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A Water Wheel Railroad.

A Piedmontese, inventor, has taken out a patent for carrying railroad trains over Mount Cenis. His plan is described as follows :—

"A railway of the usual description is to be laid down in a direct line from the bottom to the top of the ascent. Between these two rails a canal is to be dug three feet nine inches in width, and about thirty inches in depth, which is to be lined and made completely water-tight with boiler plate. The motive power to be employed is a stream of water rushing down this canal. Mount Cenis, however, affords every facility in this respect. On the outside of the railway a cogged rail is to be laid down on either side. In the middle of a frame, ab ut the size of an ordinary steam-engine without its tender, a water wheel, is to be fixed, having a diameter of twelve feet. On the same axis is to be fixed two cogged wheels to work in the cogged rails, of six feet diameter. With this apparatus it seems clear that the descending stream must force the water wheel to make revolutions towards the top of the hill, and to carry round with it the cogged wheels in the same direction. As the diameter of these is to be half that of the water wheel, the rate of ascent will, of course, be half that at which the diameter of the water wheel moves. It is calculated that the latter speed will be ten miles an hour, and the former, therefore, five. It is further calculated, that a machine of these dimensions will carry up the proposed acclivity a weight of from fifteen to twenty tuns, or say from sixty to eighty passengers. For the descent, the water wheel, moving through and against the stream, will act as a restraining force to moderate and regulate the speed."

[The above is condensed from the London *Atheneum*, which objects to the plan on account of severe frosts during winter. We, however, look upon the plan as stupidly described, for we believe the *Atheneum* does not describe the invention clearly; it confuses the account of the action of the water wheel, and leaves an impression on the mind that *it* is moved up the incline drawing the train after it, which would be a stupid impracticable plan. The invention is, no doubt, the use of a fixed water wheel at the foot of the mountain, to draw the train to the top of the ascent by a carriage and endless rope. The plan is good and economical where it can be carried out, but it is not a new invention.

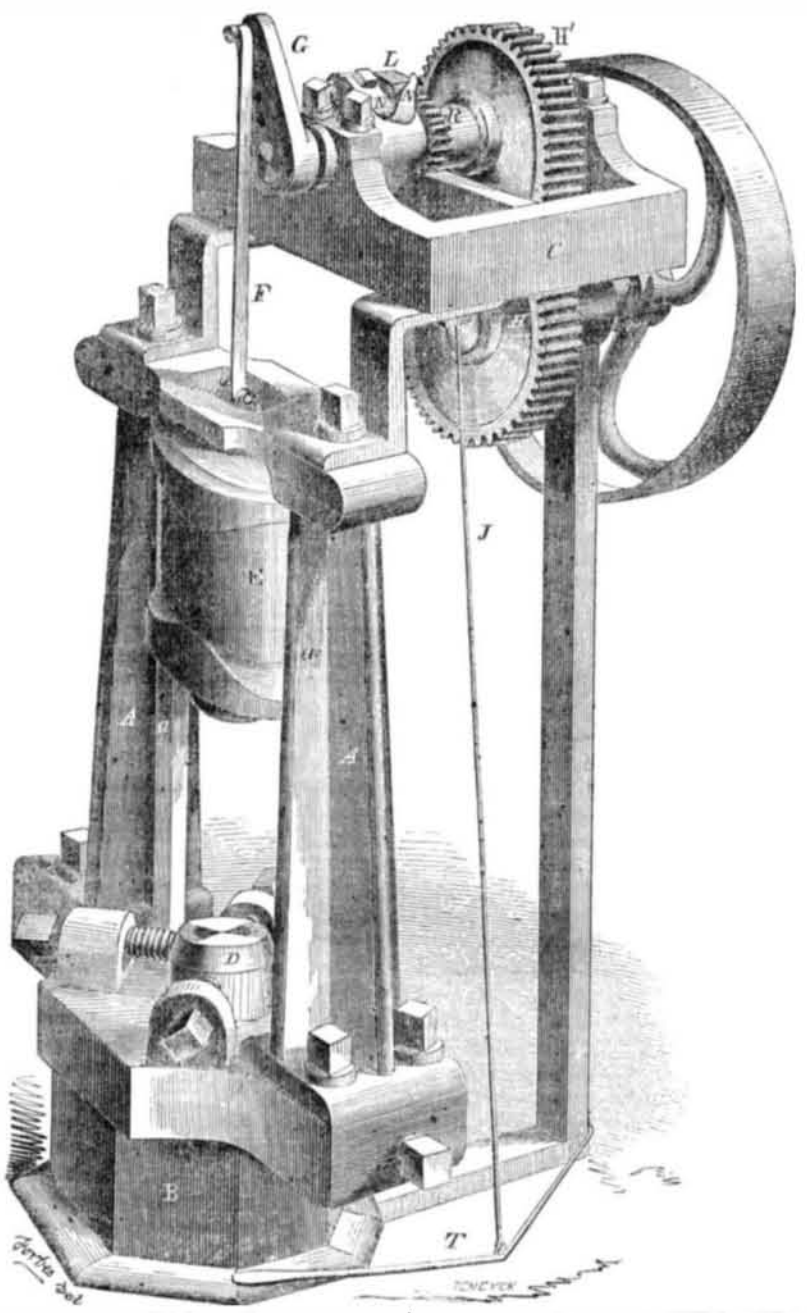
Frozen Flesh.

