Meat and Milk from Sewage Farms.

If a cow is fed on turnips, within twenty-four hours her milk will taste of turnips, and if butter be churned from the cream, the butter will taste too. The intensity of the turnip flavor is the measure of the quantity of turnips taken. In like manner, if pigs be fed on horseflesh, as they often are, their bacon will taste of the horseflesh; if they be fed on fish, the bacon has a fishy taste. The same is true of hens and their eggs. Feed hens on decaying animal matter, which they will eat greedily, and both their eggs and flesh will be most unpleasant and unwholesome eating. In the case of ducks the facts are much more striking. Ducks are very unclean feeders. Give them abundance of garbage, and they will refuse corn and similar food. Their flesh is then most pungent to the taste, and in many people is so potently poisoning as to produce diarrhœa. Animals fed on sewage farms under certain conditions are liable to have their flesh and secretions changed in character by the sewage-produced herbs and grasses upon which they feed. If the sewage on a given farm be so managed that no more of it be put into the soil than any given crop can adequately deal with, then the crop will be sweet and natural, and the cattle or other animals fed on it will be sweet and natural too. But if the soil be gorged to repletion with sewage, then the crops will be surcharged with sewage elements, and unfit for food, and the meat and milk of animals fed on such crops will be like the crops, and very unpleasant to the taste as well as dangerous to the health. It is in the last resort all a question of the intelligence and conscience of the managers of sewage farms.—Hospital.

ARCHIMEDEAN SCREW USED FOR DRAWING WATER.

The principal contrivance in this machine consists of a sort of covered screw (or Archimedean screw) placed diagonally upon its axis, the lower end of which enters the water of the reservoir, A, and the upper one of which ends in the reservoir, B, which is the one to which it is desired to raise the water.

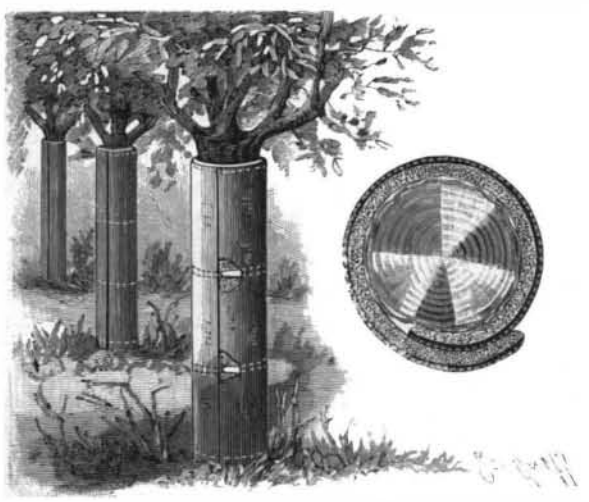
Around the long piece of wood, C, that we call an axle, it is necessary to wind tubes of lead or other metal (marked D and E in the figure), the mouth of which will be in the reservoir, A, and their outlet a little above the reservoir, B.

When this Archimedean screw revolves in the proper direction, the parts of the pipes that enter the reservoir, A, will become filled with water through the mouths of the tubes, and, through the revolution of the tubes, the liquid will be gradually carried from the lower to the upper part of the screw, where it will empty into the reservoir, B.

This screw is revolved through the intermedium of the large wheel, F, which is at the upper end of the axle, C, and which is actuated by manual power in pulling the rope, G, just as one pulls a bell rope. Our engraving is from an old print.

ORANGE TREE JACKET.

A jacket for protecting orange trees against the action of frost has been patented by Mr. Philip F. Brown, of Blue Ridge Springs, Va. By reference to the illustration it will be seen to consist of a tubular, longitudinally split waterproof jacket, which is formed of an inner layer of woolen goods or other suitable non-conducting material, and an outer coating of rubber. Arranged between the two layers are several coil springs, whose ends are held in the longitudinal edges of the



BROWN'S ORANGE TREE JACKET.

jackets, so that under their action said edges will be caused to overlap and the jacket given the form of a roll or coil.

