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Disinfecting of Putrid, Noxious Gases.

The following is from the "Courier and Enquirer," by E. Merriam, and will be found very efficacious for the purposes specified:

"A simple, cheap, and easy way of disinfecting putrid, noxious, fœtid and mephtic gases, and putrid animal matter, may be accomplished by the free use of soda ash and quick lime. Dissolve twenty-five pounds of soda ash in five buckets of boiling hot water, and while hot slake twenty-five pounds of quick lime, and as soon as slaked, (which, if the lime is good, will not exceed five minutes,) mix the fresh slaked lime while hot with the solution of the soda ash, stirring it thoroughly for five minutes, by which time the lime will have taken up the carbonic acid of the soda ash; then pour the hot mixture into the privy vault, and it will in a few hours convert the impure and fœtid gases into ammonia, and entirely divest the premises of any unpleasant effluvia, and render the atmosphere perfectly salubrious and healthy. Soda ash of eighty per cent. free alkali is sold at the soap houses at three dollars per hundred pounds, and Athens lime can be bought by the barrel at seventy-five cents the cask.

Every practical chemist knows that putrid animal matter can be converted into ammonia by the mixture (in a heated state) with caustic alkali. Such is the process, and such the result in this case.

In large vaults a greater quantity than twenty-five pounds is required; the quantity should be increased in proportion to the size of the vanlt.

The use of one hundred pound of soda ash, per annum, in a vault prepared and used as directed above, will prevent accumulation, and render the services of a scavenger unnecessary.

Bilgewater may be purified by the same process.

This preparation is more economical than chloride of lime, is fifty times mere efficacious, and one thousand times more healthful.

I have used this preparation for more than twenty years, with the most complete success."

[Chlorine gas has been stated to be very injurious and dangerous as a disinfecting agent, but this is not correct. It is true that it is suffocating in its effects, but that is no sign of danger, any more than the use of salt in large quantities, for seasoning our food. In small quantities salt it necessary and healthful; in large quantities it is neither one nor the other—in fact, very strong salt brine is poisonous. It is the same with the chlorate of lime as with salt, only it is applied differently and for another purpose. When used in small quantities, it is perhaps the best, most convenient and cheapest disinfectant that can be applied.

Steamboat Accidents in the West.

The Missouri "Republican" asserts that during the past six months of 1854, steamboat disasters to an unparalled degree have taken place on our Western waters, but we believe there have been fewer cases of explosions than during any period for a number of years prior to the passage of the new steamboat law.

HARRISON'S GRINDING MILL.

