

Cold Water without Ice.

The following method of obtaining a constant supply of cool water at all times is described by the *Railroad and Engineering Journal* as being in general use in Hanover, York County, Pa.

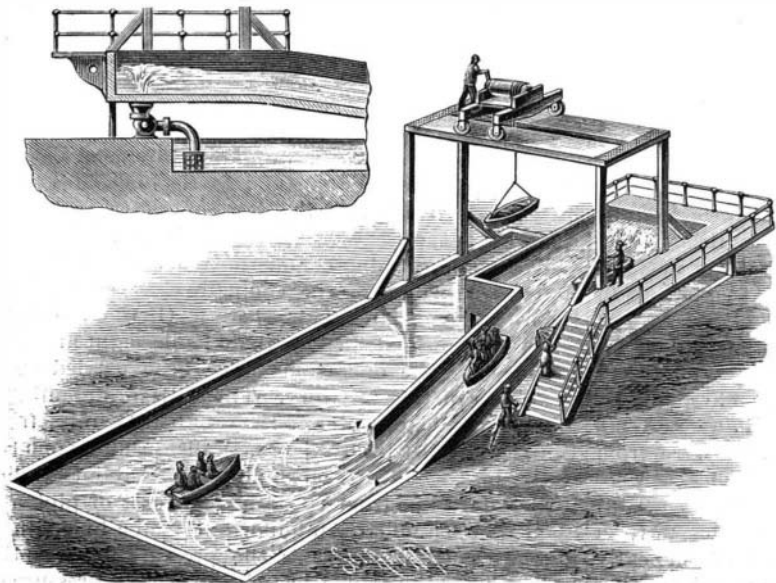
The town, says the *Journal*, is closely built up and without any system of drainage, so that the water from the wells is unfit to drink. Some years ago these reasons led to the introduction into the town of a supply of very excellent water from a large spring about three miles distant. This water is brought through iron pipes, and when it reaches the consumer in summer is warm, while the water in the wells is cool. For this reason many of the inhabitants drink the well water, and, as a consequence, typhoid fever is a prevalent disease in that community. In order to obtain pure cool water, not impregnated with lime, some of the inhabitants of the place have adopted a plan which is so simple and gives such excellent results that it is worthy of general adoption wherever there is a water supply other than wells or springs.

The plan is as follows: A cylindrical galvanized sheet iron tank, 12 inches in diameter and 4 feet or 5 feet long, is placed in the bottom of a well. This tank is then connected by a galvanized iron pipe with the water supply pipes, and another pipe is carried from the tank to the surface of the ground, or to any convenient point for drawing water, and has a cock at the upper end. The tank is consequently always filled with water from the water supply, and being in the bottom of the well, the water is cooled off and acquires the temperature of the well; so that that which is drawn from the tank is as cool as well water, and is without any of the impurities with which the latter is contaminated. The water drawn from the tank in one of the wells in the place named had a temperature of 56° when the thermometer in the atmosphere above stood at 76°

This method gives an abundant supply of cool water during the whole summer, and can be adopted in all cities, towns, or in the country. If a well is available, it can be used; if not, by simply digging a hole in the ground, deep enough so as not to be affected by the surface temperature, and burying the tank, it will answer equally well. This hole might be dug in a cellar or outside the building. If the water has any impurities in suspension, such as mud, the tank should be made accessible, so that it can be cleaned occasionally.

AN ARTIFICIAL LAKE AND WATER SLIDE.

