against lack of employment through a municipal institution has been elaborated, in which the attempt has been made to meet the objections that were urged against the Saint Gall experiment. The question of insurance against lack of employment has also received attention in other Swiss cities, notably Zurich and Lucerne, but no actual steps in this direction have as yet been taken. The federal government is now prosecuting an investigation of the whole subject of lack of employment and the means of preventing or lessening the evils resulting from it. The complete report of this investigation has not yet been made.

ALFRED KÖCHER AND HIS PACE MAKERS.

We publish herewith an engraving of Alfred Köcher and his pace makers. For this picture, which was taken from an instantaneous photograph, we are indebted to our worthy contemporary the *Illustrirte Zeitung*. At the races which were arranged in the Friedenau-Wilmersdorf Park, near Berlin, for the benefit of the sufferers from the flood, Köcher succeeded in making 1.8 miles in 3 minutes 31½ seconds, thus beating the 3 minutes 32 seconds record of Joseph Fischer, which had formerly led the world. Köcher also made the road run of 62 miles in six minutes less than it had been made before, covering the distance from Zossen

"Things American," it seems well to describe some of the "things" that I have gathered.

At first blush it would appear as if in so great a city as New York, where everything can be had, no matter from where it originally came, no special memento, peculiar to the metropolis itself, was procurable, and yet there is nothing so artistic, so beautiful and so unique among the products of American industries as the Favre glass, which Mr. Louis C. Tiffany has recently invented. It is made into a variety of original forms in vases and other objects of interest to collectors and lovers of art.

The new combinations of color with color, of color over color, the deepening of tone, the subtle quality of the texture, the introduction of new colors, the union of metal with glass, and the wonderful ornamental effects obtained by embedding lines and threads of one colored glass into that of another while they are in a molten state and during the operation of blowing, are among the characteristics of this beautiful invention.

As we journey from New York toward the South, Trenton is reached, and the collector of things beautiful would, indeed, find it a difficult task to get away from the sample rooms of the potteries of that city. Perhaps, if he goes to the right place, he may find some bit of modern historical ware, such as the exquisite pieces of Belleek, that were made for the World's Fair,

The largest aluminum works in the world are, probably, those near Pittsburg, and a pleasant souvenir of a visit to that city, so noted for its metallurgical works, is a plaque of the coming metal. A medallion, with the head of Woehler, who discovered the element, modeled in high relief, brings to mind some bitter cold days spent there several winters ago.

Baltimore is the home of the Chesapeake Pottery, and a specimen from its kilns—perhaps a cracker jar—in the Severn or Calvert pattern, is something that cannot be found in every city; while the "Rebekah at the Well" teapot, that originated in a pottery nearer the center of the city, is still procurable, but certainly not in the *bric-a-brac* shops, for there they prefer to sell, at fancy prices, English cups and saucers, decorated with views of the city.

The rare old blue plates with which the Baltimore and Ohio Railway celebrated its completion in 1828 will sometimes reward the antiquarian who is willing to spend time and money to secure one of these treasures, on which is printed the little, stumpy locomotive that was built by Peter Cooper, early in the century.

It is in Washington that we find something, perhaps, more unique than elsewhere. No visitor to the capital city of the Union can have failed to have observed the various souvenirs, made of a plastic material and in many shapes, and having a grayish color, that are

ALFRED KÖCHER AND HIS PACE MAKERS.

to Lübben and back in 2 hours, 51 minutes and 53½ seconds.

THINGS AMERICAN.

By MARCUS BENJAMIN, Ph.D.

It is a curious peculiarity of most people that they desire to obtain some reminders of places that they have visited. In a way, the habit is a good one, but, unfortunately, it is apt to degenerate into vandalism, and a piece of a curtain from the Palace of Sans Souci or a button from a Napoleonic uniform, obtained at the price of a generous *douceur* to the guide, is too frequently the kind of souvenir that the traveler brings back from abroad with him. On the other hand, a carved piece of bogwood from Ireland, a bit of porcelain from Sevres, a mosaic from Florence, a sash from Rome or a piece of glass from Venice, a miniature wooden chalet from Switzerland, an agate from Oberstein, or something in iron from Berlin, are indeed pleasant reminders of a visit to the old world.

