence all the cadavers come. Most of them, it appears, are furnished by the hospitals and dissecting rooms, and others by the prisons. As a general thing, the supply has been less than the demand, but in recent times the abundance and cheapness of skeletons of Austrian origin have considerably depressed the market. Nevertheless, despite the industrial and commercial crisis that prevails throughout the world, the industry under consideration seems to be in a most flourishing condition.

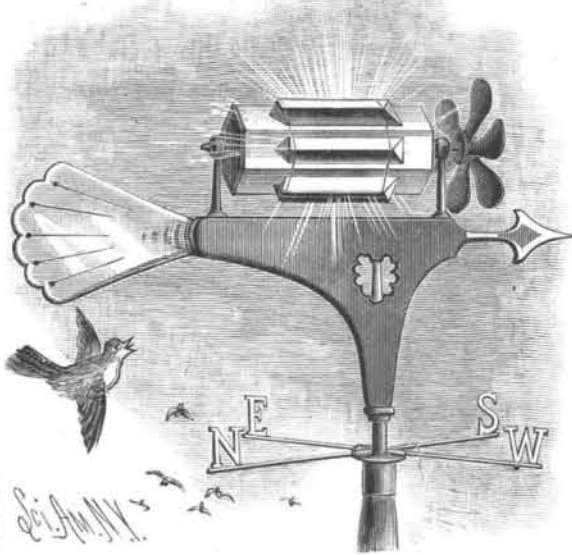
Water Back Explosions.

During the past winter quite a number of accidents have been reported from the bursting and explosion of the water backs to ranges. Among a number of remedies suggested for obviating such occurrences, the following, by a correspondent in the *American Architect*, possesses novelty, and may answer the purpose required of it.

The device consists of an air chamber made of corrugated sheet iron, placed inside of the water-back; when the water freezes, it will expand 0.089 of its bulk; and as the compressibility of air exceeds this by far, an air chamber of, say, one by two inches, in an ordinary size water back, will accomplish the object, and danger of bursting or exploding is averted, either from the expansion of ice or pressure of steam; to make sure, I have added a device in the shape of a plug placed in the top of the water back, held in its place by a spring, which will allow the plug to rise up under a certain pressure of steam, thus acting as a safety valve; when, then, the connections between the water back and boiler are made with lead pipe, instead of iron pipe, the writer adds, all danger of bursting or exploding is averted.

A NOVEL WEATHER VANE.

A decided departure from the ordinary type of weather vane may be secured very simply by following the construction shown in the accompanying engraving. A hexagonal barrel, with sides of mirrors, is mounted on its axis as shown, and a propeller or helix is connected with it at one end, whereby a rotary

**REYNOLDS' NOVEL WEATHER VANE.**

motion is imparted to the barrel by the action of the wind. Prisms are wired to the sides of the mirrors, which give to the rays a rainbow-like hue which is dazzling in the extreme. This contrivance has been devised by Mr. R. B. Reynolds, of Stockport, N. Y., and it possesses a novelty which will commend it to the attention of those seeking something quite unique in this line.

Mechanical Foolhardiness.

Carelessness kills more mechanics than old age or disease, and the number of accidents resulting from somebody's carelessness cannot be estimated. There is not as much danger in doing risky jobs and undertakings as there is in the every day risks which are met with a contempt brought about by a long acquaintance therewith, and which are hardly regarded as risks by the men who take them. The architect takes risks which are needless when he guesses at the strain to be overcome by beam or truss, and also, and doubly so, when he also guesses at the strength of that beam or truss. The builder in turn takes a risk when he passes defective construction with the guess and the hope that "twill hold." In driving piling for a block of houses in Harlem, the writer noticed that some of the piles were driven 12 to 20 inches by the last blow of the hammer, and he wondered at the risk taken by the builder for the sake of saving a few dollars thereby. In building a railroad bridge in New Hampshire, the contractors put down piling where the last blow drove some piles 4 feet! In this case some piles were driven too far, whereupon the risky, rascally contractors laid hold of said piles and pulled them up again until they were in the required position.