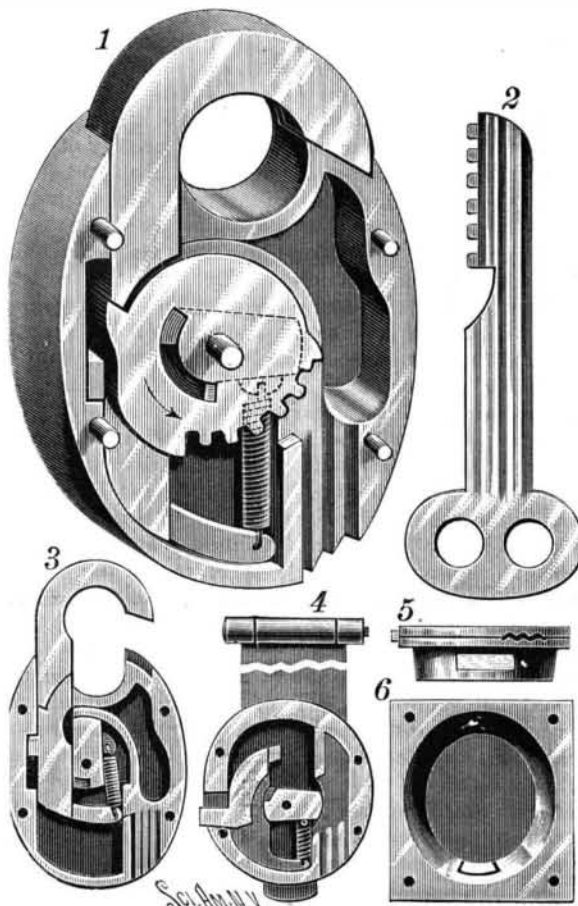
The illustration represents a water slide intended for amusement and recreation, which has been patented by Mr. James Inglis, of No. 8 Custom House Square, Montreal, Canada. The primary object of the inventor has been to provide a form of amusement for the people which might be utilized in connection with the Chicago World's Exposition, as well as at minor shows or at popular summer resorts. From a suitably constructed tank a chute extends downward to an artificial lake or reservoir, the latter also extending to one side under the tank. The part of the reservoir which extends under the chute is connected with pumping machinery, as shown in the small view, for raising the water back into the tank, thus providing for a constant flow down the chute into the lake. The slope or incline of the chute may be varied as desired, but is intended to be such as to cause a current that will carry boats or floats with sufficient speed to produce an exhilarating effect upon the passengers. At the lower end of the chute is a pivoted apron, floating freely and horizontally in the water, to prevent boats coming down from diving too deep into the water at the end of the descent. Above the tank, and over the back part of the channel, is a frame supporting a guideway on which travels a carriage with a hoisting apparatus adapted to lift the boats above the level of the tank. After they have been thus lifted the carriage may be moved transversely and the boats lowered into the tank to float down the chute



INGLIS' ARTIFICIAL WATER SLIDE FOR PLEASURE RESORTS.

AN IMPROVEMENT IN LOCKS AND KEYS.

The accompanying illustration represents a lock of novel construction recently patented by Andrew S. Fisher, Bedford, Bedford County, Pa. This device has all the advantages of other locks, with the additional merits of durability, security, and simplicity, and consequent cheapness of manufacture. Fig. 1 represents a perspective view of the padlock with the lid of casing removed. Fig. 3 is a top plan view thereof, with top of case and tumbler removed. Fig. 2 is a detailed view of the key. Figs. 4, 5, and 6 represent the same principle applied to a trunk or hasp lock, of which Fig. 4 is a top plan view with top of case and tumbler removed; and Fig. 5 a bottom edge elevation thereof, entire. Fig. 6 is a top plan view of the socket plate to receive hasp, said socket having a suitable opening in its circumference to receive the bolt of the lock, when the hasp is in position. In locking the bolt is pushed to place by means of a projection at the side of lock, as shown in Fig. 4, and can be released only by using the key. The construction and operation of locks for other purposes on this principle is substantially the same as those shown herewith. Numerous combinations are made by varying the number, size, and shape of teeth in the tumbler and key. In operating, the meshing of the teeth of the key and tumbler revolves said tumbler, and with it the dog from its engagement



FISHER'S LOCK AND KEY.

with the shackle, at the same time drawing on the spiral spring connection between said dog and shackle. When the shackle is finally released, the retractile power of the spring throws it forward, and the lock is then open. In closing, the spring draws the dog into its locking position, when the shackle is pushed to place. This invention was patented March 5, 1890, No. 422,759. Any information regarding its manufacture or sale will be given by addressing the patentee, or John O. Smith, Bedford, Pa.

Condition of Workers Here and Abroad.

The House of Representatives has recently passed a bill ordaining that eight hours shall be considered a day's work for all laborers, workmen, and mechanics, now or hereafter to be employed by the government.

In the course of the debate on this bill, the Hon. J. O'Donnell, of Michigan, made an eloquent speech, in the course of which he gave the following:

Eight hours for labor, eight hours for sleep, eight hours for improvement and recreation, will make the days glad some for those who toil. Mr. Speaker, the workingman is better off in this country than in any other. It will be seen that the nation and its in-

habitants have not suffered by the lightening of the hours of toil; the country is the most prosperous of the world. Our people are accumulating wealth; there are some sharp contrasts in the social conditions, but the general average of wealth and comfort is rising all the time. I know the number of millionaires is increasing, but it is gratifying to realize that the number of citizens worth four, two, and one thousand dollars is increasing wonderfully faster. The aggregate wealth is large, and the distribution is as nearly equal as will ever be reached under any government.