It has often seemed strange to me that Americans, who travel so much about their own country, should have so completely ignored those things that are peculiar to the many places within our own land; and yet there is scarcely an important city in the United States that has not some one thing that is made nowhere else. Some of these deserve special mention, and as an interest, largely fostered by our sons, daughters and dames of patriotic societies, has been developed in

held in Chicago; or a piece of the china set, with the heads of George and Martha Washington, that were made in 1876. There is also an interesting after-dinner cup and saucer, that I recall having seen, that was made for the New Orleans Exposition, in 1881.

Philadelphia is large, and while there may be things that are more characteristic, I have contented myself with the quaint toby jug, in old Rockingham ware, made there, and the two English plates, made in 1876, with prints of Independence Hall and the public buildings on them. The Mint affords one an opportunity of securing a specimen set of the silver coins, or, perhaps, one of the medals made there, certain of which are exceedingly beautiful.

As we go west from Philadelphia, Gettysburg—famous as the field of the greatest of modern battles—may be taken in on the way. Bullets, pieces of shell, bayonets and the like are still common and far too plentiful to be other than genuine. It was less than ten years after the battle when I first visited the field, and then, among the "relics," that which most attracted my attention was a lamp, the bowl of which was made from an unexploded shell that had been carefully emptied of its dangerous contents.

At Summit Hill, in Carbon County, Penn., are to be had what are called "anthracite coal novelties." These are simply carvings in the hard coal, which takes a polish similar to jet; and they are quite attractive, especially when care has been taken to secure a specimen containing a vein of pyrite.

everywhere for sale. They are of paper pulp, obtained from the government bank notes that have been reduced and macerated at the Treasury Department. The operation is an interesting one to see. Each object bears a small label giving the estimated value of the original bills, and one may easily bring away with him a souvenir with an estimated original value of \$50,000. Less unique, but at one time quite common, were bits or chips of stone from the Washington Monument. On many of these were crude paintings of the tall white shaft, or else of some public building in Washington. At Mount Vernon canes and other commonplace objects in wood, grown on the place, are for sale, but they are without special interest.

The battle fields of Virginia afford relics, and a company in Richmond, Virginia, advertise a tastefully finished cane, ornamented with a silver plate, upon which is inscribed the name of the battle field from which it came, cut from any one of the following historical fields of the late war: Seven Pines, Fair Oaks, Gaines' Mills, Garnet Farm, Malvern Hill, Cold Harbor, or Petersburg.

The deposits of phosphate rock in South Carolina yield fossil sharks' teeth that form convenient paper weights, which are common in Charleston, where also the brilliant plumage of semi-tropical birds may be purchased, and with which fans are easily made. In Florida, especially in Jacksonville and St. Augustine, there are stores where paper cutters and other objects, carved from orange wood, are to be had. Stuffed alli-

gators, so small as to be easily packed in a glove box, are everywhere sold. Fans in bright colors, like those from Cuba and Spain, with views of St. Augustine, from the old San Marco to the modern Ponce, are equally common. Shells and strange seeds, made into jewelry, abound; while pieces of the curious coquina stone, cut in squares or bricks, are sold for a few cents. It is with this material that many of the newer and beautiful buildings in St. Augustine are built.

It is in New Orleans that the curious carving wares from Mexico begin to appear. Here we find the strange pottery from Guadalajara, and the wax figures that the nimble fingers of the native artists fashion with such ease. Many of these are made in New Orleans itself. Nor must the feather work be forgotten, for it is not uncommon. But that which I value most from New Orleans are the Indian Choctaw baskets, that are still to be had in the French market. If the makers of them are as old as the saleswomen, surely, in years to come, they will be rarities of the first water, commanding high prices. Miniature cotton bales, that purport to have been made during slave times, are not without interest, and may be found in shops in Canal Street.

Before leaving the Southern States, it is well to remember that specimens of Confederate postage stamps and Confederate bills are on sale in many of the cities below Mason and Dixon's line.

If we ascend the Mississippi to St. Louis, we may be fortunate in finding some authentic piece of pottery from the mounds near that city. The vicinity is rich in the remains of that prehistoric people about whom so little is known. Indeed, St. Louis itself is on the site of several mounds. Magnificent quartz crystals are to be had for next to nothing at the Hot Springs, in Arkansas. Specimens that exceed in beauty the famous crystals from Switzerland are on sale along the principal street of the resort.

In Texas, steer horns, fully as beautiful as those from the cattle in the vicinity of Rome, Italy, are often to be found, and may be had for the asking. In San Antonio, with its never to be forgotten Alamo, and its beautiful missions that are slowly but surely crumbling into ruins, the products from over the line are sold to the curiosity hunters. Monkey jars and water bottles, feather work and carved onyx are seen in the shop windows.

