

# ICE WATER FROM SUNSHINE.

**M**ANUFACTURING a drink of ice water with nothing cooler than the sun's rays and dry, tropical air would probably seem under the province of the magician to an easterner who had never traveled further southwest over his native land than the plains of Colorado. It is nevertheless a fact, however, that by these ever-available agencies the greater part of the population of Texas, Arizona, and New Mexico manufacture their ice water. This not only serves for drinking purposes, but also provides an efficient medium for the ordinary requirements of refrigeration—for in the cruder sections of the great southwest the artificial production of ice is still a trifle too costly to be feasible.

Picture a cattle ranch squatted in the centre of hundreds of miles of dry, sun-baked semi-desert land. There is just enough growth of wild grass about to satisfy the far-wandering herds, which drink from the thick, warm waters of some artificial oasis.

A cowboy returns to the ranch after an all-day's exposure to the blistering heat. With parched lips he rides quickly up to a little red, oval-shaped earthen jar suspended by a rope behind the house.

He takes off the cover, which is merely there to keep out the blowing sand, and dips forth a cup of ice water which has never come in contact with anything but the sun-exposed sides of the earthen receptacle which incloses it. The water is always there, and it is practically effortless and costless in the making of it.

The secret lies wholly in the construction of the little red receptacle. This is a simple Mexican creation, and in that language is called an olla; the two l's being silent according to the Spanish pronunciation of the word.

In northern Mexico olla making is a

very profitable industry to the inhabitants, who carry them over into Arizona on the backs of burros. A good olla can be purchased from the proprietor of one of these little caravans for 50 or 75 cents.

The olla is made from a crude clayish mortar, composed of burro manure and sand. This, with the use of a little water, is worked into a pliable mass by the Mexican, and when dry and thick enough, molded into the desired shape of the vessel. In drying the composition becomes very porous, and it is this essential characteristic which contains the secret of the cooling process.

After having been painted over, both inside and out, by a solution of harmless vegetable dye, the olla is ready for use. It is then filled with water and hung up, preferably in some place which is exposed to the wind if there be any.

In a few minutes the exterior of the jar grows slightly dark with the moisture which has seeped through the porous composition. The seeping process, however, is very slow, and the moisture which exudes evaporates into the receptive, dry atmosphere in such equable proportion that scarcely more than a drop a minute trickles away from the bottom of the olla.

It is this continuous, and fairly rapid, evaporation which produces the cold. Immediately the sides of the olla become chilled, and the water within grows gradually cooler.

In less than an hour from the time the phenomenon is begun the water is cold enough for drinking purposes, no matter how warm it might have been when poured into the receptacle. Two or three hours later it is cold enough to fill the ordinary requirements of refrigeration for bottled milk, butter, and other culinary necessities.