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Improved Water Motor.

Manufacturers have of late made frequent inquiry for a small water motor which should be capable of doing a fair amount of work, be easy to regulate, and not liable to derangement or accident. Printers, in particular, where steam is not available, find such machines useful if water is at hand, and in mining districts they are also employed for driving stamps and pumps or other machinery. They are chiefly intended for application to the pipes of city water-works; and when thus applied furnish an advanta-

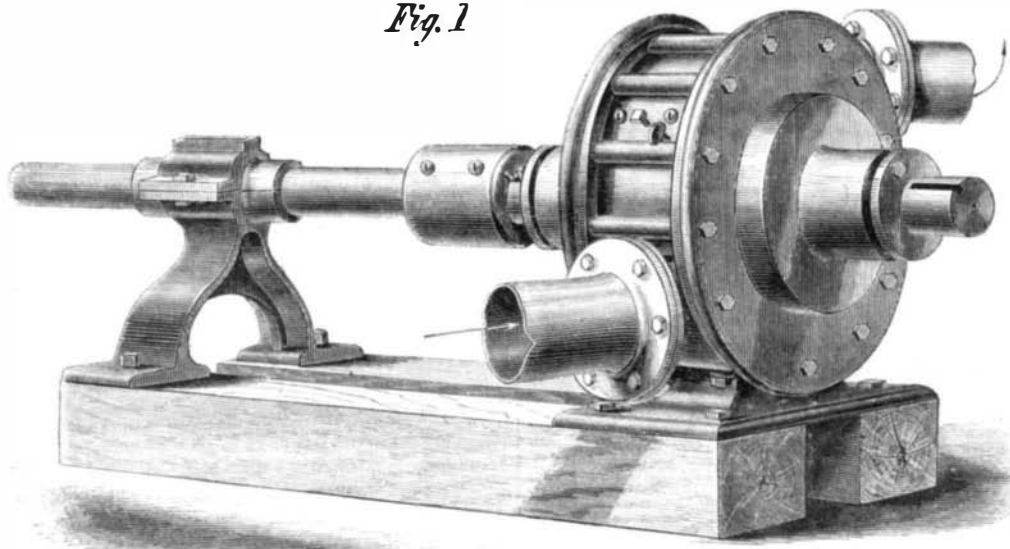
A Strong Room.

Some particulars of a strong room, for cash and securities, recently constructed for a London bank, may be of use to some of our readers:—The walls are 2 ft. thick, of hard bricks, laid in cement, and with strong hoop-iron in the courses. In the interior there is placed a fire proof Chubb's safe, weighing thirteen tons. This is 10 ft. long, 8 ft. high, and 8 ft. deep, made of plates 1 inch thick, and secured by two iron and steel doors, having twenty-eight bolts. The remaining part of the brick room is lined with

Scarcity of Furs—Better Traps Wanted.

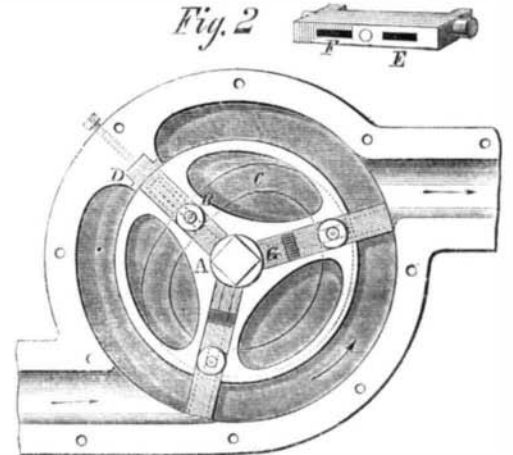
The catch of furs this year, says the *North Western Times* has been very little more than half what it was at the same period last season. Mink, which were so plentiful last year, and on which handsome profits were realized, seem to be pretty much a failure all over. This is believed to be the result of the late droughts, and the extermination of the mink by the small American traps now coming into general use. The wooden traps of other days allowed some chance to these unfortunate animals with the coveted fur, but the steel traps now put in requisition, are certain death, and so the catch will yearly diminish. Despite all the modern improvements in traps which have

Fig. 1



STANNARD'S WATER MOTOR.