Turning abruptly north, we find in Denver curiosities that are of Indian origin; but to my mind, the sprouting silver buttons that resemble an open rose are most interesting, while the large green garnets from Salida, that occur in perfect crystals, are souvenirs of greater local interest. Santa Fé is par excellence the place to purchase Indian pottery. Jake Gold's museum is known the world over, and in it may be had genuine specimens from most, if not all, the New Mexican Indian handicrafts. The Navaho blankets, that are so highly prized, are to be had here, while the more brilliant Mexican blankets, made in Santa Fé itself, are sold for far less than elsewhere. The smaller blankets, that cost from \$3 to \$4 in Santa Fé, readily command \$10 to \$15 on the Pacific coast. Indian baskets, from the coarse yucca to the more closely woven ones, are to be had, while silver ornaments, made by the Indians, will sometimes reward those who know what to ask for; and the still rarer paintings, on elk skins, are occasionally to be had. Gems, including agates and the turquoise from the Los Cerillos mines, near by, are sold in Santa Fé at reasonable prices, while on the south side of the Plaza are silversmiths, who make the curious filigree silver work that recalls a similar art practiced in Florence and elsewhere in Northern Italy.

From Santa Fé westward along the lines of either Atlantic and Pacific or the Southern Pacific Railways, Indian curiosities are procurable at all the larger towns. The large black ollas from Santa Clara, New Mexico, make handsome ornaments, and certainly much of the grotesque pottery of the Pueblo Indians is worth buying. At El Paso there are Mexican curiosities to be had, and especially if one is willing to cross the river into old Mexico by the only international horse car line in the world he will find large stores where Mexican opals that seem almost to have borrowed their brilliancy from the sun are common, while the rag, wax and feather work are lavishly displayed. Carvings of the so-called Mexican onyx, mostly of fruits, may be bought at reasonable prices, and one firm offers a ninety page catalogue with over one hundred illustrations for ten cents.

Near Fort Yuma, where the train enters California, there is an Indian reservation, and at the railway station the haughty braves who disdain to offer their wares are not loath to part with them for a few dimes. At Los Angeles, Mexican and Indian curios have well nigh disappeared, although here and there old Californian baskets are to be had, but they command a good price. Orangewood comes again into notice, and slabs of it in all sizes, from a few inches up to a foot or more, are to be had with attractive paintings of either the leaf, blossom and fruit of the tree itself or with the more somber representations of one of the old mission churches that are in the immediate vicinity.

Naturally there are curiosity shops at the delightful seaside resort of Coronado Beach, opposite San Diego. A small herd of ostriches are kept there on exhibition to show the development of a new American industry. An egg, emptied of its contents, or one of the plumes can readily be purchased. Polished abalone shells are found, and the green variety is not so scarce as further north. The shells themselves are often to be picked up on the beach. I remember fans made from a little burrowing owl being sold at Coronado. The wings are spread around the body in a semicircle, and, to say the least, they are pretty souvenirs. The Mexican owls are more expensive.

The red variety of the abalone shell that attracted my fancy was one I found in Monterey. At Santa Cruz seaweeds pressed and grouped on cards seemed common, but they were without interest. A few miles north of Santa Cruz is a group of big trees, and there I secured a square board of the mottled pine with which when polished book covers can be made. I use it as a cover for a portfolio to hold some engravings of the old missions that were purchased in San Francisco.

If there were no other object in view, the magnificent drive of twenty-six miles up Mount Hamilton to the Lick Observatory is worth taking for its delightful experience, to say nothing of the views that are seen as

the mountain is ascended. I hope Professor Holden will pardon me if I recall as a souvenir of my visit to Mount Hamilton the print of a photograph of the moon taken at the observatory which he signed for me, and which now hangs in my library, framed crudely in some wood from branches from trees that I cut in descending the mountain.

Chinese curiosities are naturally what are to be found most abundantly in San Francisco. A dirk knife in a carved bone case from Tong Yeun, in Jackson St., is a reminder of a visit to Chinatown, while a knife concealed in an imitation fan is also a trophy from the Chinese quarters. In Oakland it was quite possible until recently to purchase jewelry, such as sleeve buttons and scarf pins, made with thin sections of gold quartz showing the metallic veins set in California gold, and I understand that San Francisco jewelers make some very handsome souvenirs in California gold of different shades for tourists. It is also possible to procure the tiny gold fractional parts of a dollar which were coined at the United States branch mint in San Francisco some years ago. They are no longer made, and certain dates command a premium among numismatists.

