tion (aside from those who recover spontaneously and are credited to the apparatus) is the one treated manually.

Even more important is the fact, demonstrated now by universal experience, that when apparatus is known to be obtainable, it is sent for and the manual method neglected. Thus to-day the apparatus in public use is on the whole contributing very materially to decrease the saving of life.

SCIENTIFIC EVENTS

PROTECTION GIVEN MIGRATORY BIRDS BY AMENDMENTS TO THE BIRD-TREATY ACT

THE United States Department of Agriculture announces the promulgation of amendments and additions to the Migratory Bird-Treaty Act Regulations effective October 25, 1918.

Hereafter the open season for black-bellied and golden plovers and greater and lesser yellowlegs in Texas will be from September 1 to December 15. Another change prescribes a daily bag limit of 50 sora to a person in addition to the bag limit of not to exceed 25 for other rails, coots and gallinules.

An amendment of Regulation No. 6 has the effect of removing the limitation on the number of birds that may be transported within a state during the federal open season. The export of migratory game birds is limited to two days' bag limit during any one calendar week of the federal season. Persons must comply with state laws further restricting the shipment or transportation of migratory birds.

An amendment to paragraph 2 of Regulation No. 8, which is of great interest to breeders of game, permits migratory water fowl raised in domestication to be killed by shooting during the respective open seasons for waterfowl, and the sale thereof to state laws; but after March 31, 1919, such waterfowl, killed by shooting, can not be sold or purchased unless each bird, before attaining the age of 4 weeks, shall have had removed from the web of one foot a portion thereof in the form of a "V" large enough to make a permanent well-defined mark, which shall be sufficient to identify it as a bird raised in domestication.

Another amendment provides that the plumage and skins of migratory game birds legally killed may be possessed and transported without a federal permit. Provision is also made for the issuance of special permits authorizing taxidermists to possess, buy, sell and transport migratory birds.

Two new regulations have been added. Regulation No. 11 provides for the issuance of permits authorizing persons to sell migratory game birds lawfully killed and by them lawfully held in cold storage on July 31, 1918. Such birds may be sold under permit until March 31, 1919.

Another new regulation is as follows:

> Nothing in these regulations shall be construed to permit the taking, possession, sale, purchase or transportation of migratory birds, their nests and eggs contrary to the laws and regulations of any state, territory or district made for the purpose of giving further protection to migratory birds, their nests and eggs when such laws and regulations are not inconsistent with the convention between the United States and Great Britain for the protection of migratory birds concluded August 16, 1916, or the migratory bird treaty act, and do not extend the open seasons for such birds beyond the dates prescribed by these regulations.

This regulation is a restatement of the substance of section 7 of the migratory bird-treaty act, and is intended to remove the confusion and uncertainty that exists in regard to the effect of the federal law and regulations on state game laws.

The federal migratory bird-treaty act regulations prohibit throughout the United States the killing at any time of the following birds: Band-tailed pigeon; common ground doves and scaled doves; little brown, sandhill and whooping cranes; wood duck, swans; curlews, willet, upland plover, and all shore birds (except the black-bellied and golden plovers, Wilson snipe or jacksnipe, woodcock and the greater and lesser yellowlegs); bobolinks, catbirds, chickadees, cuckoos, flickers, flycatchers, grossbeaks, humming birds, kinglets, martins, meadow larks, nighthawks or bull-bats, nuthatches, orioles, robins, shrikes, swallows, swifts, tanagers, titmice, thrushes, vireos, warblers, waxwings, whip-poor-wills, woodpeckers and wrens, and all other perching birds which feed entirely or chiefly on insects; and also auks, auklets, bitterns, fulmars, gannets, grebes, guillemots,

gulls, herons, jaegers, loons, murres, petrels, puffins, shearwaters and terns.

POTTERY PRODUCTS

THE makers of pottery in the United States reported another record-breaking year in 1917 in value of output, which was $56,162,522, an increase of $7,945,280, or more than 16 per cent. over the value in 1916, according to figures compiled under the direction of Jefferson Middleton, of the United States Geological Survey, Department of the Interior.

The imports of pottery during the year were necessarily small, and the demand was fully equal to the largest domestic supply that would have been produced under normal codnditions, but the American potters found it impossible to supply the demand. Though the value of the output was the largest yet recorded, the volume of the product was probably not so large as it had been in some other years. Few plants, if any, ran to capacity, and many of them did not market more than three fourths of their normal output. The increased cost of labor and raw materials made it necessary to fix higher prices for the wares than those that have prevailed in the last few years. The imports showed an increase over those of 1916 but were much below normal imports before the war. This increase was due chiefly to greater imports from Japan, whose wares are now finding a larger market in the United States.

Notwithstanding the handicaps which the pottery industry suffered in 1917, greater efforts were made to place the industry on a firmer foundation than ever. Realizing that after the war he will have the keenest competition, and knowing that in order to hold his present trade he must not only make ware of superior quality but must be able to undersell all foreign competitors, the American potter has begun to study not only how to improve the quality of his wares but to find or devise labor-saving machines and improved kilns. The report of the United States Potters' Association shows that a number of such devices that give promise of lowering the cost of labor and fuel were introduced in 1917 or were being successfully developed. Among these devices are sagger-making machines, a conveyer type of stove, a casting process that makes large production possible by unskilled labor, and down-draft and tunnel kilns that insure a large saving of fuel.

The effort to establish in the southern states a pottery for the manufacture of high-grade ware has, after many years, at last been successful. In 1917, for the first time, white ware was manufactured in the south. The Southern Potteries (Inc.), began to operate at Erwin, Tenn., a 10-kiln plant for the manufacture of semi-vitreous porcelain table ware, using domestic clays exclusively.

Another important development in the pottery industry of the United States is the production of chemical porcelain, the manufacture of which in this country was considered impossible before the war. Several operators are now making chemical porcelain which satisfactorily meets the exacting requirements of the laboratory.

In 1917 the value of the output of every variety of pottery classified by the Geological Survey, except red earthenware, was greater than in 1916. White ware showed the largest increase—$2,729,079, or 15 per cent. Porcelain electrical supplies also showed a large increase —$2,417,166, or 34 per cent. China, the highest grade of pottery, has been a minor product in value, yet its value in 1917 showed an increase of $1,327,534, or 38 per cent., compared with 1916. Its value in 1917 was nearly twice as great as in 1913.

The value of white ware, including china, which comprises the general household wares and constitutes more than 45 per cent. of the value of all pottery, was $25,726,375 in 1917, an increase of $4,056,613, or 19 per cent., over 1916. If to this sum is added the value of the high-grade products sanitary ware and porcelain electrical supplies, the total value in 1917 was $47,814,178, or $7,998,579 more than in 1916.