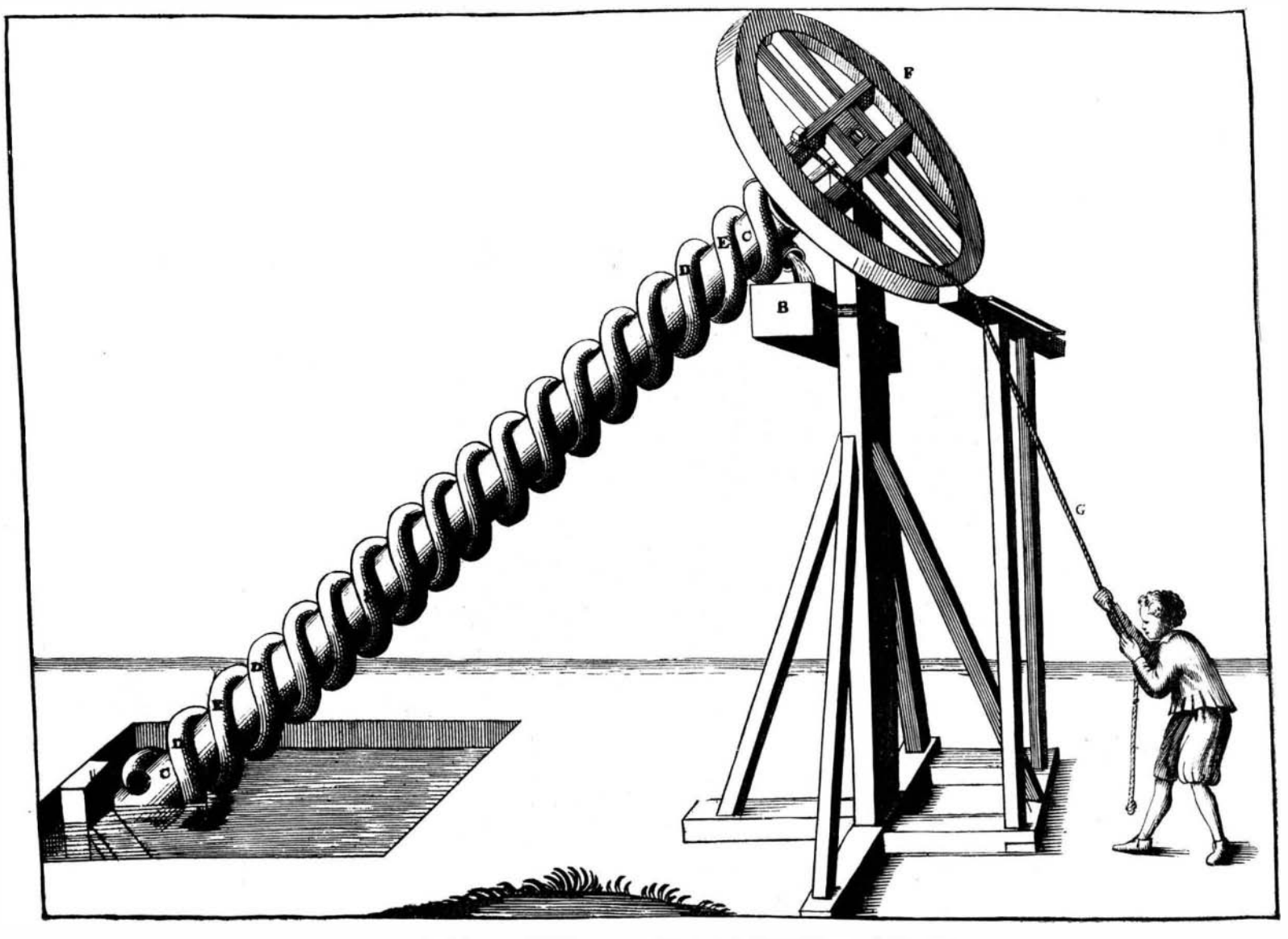
To place the jacket in position, the edges are sprung apart and it is then drawn around the trunk, the springs causing it to close upon the tree and snugly embrace it. By keeping a stock of various sizes of these jackets on hand the orange grower can jacket his grove at very short notice and thus prevent the great loss due to freezing. The use of this device makes it possible to grow the semitropical trees in the parks of the North.

The Ruins of Ang-Kor Wat.*

Around the ruin, and some three or four hundred yards away from it, there is a wall twelve or fifteen feet high, and in an excellent state of preservation. It is impossible to follow this wall all throughout, on account of the dense jungle growing about it here and there. But I followed the outside of it as well as I could from the southwest corner to the south gate, and counted seven hundred and fifty-three steps, representing half the length of the wall in a west-east direction. Making due allowance for the more or less tortuous way that I was compelled to take, this rough measurement would make the wall in this direction something like three-quarters of a mile long. Our Kumer guide said that the walls, as well as the buildings, were square, with equal length of sides; but whether he was right or wrong about the walls, which we were not able to measure thoroughly, we found that he was quite wrong about the buildings themselves; for I measured them afterward, and found that, with the exception of the central platform, they were really oblong in figure, with the longer sides directed east and west and the shorter ones north and south. Inside the parklike wall is another wall, only a few feet high; and inside this again, only a short distance from it, is the magnificent ruin itself. I happened to have a measuring tape with me, twelve yards long, but by attaching a piece of twine to it we were enabled to get a length of twenty-seven yards. With this combination we measured the building, and the measurements may be relied on as correct enough for all practical purposes. . . .

The bass reliefs are raised three or four feet above the ground, and are about four or four and a half feet wide. Speaking roughly, they look to the naked eye about half as wide again as the frieze of the Greek Parthenon, to be seen in the Elgin rooms of the British Museum. The sculptures are somewhat less "relieved" from the general surface than the bass reliefs just mentioned, but they are apparently quite as finely chiseled, and in a much better state of preservation. It was on this inner wall that the measurements of 705 feet by 588 feet were taken, extending from the outer door post on the one side of the building to that on the opposite side. Bass reliefs abound on the walls almost everywhere throughout the ruin; but it is on the outside of this inner wall of the corridor that they are particularly abundant and extensive. Taking the sum of the four sides, there is nearly half a mile of almost continual sculpture on these four walls alone, and representing various scenes, most of which are of a warlike character, while one side in particular is occupied by what appears to be a tug of war on a large and ancient scale. Scores of men on one side are doing their utmost to pull over exactly the same number of men on the other side, while the umpire, or whoever he may be, represented by a larger figure than the rest, is seen in the middle between the two contending parties, and sitting on the back of a turtle, whatever allegorical meaning that fact may contain.—Public Opinion.

*These, the most inaccessible and most interesting ruins in Further Asia—sometimes known as Nakkon-Wat—are admirably and fully described in Surgeon-Major MacGregor's book, "Through the Buffer State."



ARCHIMEDEAN SCREW USED FOR DRAINING A MARSH.