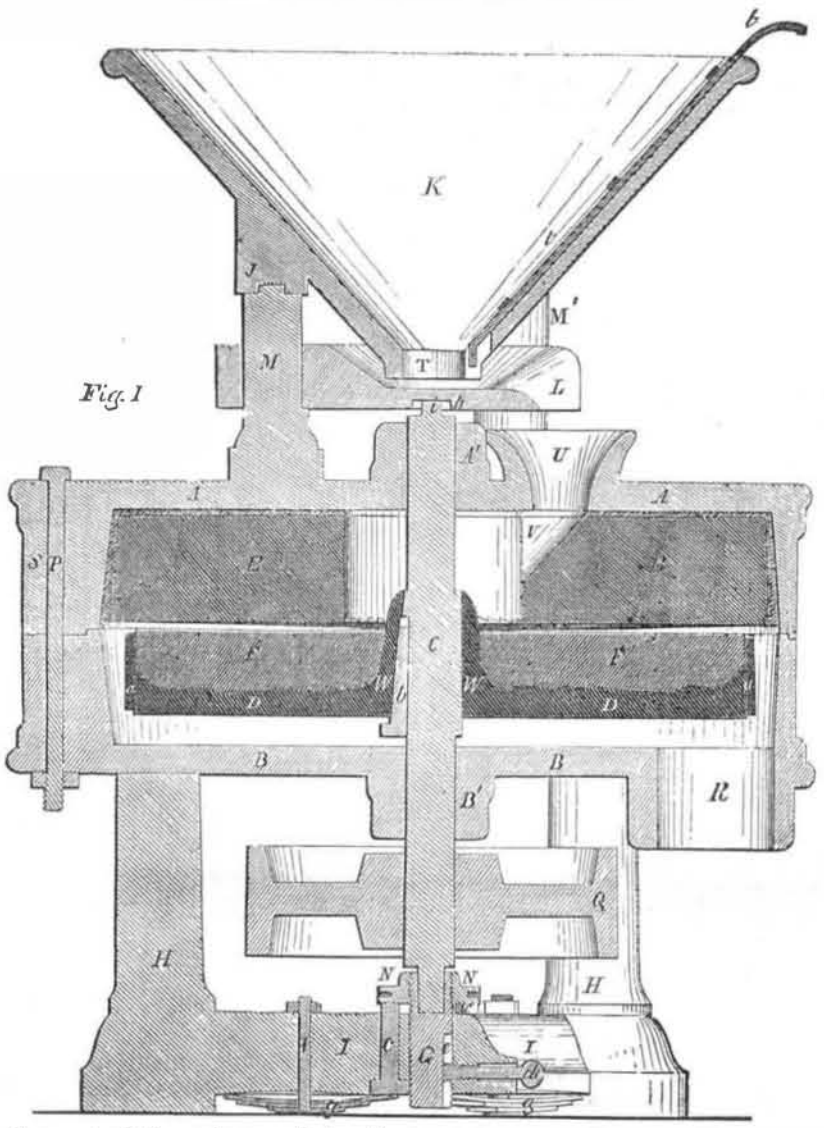

Fig. 1

The annexed figure is a vertical section through the middle of the improved Grinding Mill, for which a patent was granted to Edward Harrison, of New Haven, Conn., on the 6th of last month (June, 1854.) This is constructed wholly of stone and metal.

Matched casings, A and B, receive the stationary grinding stone, E, and the runner, F D W. The stationary stone, E, is cemented and firmly secured within the upper casing, A; and the runner is rigidly secured to shaft C, and rotates freely within the lower casing, B. The lower casing, B, has three hollow columns, H, descending from its under side, upon which the mill rests, which columns are connected to each other at their lower ends by the three arms base, I, &c. Three standards, M M', &c., rise from the upper casing, A, and support the hopper, K; the sockets, J J J, being cast upon the under side of the hopper, which receive into them the upper ends of the said standards. The shoe, L, is supported and vibrated in the following manner, viz.: a smooth vertical hole is formed in the rear end of the shoe, which receives the standard, M, fig. 1. A slot, *h*, is formed in the under side of the shoe, which receives into it a pivot, *i*, that rises from an eccentric position on the top of the shaft, C. Consequently, it will be perceived that the rotation of the shaft will impart the requisite vibration to the shoe. The discharge of the grain from the hopper into the shoe is governed by varying the size of its discharging aperture, T, by means of the sliding gate, *t*. The grain falls from the open end of the shoe into the open mouth of the aperture, U, in the upper casing, and thence it passes into the inclined passage, V, in the upper stone, which conducts it into the eye of the same. The instant that the grain falls upon the center of the runner, it is thrown outwards by centrifugal force between the grinding surfaces of the runner and the stationary stone, which enables the highest safe velocity to be given to the runner without the possibility of the accumulation of grain within the eye of the stationary stone.

The runner is formed of a united metallic back, D, and hub, W, combined with a disk face composed of the requisite quantity and quality of stone. The said back and hub of the runner may be formed of soft metal, and be cast upon the back and within the eye of a prepared stone; or be formed of cast iron and the stone face be fitted and connected to the back and around the hub of the same. A band, *a*, closely embraces and unites the peripheries of the metallic side of the said back. The shaft, C, is provided with three bearings, viz., one in the center of each of the upper and lower casings, A and B, and the step, G, at its lower end.