Mr. A. Bronson, of Meadville, Pa., says, from fifteen years' experience, he finds that Indian meal poultice, covered with young hyson tea, softened with hot water, and laid over burns or frozen flesh, as hot as can be borne, will relieve the pain in five minutes.—[Exchange

A Large Ruby.

The King of Burmah wears a ruby in the center of his crown which is larger than a hen's egg, and more valuable than the celebrated Koh-i-noor diamond. It is more than two thousand years since it was found, and is beautifully cut.

PECK'S PATENT DROP PRESS.



The accompanying figure is a perspective view of the patent Drop Press (with its recent improvements,) for which a patent was granted to Milo Peck, of New Haven, Ct., on the 28th Nov., 1851, and which was illustrated on page 140, Vol. 7, SCIENTIFIC AMERICAN.

A A are the standards, or upright ways between which the drop or ram moves. B is the bed or anvil, and D is the lower die on the face of the bed. E is the drop with the upper moving die secured in its under face. C is the frame which supports the gearing and machinery on the top of the press. F is the pitman rod attached to the drop, E. It is connected by a pin to the crank, G, on an upper shaft, which, as it is rotated, moves the drop, E, up and down, as desired. The crank has holes in it to connect with rod F, at different points from the center, to give a long and short stroke to the drop. I is the main driver shaft, having a cog wheel, H, on its inner end, gearing into another, H', on a hub, R, surrounding the crank shaft, to which it gives an intermittent rotary motion, by a rotating dog or catch, L, attached to an arm or sweep on the inner end of the crank shaft. The dog takes into the small cog wheel on the hub, R, as it rotates, and thus acts as a clutch to connect the crank shaft with the rotating hub, R, to raise the drop, E, to the top of the fall. When the drop, E, is raised to the top of the frame, a small eccentric stationary rim (not seen) fitting close to the small ratchet wheel on hub, R, throws the spring ratchet, L, out of gear, and the crank then ceases to rotate. The drop, E, is now at the head of the fall, ready to descend, but a spring catch, not shown on the upper end of the treddle rod, J, catches a sweep in the under side of the crank shaft, and holds the drop stationary at the top, while the main shaft and hub, R, have a constant rotary motion. The crank, G, however, is a little inclined from the center—as now shown in the figure—when the drop, E, is raised and caught, so that the moment the lower sweep of the crank shaft is relieved from the treddle catch, the drop, E, will descend by its own gravity. The workman, by placing his foot on the treddle, T, at once releases the catch described, which holds the sweep of the crank shaft, and then down comes the drop with its die upon the lower die, D, on the anvil, and stamps the article which may be placed upon it. The machine is entirely self-acting, excepting when the drop is made to fall, and then the operator just places his foot on the treddle for every blow he desires to be struck. The rotating ratchet, L, has a spring, N, to hold it in contact with the teeth of the small ratchet wheel, and also to give a little, to allow the ratchet to be raised from the teeth of the wheel by the eccentric rim mentioned, to throw the crank shaft and the hub, R, out of gear as the main shaft rotates. The treddle, T, is for the purpose of tripping the spring catch which holds the crank shaft sweep when the drop, E, is raised to the top of the fall. When the operator is securing a piece of work on the anvil, the main