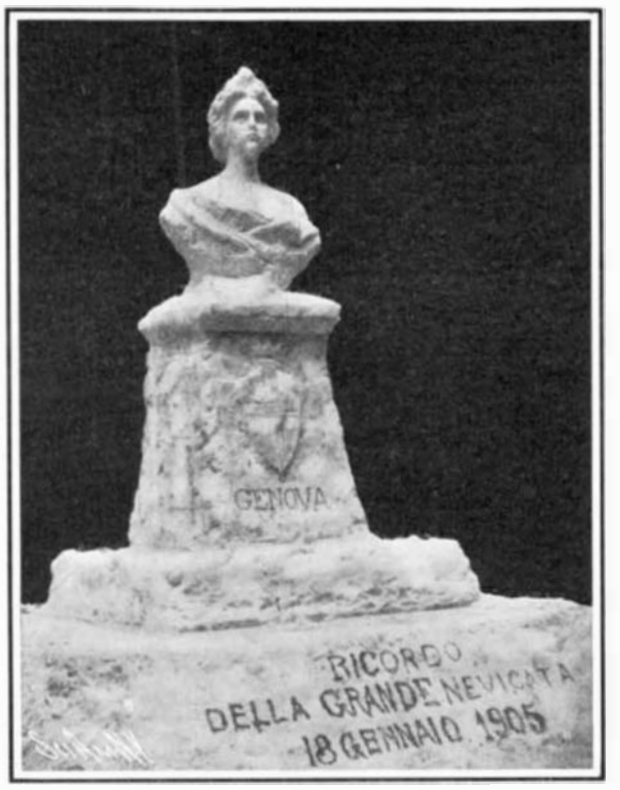
SNOW SCULPTURES.

BY DR. ALFRED GRADENWITZ.

There is some ground for the statement that snow is the most widely used material for modeling, though the latter, it is true, is generally of a very primitive description. In practically every country where the snowfall is sufficiently heavy, the boys of the cities; as well as their brothers of the country districts, at the arrival of winter proceed to form the glittering white masses into coarse shapes, which an active fancy will recognize as the representations of men or animals. In some localities this sport is developed to a fairly high degree, and entire communities, young people and old, often take a hand in the healthful pastime. In the Harz Mountains of Germany, for instance, attractive groups of snow sculptures are sometimes encountered, though these productions never attain the level of true art.

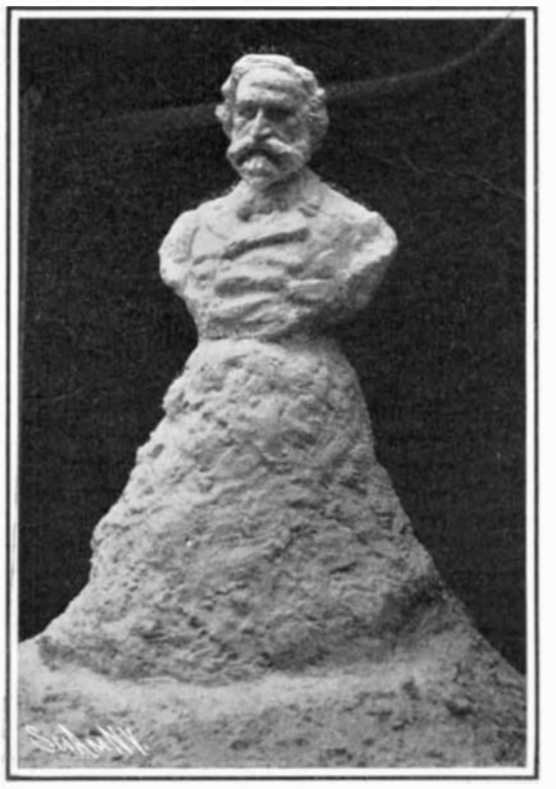
An Italian sculptor, Signor Achille Carressa, of Genoa, who has become famous through his Columbus monuments designed for certain South American cities, was one of the first to accomplish the task of producing snow representations of truly artistic value. The southern home of the artist bids fair to surpass parts even of the north of Europe in the rigidity of its climate, and with the first heavy snowfall Signor Carressa quickly installs his studio on the neighboring Piazza San Giro, and surrounded by the wondering crowd, he produces these charming examples of the plastic art, which by their delicacy of design and execution are little inferior to marble sculptures.

The accompanying engravings illustrate several of these works of the Italian artist. The latest production is the statue of Genova, patroness of the city of Genoa. The inscription reads: "Record of the Great Snowfall of January 18, 1905," and a splendid, though fragile souvenir the statue is. It is truly unfortunate that the only means for preserving these works of art is through the agency of the camera.



Genova, the Patroness of Genoa, Made After the Snowfall of January 18, 1905.

A Characteristic Bust of Columbus by Signor Carressa.



A Striking Likeness of the Italian Composer Verdi.

SNOW SCULPTURES.

The Money of Savages.

BY HENRI COUPIN.

Many savage tribes know no commerce except the direct exchange of one useful object for another, but numerous other tribes have experienced the necessity of facilitating business by the creation of a standard currency which enables exchanges to be made indirectly and at any time. This money varies greatly in character in different places. Sometimes it has only an arbitrary value, sometimes it is also available for use as ornaments, or otherwise.

The money most commonly employed by primitive peoples consists of useful objects. Examples are: Slaves (in Africa and New Guinea), cattle (reindeer among the Lapps), salt (in Laos), furs (in Siberia), cloth (in Africa), shells, beads, feather and other ornaments, and even various articles of food.

