

and I give them a decided preference over all others. Their form is good, being sixteen inches broad at the top and twelve at the bottom; the glass is dark bottle-green, transparent, and perfectly smooth, about one-eighth of an inch thick, and provided with a rounded rim at the upper edge, which makes it easy to retain a safe hold of them even when full. They contain eight quarts, but never receive more than six. They cost eight pence a-piece, and their durability may be estimated by the fact that, to encourage carefulness, each dairy-maid is allowed one dollar per annum extra, as *pan money*, being bound at the same time to pay ten pence for each one she breaks; yet hitherto no girl has broken to the extent of her dollar. It is self-evident that acidity cannot be communicated to glass; and the ease and rapidity with which they are cleaned, requiring merely to be first washed with lukewarm water, then rinsed in cold water and placed in a rack to dry, effect a great saving in fuel and labor, diminishing the number of our dairy-maids by at least two." Captain Carr stated that Mr. Thomas Peterson, of Trinity Chambers, Water-lane, Tower-st., London, had undertaken to supply the German milk-pans in any quantity at 2s. each, or at 21s. for the dozen. The earthenware vessels cost about the same price, 1s. 4d. to 2s. a-piece. If made of clear glass, the pans cost 4s. a-piece.

Mr. Duncan, of Bradwell, near Stony Stratford, writes thus:—"When I first took to dairying on a large scale, I laid out £20 in glass pans, because they looked so well in a dairy. On further acquaintance with them I have come to the conclusion that they are the cheapest things (even at 4s. each) that a farmer can use; for they are washed, and wiped, and kept clean with 300 per cent. less trouble than 'leads,'—My glass pans are about twenty inches in diameter: I do not like larger ones. They hold about five quarts each."

Besides these several materials, stone cisterns or vessels cut out of what are called milk stones in Derbyshire, or out of common slate, are in use in some dairies. The milk stone vessels are deemed by those who use them to surpass anything else for their very excellent preservation of milk. The stone-masons of Bidford, near Stratford-on-Avon, work these stones very well by manual labor.

Mr. Love, of Northampton, gives his experience of slate as a capital material for milk vessels. They are from three to four inches deep, two and a-half feet wide, and three feet long, and excavated out of the

solid block of slate. They are placed on shelves in the dairy, and considered as fixtures, the milk being drawn off at the bottom, while the cream is left behind in the cavity of the slab. After being in use for fourteen years, no other change in the material was to be observed than that which consisted in a little better polish being given to it by wear. Mr. Love considered such masses of slate as nonconductors of sudden changes of temperature, and as preserving the milk, in consequence, in a state of equable coolness. In this case, no joints are left for absorption of milk and retention of stale animal matter of any kind.

As to the asserted differences in the yield of cream from milk set in different kind of pans, that must arise if the milk in each was of the same depth, from their influence respectively on the temperature of the milk. That a good deal depends on this point is plain from ordinary experience, and especially from that of Mr. Horsfall, of Burly Hall, Otley. It is well known that in very hot weather milk is apt to spoil even before the rising of the cream, and in very cold weather there seems to be a sluggishness in the butter globules, probably owing to their greater specific gravity, which hinders their ascent. Mr. Horsfall on this subject states that by placing his milk vessels in a shallow leaden cistern as a shelf, in which water of such a temperature circulates that in the depth of winter he can maintain a temperature of 55° Fahr. in his dairy, he obtains a higher yield of cream and butter from his milk. The object should be to preserve the milk both in summer and winter at a temperature of 60°, or thereabouts, and this cistern is available for the circulation of cold water in the former season, and warm water in the latter. Mr. Horsfall adds: "By a series of carefully conducted experiments at varying temperatures, I am of opinion that a correct scale of the comparative yield of butter at different temperatures might be arrived at. As thus:—from a very low degree of temperature little or no butter; from a temperature of about 38°, 16 ozs. from 16 quarts of milk; ditto 45°, 21 ozs. from 16 quarts of milk; ditto 55°, 26 to 27 ozs. from 16 quarts. This is somewhat beyond the ordinary experience of dairymen.

Let it be added to the above (1), that each day's skimming, or, rather, the cream separated at each operation, at whatever interval it be taken, is placed in the cream-crock, a vessel which may be of earthenware or tin; (2) that at each addition to the store in this vessel, and, indeed, the