Fig. 2



geous and economical power. They are particularly adapted to situations where it is desired to obtain a moderate amount of power; and for driving printing presses, sewing machines, elevators, dentists' and jewellers' lathes; also for hotels where washing, ventilating and pumping machinery is used. They are perfectly safe to use, and require no attendance whatever; they occupy but little room, may be attached to any pipe, and use water only when doing work.

As may be seen, by referring to the engraving, it is simple in detail and within the capacity, as to attendance, of the most unmechanical person.

The section of this engine, Fig. 2, shows the internal arrangement; there are three pistons sliding in the disk, A, having rollers, B, which work in the cam groove, C. This groove regulates the action of the pistons so that they present a fair surface to the action of the water, and the chamber or channel formed by the pistons, and the head permits the water to escape freely at the outlet without undue friction or pressure upon it. The diaphragm, D, divides the chamber into two parts.

By examining the piston shown isolated at E, two water channels, F, may be seen. The water circulates through these channels to the back part, as at G, in Fig. 2, so that the piston is perfectly balanced in its movement and requires no forcing from the cam grooves, C, to make it work properly up to the face of the cylinder; the rollers, therefore, wear a long time without requiring adjustment, as do also the pistons which preserve a regularity of working surface not before attained in engines of this character. This engine was patented by M. Stannard, on the 20th of August, 1861, and is manufactured by Messrs. Pratt, Whitney & Co., Hartford, Conn., of whom all further information can be had.

ROBIN for violins should be melted with a little vinegar.

iron, half an inch thick. The whole is again further secured by an iron and steel door, having ten bolts, let into the center of the brickwork; and there is a gate for ventilation in the daytime. A large alarm is fixed in the bedroom of a clerk on the second floor which goes off whenever the outer door is opened, and a porter who sleeps in the office, and whose bed is in front of the door, can also, by pulling a trigger, set the alarm going. The whole of the ironwork, we should mention, was executed by Messrs. Chubb and Son. Mr. P. C. Hardwick is the architect under whom it was set up.—*Builder.*

Genuine Diamonds Found in California.

Stones known as California diamonds have been used by jewellers during the past ten years but it is now ascertained that the genuine diamonds are to be found in the mountain streams of that State—a number of these precious stones have been sent to San Francisco, and Boston—the only place in the United States where diamonds are polished—and have been found to be genuine. Most of these stones were found at Cherokee Ravine, in Butte county; several came from North San Juan, Nevada county, and one was found near Placerville.

The average value was perhaps seventy five dollars, the largest one being worth one hundred and twenty-five dollars. They were found in sluices, or pudding boxes used for placer mining. Several of the miners who found these diamonds in their sluices, stated that they had repeatedly seen similar stones while mining, but supposing them to be worthless had thrown them away.

CALIFORNIA granite is of light gray color, bright and clear, and easily worked. It splits almost equal to slate, and thus requires very little labor in dressing. It is like marble when dressed. Its light color gives a building a bright appearance, as well as avoids discoloration by dust.

proved so fatal to the mink, foxes are said to be flourishing and on the increase. They are getting too wary to be trapped in any considerable numbers, it would seem; and indeed their foxships are rather independent this year in consequence of the ease with which they can procure an abundant supply of rabbits; foxes will be fully as numerous next year. Marten are also said to be very numerous in some quarters; but are less plentiful than last year. Buffalo robes must, we believe, be included in the list of partial failures, for very few are offering.

A Locomotive with a History.

Among the locomotives secured by General Terry in his overland movement from Wilmington to Goldsboro', is one that possesses some historical interest, the engine "Job Terry." The "Terry" first came into the possession of the United States military authorities by the occupation of Alexandria, Virginia, in May, 1861; was re-captured by Stonewall Jackson at Front Royal in the famous Banks retreat down the Shenandoah, in the summer of '62; re-captured soon after by the Union forces near Martinsburg, and found slightly damaged; was, however, soon put in running order; ran for us but a short time, again falling into rebel hands at Warrington Junction, Virginia, at the time of Pope's disastrous campaign, doing the rebels service till repossessed for Uncle Sam, a short time since, by her namesake, General Terry. It is fair to assume that the military vicissitudes of this locomotive are at last over, and that while there is steam in her iron lungs it will be respired for the exclusive benefit of the United States Government.

EDWARD HARRIS, the largest woolen manufacturer in the country, intends to build thirty or forty cottages in Woonsocket the coming summer, each one to have a garden, and offer them to industrious mechanics for sale. Who will follow this excellent example?