

When calved, give her warm drink for the first two days; if she does not clean, give her a bucket of warm water, in which some wood ashes have been put; card her gently during the winter, till near the time of her calving, then cease. Keep no more cows than you can feed plentifully, both in winter and summer. Rich pastures in summer, will afford an abundance of milk for butter and cheese; and good keeping in winter, will give you fat calves in the spring. Farrow cows should have corn as well as good hay, or milking them for twelve months will render them very thin and poor. In very hot weather, cows should be watered three times in a day, and placed in shady pastures. Farmers should bear it in mind, that a farrow cow is not so profitable by one third part, as one which calves annually.

COWS, should be calved in February, or in March, and may be stuck in moist mud, or in clay. They will keep two or three months; but I prefer those taken immediately from the tree. Avoid suckers.

BARLEY ground should be ploughed twice, or three times; sowed early; two bushels to one acre; ploughed in immediately after sowing—no grain is harder to sprout, and none requires more ripening in the field.

APPLES, for winter, should be gathered by hand—first of October—middle of the day, when fair and dry weather—spread thin on a chamber floor, till late in November, then barrelled up, and put in a cool place in a cellar.

AUTUMN. In this season cart out your summer dung; and plough all your land to be seeded the next spring. One ploughing at this time will answer for one in the spring, when your team is feeble, and save spring labor, which is very precious.

CABBAGES require moist, rich land. The later taken up the better, in a dry and windy day—set them heads down, till carried into the cellar, and then heads up, and close together, where they may have a little frost—warmth, soon destroys them.

CALVES for veal, should be kept from the cow—suck only two tits the first week, three the second, and the whole after the two following weeks, then kill them. Those to be reared, should come as early as April; have more or less milk for ten or twelve weeks. After the first fortnight, mix in skimmed milk or hay tea, or meal and water. When they are a month old, place some sweet hay in cleft sticks, and they will soon learn to eat it. As soon as grass is grown, turn them out—give them milk and water for a few days, and house them for a few nights; they should be housed early in the fall and kept warm in the winter.

SAFE GUESSING. A real Yankee, who never intended to err in guessing, being in-

quired of by his neighbor, as he was passing a farm-yard, how much a certain ox would weigh, that stood near, answered—“Well, I don't know entirely, I guess he'll weigh 13, 14, 15, 16, 17, 18 hundred, somewhere along there, no great difference from that any way.”

From the Penn. Advocate.

#### EXPANSION OF SOLIDS BY HEAT.

The general and comparative expansion of solids by heat is exemplified in the following cases:—

A cannon ball, when heated, cannot be made to enter an opening, through which, when cold, it passes readily.

A glass stopper sticking fast in the neck of a bottle often may be released by surrounding the neck with a cloth taken out of warm water—or by immersing the bottle in the water up to the neck: the binding ring is thus heated and expanded sooner than the stopper, and so becomes slack or loose upon it.

Pipes for conveying hot water, steam, hot air, &c. if of considerable length, must have joinings that allow a degree of shortening and lengthening, otherwise a change of temperature may destroy them. An incompetent person undertook to warn a large manufactory by steam from one boiler. He laid a rigid main pipe along a passage, and opened lateral branches through holes into the several apartments, but on his first admitting the steam, the expansion of the main pipe tore it away from all its branches.

In an iron railing, a gate which during a cold day may be loose, and easily shut or opened, in a warm day may stick, owing to there being greater expansion of it and of the neighboring railing, than of the earth on which they are placed. Thus also, the centre of the arch of an iron bridge is higher in warm than in cold weather; while on the contrary, in a suspension or chain bridge, the centre is lowered.

The iron pillars now so much used to support the front walls of which the ground stories serve as shops, with spacious windows, in warm weather really lift up the wall which rests upon them, and in cold weather allow it again to sink or subside, in a degree considerably greater than if the wall were brick from top to bottom.

In some situations, (as lately was seen in the beautiful steeple of Bow church, in London,) where the stones of a building are held together by clamps or bars of iron, with their end bent into them, the expansion in summer of these clamps will force the stones apart sufficiently for dust or sandy particles to lodge between them: and then, on the return of winter, the stones not being at liberty to close as before, will cause the ends of the shortened clamps to be drawn out, and the effect increasing with each revolving year, the structure will at last be loosened and may fall.

The pitch of a piano-forte or harp is lowered in a warm day or in a warm room, owing to the expansions of the strings being greater than of the wooden frame-work; and in cold, the reverse will happen. A harp or piano, which is well tuned in a morning drawing-room, cannot be perfectly in tune when the crowded evening party has heated the room.

Bell-wires too slack in summer, may be of the proper length in winter.

HINTS TO HOUSEWIVES. Vessels intended to contain liquid of a higher temperature than the surrounding medium, and to keep that liquid as long as possible at the highest temperature, should be constructed of materials which are the worst radiators of heat. Thus, tea-urns, and tea-pots are best adapted for their purpose when constructed of polished metal, and worst when constructed of black porcelain. A black porcelain tea-pot is the worst conceivable material for that vessel, for both its material and color are good radiators of heat, and the liquid contained in it, cools with the greatest possible rapidity. On the other hand, a bright metal tea-pot is best adapted for the purpose, because it is the worst radiator of heat, and therefore cools as slowly as possible. A polished silver or brass tea-urn is better adapted to retain the heat of the water than one of a dull brown color, such as is most commonly used. A tin kettle retains the heat of water boiled in it more effectually, if it be kept clean and polished, than if it be allowed to collect the smoke and soot to which it is exposed from the action of the fire. When coated with this, its surface becomes rough and black, and is a powerful radiator of heat. A set of polished fire-irons may remain a long time in front of a hot fire, without receiving from it any increase of temperature beyond that of the chamber, because the heat radiated by the fire is all reflected by the polished surface of the irons, and none of it is absorbed; but if a set of rough, unpolished irons, were similarly placed, they would become speedily so hot, that they could not be used without inconvenience. The polish of fire irons is, therefore, not merely a matter of ornament, but of use and convenience.—The rough, unpolished poker, sometimes used in a kitchen, becomes speedily so hot that it cannot be held without pain. A close stove intended to warm an apartment, should not have a polished surface, for in that case, it is one of the worst radiators of heat, and nothing could be contrived less fit for the purpose to which it is applied. On the other hand, a rough unpolished surface of cast iron, is favorable to radiation, and a fire in such a stove will always produce a most powerful effect.—*Cabinet Cyclopædia—Dr. Lardner on Heat.*

CATTLE. If you must pinch them, do it in the beginning, rather than in the close