

geons or spingles run in brass bearings. This reduces the friction, or makes, in customary parlance, the bar-cw "run light." The face of the felloes is from $\frac{1}{2}$ inch to 3 inches, according to order. They seem to have been approved by those who have used them, both in this country and in the West Indies, but I have never had an opportunity myself of testing their qualities.—*Gardener's Almanack.*

AIR CHURN.—Some time ago we gave a notice of a newly invented churn, called the "Atmospheric Churn." The principle of its action, in bringing butter, was the forcing a stream of atmospheric air through the cream during its agitation, while being churned. It was a patent, and it is said a right to make and vend it in a single state, has been sold for ten thousand dollars.

It seems, however, that the principle of forcing air through cream, in the process of butter making, is not new. If this be the fact, all that the patentees can hold, is their *mode* of forcing the air through, and not the principle of it.

Mr. Nathan N. Barlow, of Homer, N. Y., has published a communication in the last Boston Cultivator, on the subject of atmospheric churns, accompanied with a drawing of one, which he says he invented in 1836. He found, by experiment, that although the mode he adopted brought the butter rather quicker than the common mode, he could not collect the particles of butter that formed together, into a mass without much trouble, and that the dash churn still took precedence, and he applied the principle to that. This he says was a great improvement; for it not only causes the cream to change sooner, by communicating a stronger ebullition than can be obtained from the simple dash churn, while those who have them in use, declare they obtain a larger proportion of butter, determined by actual weight.

I construct the handle of the common dash, hollow, with a ferule at the top, and insert in that ferule a valve that opens outwards, (downwards?) so that when the dash is raised, the air draws in, and when it descends, the valve closes; and thus you perceive that the air is drawn into the churn by the vacuum formed by raising the dash, and by the operation of churning there is a continual current of air passing through the cream in the churn.

We perceive, by the cut in the Cultivator, that there is a short tube inserted through the lid of the churn, through which the air escapes. Thus by using Mr. Barlow's invention, you have an atmospheric churn, which combines all the advantages of the old dash churn, with the new atmospheric action. All that you need do is to have a hollow handle made, with a valve or clapper fixed into its upper end. If you wish to be a little more systematic, you can have a thermometer set into the side in such a manner as to communicate with the cream, and by keeping the cream at a temperature of fifty-nine degrees, you will have all the requisites of a philosophical churn. Then, with a lot of good thrifty cows to yield good rich cream, and a good hand to churn, and a good neat wife with good clean hands to work it in a good thorough manner, you will have real good butter—no mistake.—*Maine Farmer.*

A PROCESS OF HARDENING HIDES.—The following patent process for hardening hides, extracted from Examiner Pag's Report, will be found not a little interesting. The hide is hardened and rendered as transparent as horn.

In the first place they are submitted to the sweating operation, or liming, for removing the hair. They are then submitted to the action of powerful astringents, such as sulphuric acid, alum or salts of tartar dissolved

in water at a high temperature. During the operation of cleaning the hides of the oil, they are rubbed or friction is applied in any convenient way, whereby the hide becomes thickened; and after this process is finished they are rinsed in warm water and dried. After being dried they are submitted to the action of boiling linseed or any drying oil, and retained in the hot oil until a yellow scum appears on the surface of the hides, when they are withdrawn. If it is desired to impart color to the material, as staining it in imitation of tortoise shell it is done while in the oil bath, and when removed from the bath it is submitted to pressure in moulds for the formation of various articles, as knife handles, &c., for the article when it comes hot from the oil bath, is very soft and pliable but when allowed to cool becomes hard and susceptible of high polish.

NEW SAW FILING AND SETTING MACHINE.—Messrs. Norton & Cottle, of Holmes Hole, have recently patented a machine for filing and setting saws, which is very valuable, enabling the operator to set and whet the teeth of saws in such a manner that every tooth will be equal in size and length, the proportion being graduated by an index, and so adjusted as to suit the teeth of saws of every description. Saws that have been used and become useless in consequence of bad filing can be recut and made as valuable as new. The set is attached to the machine in such a manner, that when the filing is completed, no alteration is required in the adjustment of the saw to complete the setting. The inventors have found, by experience, that the hardest saws can be set without breaking or injuring the teeth. Saws considered in a measure useless, having passed through this machine, are said to work perfectly easy, and perform much faster than those filed in the usual manner, and the teeth being all of an equal length, will not require filing as frequently. These machines, if not too expensive, we think will come into extensive use.—*Far. & Mec.*

SEWING MACHINE.—Mr. Lerow, of this city, says the *Transcript*, has invented a "Rotary Sewing Machine," which will sew a yard a minute, with the "fast stitch" made in sewing the seams of pantaloons, &c. The workmanship is excellent; and unlike that of other similar machines, the stitch will not pull out. It seems as strong and perfect as the best sewing by hand. The machine is simple in its construction, small and portable, and not likely to get out of order. To housewives and tailors we should think the contrivance would be one of great utility.

AN ATMOSPHERIC MAIL TELEGRAPH.—Among the new things claiming a patent in Washington, is an invention of Mr. Van Vechten, of the Towando Democrat, N. Y., who claims the discovery of a plan by which mail and all express matter can be transmitted one thousand miles an hour, by means of an Atmospheric Telegraph. A tube is formed of a given size and length, and by means of an air pump, a carriage is propelled of a cylindrical form, the air operating on a piston head or driver, which is in the rear of a train of cars.

COATING TELEGRAPH WIRES.—Mr. B. H. Green, of Princeton, has patented a machine to coat telegraph wires, after the same are stretched ready for use on the posts. The composition at once insulates the wires, and prevents them from rusting. The machine, weighing about eight pounds, is hung on the wires, and drawn along by a cord from post to post. The brushes used in coating supply themselves with the composition.