We are in the forenoon of our national existence, but what a change in the condition of all in the last century, and for the better—improvement and progress. This is the genius of our people and is woven in the fiber of our free institutions. This, compared with the "good old times" we hear of, is an era of luxury in all strata of society. The statistics show that in the savings banks of this country (six States not reported) there are 4,021,523 depositors, with \$1,425,239,349 to their credit, an average of \$354.40 for each depositor. In my own State of Michigan there are 99,245 depositors in savings banks, who have \$24,015,207 on deposit. If you compute the millions deposited in building and loan associations, to secure homes for themselves and families, you will find our artisans and laboring population are in the sunshine of prosperity.

One of the enterprising papers of Michigan two years since sent fifty workmen to Europe to see the condition of their fellow laborers abroad. They visited many points in Great Britain, France, and Germany, and, after due observation, they were of opinion, without exception, that "the American workmen are better housed, better fed, better paid, better clothed, and generally better off than their European fellows." This pleasing picture of American contentment is supplemented by the report of the statistician of the Agricultural Department, who states that labor here secures a larger share of reward than in other countries; there is one pauper here to twenty-two in Great Britain; our people consume double the amount of meat here over those of Great Britain, and nearly four times the meat the inhabitants of other lands have; our consumption of cereals is three times as great as that of Europe, in proportion to population nearly the same gratifying ratio of bread, while our inhabitants have the same excess of clothing and other comforts.

An Imprisoned Fish.

The following was related to the *Chattanooga News* by one of its correspondents residing near that city:

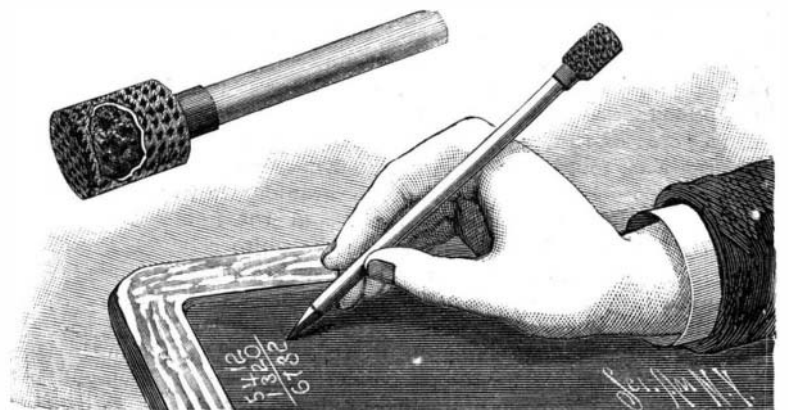
"My cousin owns a watermill, and in removing some obstructions found an immense log embedded in the stream which must have been submerged for a number of years. The log had to be cut in two to remove it, and much to our surprise we found it hollow, although it had every appearance of being solid. One of the negroes while examining the log looked into the hollow and thought he saw something moving. He began using his ax, and soon had the log cut into in another place.

"Imagine our amazement when we discovered a live catfish which had grown to an enormous size and length, and was so completely wedged in the hollow as to be unable to move except to open its mouth and wiggle its tail. The fish was very lively and apparently in the enjoyment of excellent health.

"The question is how did the fish get into the log, as the only means of ingress or egress we could discover was a small round hole not more than two inches in diameter. We surmised that he must have entered the little opening when no larger than a minnow, and grown great in his solitary confinement."

A CONVENIENT SPONGE FOR CLEANING SLATES.

The illustration shows a device especially intended to facilitate the wiping of school-slates, or the erasing of certain portions only of what may be inscribed thereon. It has been patented by Mrs. Emma C. Hudson, of No. 327 Arch Street, Seattle, Washington. It consists of a flexible casing having meshes or perforations, and adapted to hold a small piece of sponge, the casing being preferably a rubber net-work, and formed with a neck adapted to be engaged by the end of a pencil. The sponge is thus always at hand when needed, and can be readily wet sufficiently for the use designed, while it is retained in shape by its casing.



HUDSON'S SLATE SPONGE.