The hub-like outwards projections, A' and B', which form the centers of the casings, A and B, that receive the shaft, C, should be cast of such a shape as to enable them to receive bushings or bearing surfaces of Babbit metal.

The shaft, C, has a vertically elastic and an adjustable bearing by means of the following arrangement of parts, viz., the step, G, of the shaft, passes down through a hole in the center of the base, I, &c., and has a screw cut upon its periphery, which is embraced by the supporting and adjusting nut, N. To the under side of the respective arms, I, of the base, there are secured the springs, *g g g*, by means of the sustaining and adjusting screw bolts, which pass up through the said arms of the base. On the inner end of each spring, *g*, a rod, *c*, rests and rises through a hole in the base near to the central opening in the same, which receives the step; and upon the upper ends of the said rods, *c c c*, the nut, N, rests.

The stiffness of the springs, *g g g*, can be varied by means of the screw bolts, and the shaft, C, can be raised or lowered by turning the nut, N. The step, G, is prevented from turning with the nut, N, by means of a longitudinal groove, *e*, in its side, and the screw, *d*, which passes into the same.

The following are some of the advantages derived from constructing the runner of a metallic back and hub, combined with a stone grinding face, viz., the stone grinding face of the runner can be worn nearly to its metallic back with perfect safety; and when it is so much worn as to be unfit for use it can be replaced at a comparatively small expense. Second, the runner is enabled to be so rigidly and securely confined to the shaft, that when placed in a metallic supporting frame—the stationary stone and the runner can be truly and accurately faced by grinding them together. Third, a large size of runner can with perfect safety be rigidly confined to a shaft, provided the shaft be of sufficient strength, and the hub be of sufficient hight.

This is not the first patent obtained by Mr. Harrison, and 250 of his mills have been sold during the past year. He manufactures such mills from 20 inches to 5 feet in diameter at his new steam mills, No. 134 Orange street, New Haven.

The diameter of the stones and the prices of these mills are as follows:—20 inch mill, $100: 30 inch, $200; 3 feet, $300, and 4 feet $400. The 20 inch is a superior farm and plantation mill, grinding corn and all kinds of grain in the best manner, by horse power and also by hand. The 30 inch mills are now used in place of common stone in many of the best mills in the country, with decided advantage, both in the power required and in the quality and quantity of the meal. Millers who prefer large size stones, will find the 3 and 4 foot mills to be suitable for the largest business. They can be driven 600 revolutions a minute with safety.

One of these entire mills, including the hopper, with stones two feet and a half in diameter, and each of them cut from a solid block of burr, weighing in all about 1,300 pounds, and warranted capable of grinding, in the best manner 25 bushels per hour of flour or meal, may be packed in a cask thirty-four by forty-two inches inside, and thus transported in safety to any part of the world.

More information may be obtained by letter addressed to the patentee.

Over-Honest Silver Coin.

The U. S. Mint, under instructions from the Secretary of the Treasury, has been examining some counterfeit coins in circulation, and among others they found Mexican dollar-pieces worth 109 cents. They under assay gave an average fineness of 776 thousandths, and a consequent value of 91 1-4 cents in silver.—The amount of gold contained in them is sufficient to add 12 cents to the value of each, after paying the charge of separating, making a net value of 103 cents; and if to this the usual premium on silver is added, the worth of this counterfeit coin is actually 109 cents.—[Phila Ledger.

Subterranean Air Essential to the Growth of Vegetation.

There is now on exhibition at the Crystal Palace, from Holland, a long pointed iron socket attached to a wooden handle, labelled, "to promote the growth of fruit trees." The mode of using is not specified, and we can only conjecture that it is for making holes and breaking up the earth around the roots—not a bad idea, we think.—[American Agriculturist.