

TO PREVENT CISTERN PUMPS FREEZING.—Cistern pumps often are made to bring up the water through curved or inclined lead pipe, so as to conduct it to any desirable place in the kitchen. They usually have a valve to open by a stroke of the pump-handle, and let all the water down again, so as not to freeze. But careless hired girls frequently omit this, and the lead pipe is filled with ice, which often splits the lead and spoils the pump. A safer way, therefore, is to place a small splinter of wood under the lower valve, to let the water leak out in about five minutes, and drain the pump. This is to remain only during winter. The best pumps are now made so as to *screw off* the base in a few seconds laying the lower valve to view. If pump tubes become actually filled with ice, they may be quickly thawed by pouring hot water *directly* on the ice, through a small lead or other tube, which must settle as fast as the ice thaws. Ice may thus be thawed a foot per minute—but without this tube it could not be thawed in a whole day, for the hot water being lightest, remains at the top.

KEEPING POTATOES IN WINTER.—Potatoes spoil in winter, if buried, from three causes. First and greatest, want of ventilation. Secondly, and nearly allied, dampness. Thirdly and more rare, freezing. Farmers find most of their potatoes spoiled at the top of the heap, where they suppose they became frozen; but this is not the usual cause; the damp, foul steamy air ascended there, and could not escape, and this spoiled them. A hole made in the top, with a crowbar, and closed with a wisp of straw, would have allowed egress to the confined air, and saved the potatoes.

The best way to secure potatoes out-doors, is to make large heaps, say 50 or 60 bushels see that they are dry and clean, by digging before wet weather comes on; cover them all over with *one foot of packed straw*, and three inches of earth. The straw will prevent dampness, and the few inches of earth will favor ventilation. A farmer who raises many potatoes, and practices this mode, does not lose a peck, on an average in 50 bushels.

GUTTA PERCHA PHOTOGRAPHS.—It is announced that gutta percha photographs are a recent English invention. The negative picture is produced in the ordinary manner upon the collodion film on a sheet of glass, and it is fixed and dried in the ordinary manner; it is then dipped in a solution of gutta percha, and after draining off the excess it is dried by a gentle heat, and nearly a transparent film of gutta percha will be found upon the collodion. If the film is not sufficiently thick, this operation is repeated one or more times until a sufficiently thick film of gutta percha is formed. The whole is next immersed in water, which causes the collodion to separate from the glass, and come away with the film or sheet of gutta percha firmly adhering to it. These films or sheets are sufficiently transparent, and are tough and flexible, and may be handled without injury.

RE-DRESSING MILLSTONES.—This operation, formerly so tedious, can now, it is said, be performed with much facility and success by a machine devised for the purpose. With this machine, any person capable of turning a crank can re-dress the lands and furrows of a millstone in a very accurate and expeditious manner. The novelty of the invention consists of a number of picks guided and fed back and forth from eye to circumference of the stone, by means of a screw shaft and as they traverse are caused to rise and fall, by means of a cam shaft. The chisels, or blades of picks, are so confined that the liability of their being broken, owing to their high temper and concussion with stone is by this unique arrangement completely avoided.

THE GREATEST STEAM INVENTION YET. — The *Baton Rouge Gazette* under the above heading, has the following:

Wm. St. Martin, of this city, has invented an engine which can be constructed, boiler and all, for about \$50. The machine is so simple that we might with propriety say it is merely an escape-pipe, taking up no more room. The steam is admitted into the centre of a drum or cylinder, in which the shaft works; from this the power is applied directly, without further friction. The other day we saw the perfected model of the engine pumping water about twenty feet, and throwing it into the reservoir at the brewery.—This is the apparatus wanted, for getting in a cheap manner, one or more horse power to drive small machinery. Mr. St. Martin has made application for letters patent and when he gets them, we think he has a fair prospect to realize something from the result of his genius.

FOOD CONSUMED BY COWS.—Prof. S. W. Johnson says that according to experiments made in Bavaria, cows to give the greatest quantity of milk, must consume daily one-thirtieth of their live weight in hay, or other food of equivalent value. More food increases flesh and fat, and less diminishes milk.