shaft keeps rotating, while the ratchet, L, being thrown out of catch with the small ratchet wheel, the crank shaft is kept stationary, with the drop, E, raised, and ready to descend, when the treddle, T, is trod upon. The mode of tripping the drop is shown and described on page 140, in the volume heretofore referred to: the devices in this figure are nearly the same for this purpose. We have briefly described these operations, however, to convey a clearer idea of the tripping action of this drop press to subscribers who do not possess Vol. 7 SCIENTIFIC AMERICAN. The ways to guide the drop, E, correctly, are differently combined in this press, and are a great improvement on the old presses. In the old drop presses the rods or guide ways, A A, of the drop rest in grooves, and are bolted to the *anvil bed*, and the yoke on top of the ways is generally secured to the frame of the building in which the press is placed. In this press the face of the anvil itself is made broad, and is planed true, whilst the foot of each way is a broad smooth flange, fitted nicely to, and bolted to the anvil instead of its bed. The yoke on the top of the ways, A A, is bolted direct to the top flanges of the ways, and the anvil, ways, and yoke, thus almost form one piece when adjusted and set. *a a* are guide flanges for the drop.

One great object to be secured in such presses is a true vertical blow of the drop, with its die, upon the die of the anvil. If the upper die does not fall true on the lower one, good work cannot be accomplished. In all common presses, the upright ways are liable to be thrown, more or less, out of the perpendicular, and require frequent adjustment, thus causing great trouble to the workmen. In the press represented in this figure, the upright ways being bolted fast to the anvil itself, and the yoke of them not being directly connected to the building in which the press is placed, if any part of the building settles, the ways, anvil, and yoke are so connected that they will not be thrown out of line with one another, consequently the press will operate with more precision, and will execute better work, and at the same time it will save much loss of time, caused by the common presses requiring frequent adjustment to make the drop strike true.

More information respecting this improved drop press may be obtained by letter addressed to Mr. Peck, at New Haven, Conn.

A Tall Chimney.

At Preston, England, a chimney has just been completed at the work of Messrs. John Hawking & Low, which is 258 feet in hight; its width at the foundation, 34 feet; the weight of the stone cap is thirty-one tuns, and 440,000 bricks have been used in building it.—[Exchange.

[This is, indeed, a pretty tall chimney, but not to be compared with one in the city of Glasgow, described in the December number of *Hunt's Merchant's Magazine*, page 677. Its hight is 460 feet, and its circular diameter at the base 50. It is of the form of a cone, and contracts to six feet diameter at the top. Three millions of bricks, and thirty tuns of iron for bands, were used in its construction, and cost about $50,000. It was built by Messrs. Tennant, to carry off the deleterious gases arising from their retorts in manufacturing chemicals. It is situated on elevated ground, and can be seen at a distance of 20 miles on approaching the city, from any direction. It is the tallest chimney in the world.

New Guano Islands.

A new island, containing many million tuns of guano, has been discovered in the Pacific Ocean; and it is believed that our farmers will hereafter obtain this excellent fertilizer at a much lower price.