

## A NEW MILKING MACHINE.

Among the many uses to which India Rubber has been applied, is that of milking. Two or three years ago a milking machine was brought before the public which without the aid of the hand, accomplished the operation. It was composed of India Rubber, and was attached to one teat at a time. We believe it was not found of much use in practice. Another invention is now introduced to public notice, which operates on a somewhat different principle. Whether it will prove of greater value than its predecessor remains to be seen. We fear that an air-tight pail, with an air-pump attachment is not likely to continue in working order very long in the hands of ordinary dairy-maids. This air-tight invention is by Mr. Kingman, of Dover, N. H.; U. S. He comes out with a very clear description of it in the *New England Farmer* and says it works "first rate." He takes a calf for his model, and manufactures a machine calf, with four mouths, and sets him to sucking—substituting a pail for the calf's stomach—but we will let him tell his story as we find it in the *New England Farmer*:—

"In the first place, I take a large size pail, either of tin or wood, and fit on it a cover so as to make it air-tight; then I construct a small pump in some compact form, so as to exhaust the air from the pail. The pump made for my experiments (and which is described in the application for a patent) is a part of the cover to the pail, and being flat and thin, works rapidly and without friction, and does not wear so as to leak. It is only necessary to produce a slight vacuum, such as a calf might make with his mouth. I then connect four small rubber tubes, about eighteen inches long, with the top of the pail; and on the other end of each of these tubes, I fix a little cup of tin, glass or any other convenient material, about two inches in diameter and three inches deep. Over the top of each of these cups is drawn a cap of thin, flexible rubber, having a sack or mouth in the centre, of sufficient size to receive the end of the cow's teat, with a small hole in the bottom for the milk to pass through. The cap fits to the top of the cup, air-tight, by its own contraction, and also hangs around the end of the teat, but by its flexibility permits a free flow of milk into the cup and through the rubber tube into the pail.

Having got the machine in readiness, I slip each of the cow's teats into one of the soft, flexible sacks or mouths, which can be done in an instant with the end of the thumb—the rubber clings around the teats and holds the cups in place. I then commence pumping slowly and easily, and the milk flows in a large, steady stream from each teat, through the tube into the pail. The cow meantime, is quietly chewing her cud, hardly knowing that anything is going on; so perfectly is the teat sustained by the rubber suck, that the suction hardly affects it all, and there is no pulling, or flinching, or squeezing in any direction. All the while the milk is flowing at the rate of about two quarts per minute; at any rate, I have milked eight quarts of milk from my cow in four minutes, with a machine by no means perfect; because being the first and only one ever made, and got up only to experiment with, it has suggested improvements which will be embodied here, after; and I am entirely satisfied that a child or woman can milk with this machine with perfect ease, faster than four milkers, either men or women, can milk by hand.

But the chiefest recommendation of the machine remains to be mentioned. The common method of milking by hand necessarily exposes the milk to more or less dust, dripping from the hands, and other kinds of filth, which often spoil its taste, and always gives one the idea that he is swallowing a disagreeable amount of unmentionable materials. Even the best and most careful milkers cannot avoid getting something into the pail that should not go there; this is proved by the universal custom of straining milk immediately after milking, in all cases, and by whomsoever it may have been milked.