In erecting buildings, hundreds of risks are taken by the workmen themselves, by the owners, and by the builders also. In erecting machinery, the risks continue to be taken, and after the machinery is running it seems almost as if the attendants vied with each other in courting danger. Begin with the fireman. How many times will he risk his life by guessing that the safety valve is in perfect order, or that the combination water gauge pipe is not plugged up! All too often he will guess that his boiler is safe, and run with dirt, leaks, corrosion, and he knows not what else, in that straining and groaning iron shell under which he

shovels coal. Why is all this, we may well ask? Is the man a lunatic? Is the man a fool, or what is the matter with him? There are just two other causes which may affect his behavior, for he may be lazy or avaricious; then in this latter case he is a villain as well. The architect was lazy; he didn't figure because it was easier to guess. The builder who drove the piling was a knave. He did thus in order to make more money out of the job; but the workmen who got maimed or killed, the fireman who lets his safety valve get stuck, he is sometimes a fool, but more often these things happen through pure laziness, and laziness alone. The engineer who almost hourly exposes himself by walking under the expand belt from his engine, this man is lazy; but he is abetted in his laziness by knavery, in shape of an avaricious owner, who grudges the few dollars necessary to box up the dangerous place, and thus relieve the lazy man's temptation.

Lazy men run all sorts of risks in putting on belts, in fooling around moving machinery and in monkeying with running tools, such as circular saws, planers, and moulders. The man who crawls around exposed machinery to oil or clean the same, when he can just as well stop the machine before exposing himself, this man deserves to be sent up for ten days for every offense. Only a few days since, a party of masons were building a 100 foot mill chimney. They had got up 18 feet, when all at once the whole party thought an earthquake had come to help them. They were all on the ground among bricks, mortar, and splintered lumber, with two of their number seriously hurt. An examination showed that in nailing on the last course of ledgers, only one nail had been put into some of the posts where six should have been driven. Here was a clear case of laziness and foolishness combined, with the poor consolation—to the victims at least—of knowing that only themselves were to blame. Sometimes this carelessness becomes criminal, and is occasionally brought to justice; and lately, where knavery is the cause of accident, it has been frequently severely punished. There is no excuse for exposure to such accidents, and every man can educate himself out of it if he will.

Familiarity is one great cause of a man getting careless and lazy. He works around machinery so long without accident that he thinks, if he thinks at all about it, that he knows all the ins and outs, all the dangerous places and death traps, so he will not have to be so continually on his guard. It is a good deal of work to keep his thoughts on his fingers all the time, so our man gets a little lazy, goes too near a quick running belt, and the first thing we know he is a subject for the surgeon or undertaker. Well, the writer remembers a man who was set at work running a circular saw. This man was mortally afraid of the saw, and kept as far from it as possible. For twenty-three years the saw was operated by this man without accident, until one day he dropped his rule beside the saw, and attempted to pick it up without going back to the table. He got three fingers and his thumb cut off, all through a little laziness in not taking proper pains against accident.—*J. F. Hobart, in the Boston Journal of Commerce.*

Poisoning by Locust Tree Bark.

The inner bark of the fragrant flowered locust (*Robinia pseudacacia*), commonly cultivated as an ornamental tree and for its invaluable timber, has long been known to have a sweetish taste resembling that of licorice, and to have emetic and cathartic properties.

In the *New York Medical Journal* of January 22, Dr. Z. T. Emery reports a case of poisoning of thirty-two boys at the Brooklyn Orphan Asylum, from chewing some of this bark, which they had obtained from the yard, where fence posts had been stripped.

In the mildest cases, vomiting of ropy mucus was observed, together with flushed face, dryness of throat, and dilated pupils. In the severest cases, large quantities of ropy mucus mixed with blood were vomited. The other symptoms were retching, pain in the epigastrium, debility, stupor, cold and pulseless extremities, a feeble and intermittent action of the heart, dilated pupils, and face of a dusky pallor.

The patients were given subcarbonate of bismuth and brandy by the mouth, and morphine hypodermically; sinapisms were applied over the stomach, and bottles of hot water along the extremities. The patients were discharged from the hospital in two days.

ALUMINUM STEEL.—The Cowles Electric Smelting and Aluminum Company, of Cleveland, O., are now exhibiting what they call aluminum steel. In a sample bar of iron welded to a bar of Siemens-Martin basic steel with one-fifth of 1 per cent of aluminum added, no line of weld can be seen, the characteristics of the steel appearing to extend far into the iron. Without the aluminum, a clearly defined weld is visible between iron and the same steel. The same firm show a forged bar of aluminum bronze, with 5 per cent of aluminum. This broke at 36 tons per square inch of original section, with 60 per cent elongation.