

heat of the atmosphere by being surrounded by a good non-conductor, the top of the can being covered by felt or some similar material for the same purpose, yet not confining the vapor of the evaporated liquid.

By means of Dewar globes the liquid can be kept for some time. These consist of two or three globes one inside the other, the smallest about three inches in diameter. The air in the intervening space is exhausted to about one-millioneth of an atmosphere, the outside of the smallest globe being coated with a thin film of silver in order to prevent radiant heat from affecting the liquid air.

Experiments made by Mr. Tripler show that liquid air has a most peculiar effect upon various substances. Iron if immersed in it becomes very brittle yet its tensile strength is considerably increased. An agate dipper, after given a bath in the liquid, becomes so brittle that it can be broken to pieces by pressure from the fingers. A rubber ball frozen by it if thrown against a wall with only a very small force, smashes into pieces like a piece of glass. A piece of beefsteak can be frozen so hard that it will ring like bell metal, and butter when frozen by it can be pulverized to a fine dust.

The most interesting of experiments with this strangely acting liquid is that of placing some of the liquid air into a tea kettle under which is a hot fire. The liquid when first poured in boils rapidly but soon becomes quiet as the temperatures equalize each other. Then by dropping in a piece of ice the action becomes more vigorous than at first. When at last a few ounces of water are poured in the action becomes violent and the liquid spurts with great fury forcing out of the spout a great jet of vapor. The water however is frozen instantly and when the kettle is inverted the ice falls out as dry and brittle as chalk. Thus you can easily see that it is a very simple matter to freeze water over a blazing hot fire.

By pouring some of the liquid into a smooth glass tumbler and immersing this into water, a coating of ice will at once form on the outside of the tumbler. By repeated immersions coat upon coat will be formed until an ice cup, sufficiently strong to be handled, can be obtained from which the glass tumbler can be withdrawn.

Now then partly fill this ice cup with liquid composed largely