If the money is not useful in itself it must naturally be composed of rare materials. "Thus the Pellew islanders," says M. Deniker, "carefully preserve as current money (andou) a certain number of obsidian or porcelain beads and prisms of terra cotta, imported no one knows when or how, which have very high values. One tribe possesses a single prism of clay (called baran) which is regarded as a public treasure. In the neighboring island of Yap the place of money is taken by blocks of aragonite, a mineral which is not found in the island but is brought from the Pellews. The value of a block is proportional to its size, a thousand-franc note ($200) being represented by a huge disk which two men can hardly carry. These stones serve rather to flatter the vanity of the wealthy natives, who exhibit them in front of their huts, than to facilitate barter."

But this is an exceptional case. Usually, preference is shown for more convenient objects which combine a maximum of value with a minimum of weight. For example, the Chorchon and Bannock Indians of Idaho and Montana use teeth of the wapiti deer as money. For the same reasons Scandinavian tribes, like the ancient Carthaginians, employ as money the skins, and the Michmis make use of the skulls, of animals, while the money of the Loyalty Islands consists of ropes made of fox hair, which may be cut to any desired length. The Mexicans formerly made extensive use of cacao beans and this sort of money is not yet entirely obsolete, despite modern facilities of communication.

Shells are often used as money. According to M. Deniker, the tooth shell, or "elephant's tusk," is thus employed by the Indians of northwestern America. The wampum beads of the tribes of the eastern United States are made of the shells of *Venus mercenaria*, a species akin to the cockles, etc.

But of all shells the cowry is most used as money. The species most frequently employed are *Cyprea moneta* and *Cyprea annulus*, of which the former appears to be commonest in Asia, the latter in Africa.

Both species occur throughout the Indian Ocean, but they are gathered in large quantities in only two districts, the Maldive islands, west of Ceylon, and the Sulu archipelago, between Borneo and the Philippines. On the Asiatic continent they are used as money most extensively in Siam and Laos, where, twenty years ago, from twenty to thirty cowries were equivalent to one centime (100 to 150 to a cent).

Tropical Africa, however, is the true realm of the cowry—a fact which is explained by its rarity. The shell is not found in the Atlantic and it has traversed the continent from Zanzibar, on the east, to Senegal, on the west coast, solely in consequence of commercial relations. Such relations must have been established at a very early date, for Cadamosto and other Portuguese explorers of the fifteenth century speak of the use of cowries as money among the "Mames" of Senegal. In Africa the exchange value of the cowry is much higher than in Asia, a fact which indicates that it is imported. The cowry was probably introduced to the east coast of Africa by the Arabs. Subsequently the importation was carried on also by Europeans. The cowry is still current money throughout the west coast of Africa as far as the River Conanza in Angola. Farther south, in the region extending to Walrus Bay, we find another variety of "shell money," consisting of fragments of a large land shell, *Achatina monetaria*, strung in cords. This money is manufactured chiefly in the Selles district in the interior of Benguela, whence it finds its way throughout the coast and even to London. The strings of shells are about 20 inches long and were worth, fifteen years ago, from 10 to 30 cents each.

Among articles of food employed as money the most important are rice in the Philippines, bricks of tea in Mongolia, and lumps of salt in central Africa, where this indispensable substance is very rare.

Iron, bronze, and other metals are very widely used as money. They occur in many forms, from simple rods and crosses to the circular coins common among civilized peoples. Sometimes the form is such that any desired value may be obtained readily by cutting. In central Africa, for example, debts are paid in brass or copper wire, and bars of silver are current money in China.—Translated for the SCIENTIFIC AMERICAN from La Science au XXme Siècle.

The Blessings of Cold.

In the Medical Era for October, Dr. Robert Peter maintains that cold is a blessing when you learn to endure it. He points out that its endurance can be acquired gradually if begun early in the season. He does not believe in coddling the body with woolens. "Better keep blood in circulation by outdoor exercise," says he, "so that if heavier clothing should really be needed the body will not require its encumbrance too much."

Graduated baths, with friction, he tells us, will harden the body very much, especially when followed by vigorous exercises in graded temperatures. "I know a man," says he, "who is always astir and who wears not even a shirt, but only blue jeans and blouse, all the year round. He has his windows open all the year round, day and night, no fire, and thoroughly enjoys it. While this is an extreme case, it shows how one can inure himself to cold."

Dr. Peter expresses the conviction that the subjects of ventilation and heating, which are important factors in the winter months, are not as well understood as they might be, and he attributes much of the illness during the inclement part of the year to the foul air and fuel gases, to which the baneful effects of indoor life are mainly due. According to him conditions should be reversed, and it would be wiser to camp out and bask in the winter sun and to stay at home in the summer shade.

"As to ventilation," says he, "it can never be overdone, and especially is this true at night. Our bedrooms should be well ventilated. One-third of our lives is spent in them. A bedroom with southern exposure is probably best in winter and it is a cheer and godsend. It is death to germ life. It will cut short a cold or catarrh and the white plague cannot lurk there. As we need the shade in summer, we need the sun in winter."

After a consideration of the diet, which should be more stimulating at this season of the year, the author emphasizes the fact that the respiratory organs mostly stand the brunt of the winter diseases. The doctor believes that we must look to the circulation to help us out in our prophylaxis. "After a cold is once contracted, however," he says, "open the flood gates of elimination and equalize the circulation. A good physic or a Turkish bath may restore conditions."

In recent years the construction of railways proceeded in Germany at the rate of about 621.5 miles per annum. The entire mileage exceeds at present 34,183 miles. The electrification of railways is still confined to a few suburban lines, where the system works satisfactorily. The question of long-distance electric railways is still being studied, but no decision has been arrived at so far. Plans are said to be under consideration for the introduction of electric services between Düsseldorf and Cologne—23 miles—and Berlin-Hamburg—185 miles.