There is a Chinese quarter in Portland, Oregon, and there again one may gather curios from the Orient if he so desires. A pack of Chinese playing cards that cost me a trifle, perhaps "two bittee," is the result of an evening's stroll among the haunts of the Celestials. In the vicinity of Puget Sound, as in Tacoma and Seattle, Indian curiosities, chiefly those made by the Indians from Alaska, who come down for a short while during the autumn to pick hops, are to be had. Closely woven baskets, such as those seen in Southern California, are found and also the stone carvings, representing totem poles. In Victoria and Vancouver, in British Columbia, similar curios may be purchased, including spoons made from the horns of buffaloes or perhaps more correctly bisons; also woven mats from Alaska and silver bracelets purporting to be made by the natives, but which are said to be made in Victoria by Indians in order to supply the tourists' demand.

Coming east from the Pacific coast, skins are sometimes procurable, but horns are more common, and frequently a pair of antlers can be picked up from the heaps that are seen in the vicinity of the railway stations. Doubtless here and there bead work can be had, but I failed to find any. It is at Niagara Falls

to be found in Boston, where also is sold the Longfellow pitcher, which is of English make. The Low tiles from Chelsea are genuine American products. The witch jug from Salem, made at the Hampshire pottery in Keene, is also an American article, while the stranger vases of mottled clay from Gayhead are unique. Curious pipes are also to be had from Cottage City, where the Gayhead Pottery is. Tiles, plates and pitchers abound and are to be had with American views, such as the old tower in Newport or the homes of our New England poets. Here and there are glass factories, some of which afford things of interest. The amberine of reddish shaded glass, the Burmese, the Sicilian and the peach blow are among the varieties of interest, none of which are now made, as far as I know, that were found in the show rooms of the glass makers in New Bedford, some years ago, while the old cut glass of Sandwich is held at fancy prices.

No mention of souvenir spoons has been made, and yet the time will come when the better varieties of these will be highly prized by those who were wise enough to collect them when the craze was on. There can be no doubt, it seems to me, that by a judicious selection of the curiosities sold in this country one can fill one's home with interesting "Things American," many of which will recall pleasant visits to various sections of the Union.

THE TOMATO GRAFTED UPON THE POTATO.

THE origin of grafting is very ancient. This is not the place to reproduce the history of the art, which is given in special works, but it is likely that man learned it in nature. Who has not seen examples of natural grafting in the woods between the branches or trunks of trees, or the branches of a thick bush?

Nevertheless, as easy as grafting is in many cases, a person who is not up in the art will be amazed upon opening a manual of arboriculture to see the number of varieties of grafts that have been devised by nurserymen and horticulturists, and the knowledge that has had to be acquired in order that the operation may never prove unsuccessful. The great trouble has been and is still to ascertain the affinity between the subject that is to receive the graft and the plant whence the scion is derived. In fact, it is necessary that the anatomical elements of the plants brought into contact

TOMATO GRAFTED UPON THE POTATO.

and similar resorts that much of the Indian beadwork made into cushions and the like is to be found.

Indian pipes or calumets made from the mineral catlinite may be bought in the Northwest, and at Sioux City are the works where the agatized wood is cut into slabs, some of which are made into clock faces and the like. These are also to be had in St. Paul. What to look for in Chicago is indeed a question. Relics of the great fire are presumably no longer obtainable, but I well recollect a little bell that purported to be made from the molten metal of the big bells of the City Hall that were common in 1873. Probably souvenirs of the World's Fair held in 1893 would be more easily obtainable. There were many such, and perhaps something has been made from the material of the buildings that were torn down. Exquisite bronzes reproducing in miniature the animals that were conspicuous on the grounds, notably the grizzly bear by Proctor, were made, but they were very expensive. The Columbian half dollars or the Isabella quarters are not bad reminders of the Exposition, and even the tickets of admission, especially those that were so beautifully engraved, are well worth preserving.

At Cincinnati there is the Rookwood Pottery, and its products are everywhere conceded to be exquisite works of art. The "aerial blue" coloring is one of the latest of its many styles and is the most admired by some. The rare Matt Morgan, Kezonta, and Avon wares were also made in Cincinnati, but the potteries where these were produced have long since ceased to exist. Curious pieces of pottery are also to be had in East Liverpool and Steubenville, Ohio. The usual run of curiosities are to be had at Niagara; besides the Indian beadwork already mentioned, birch canoes can be purchased, but most of the articles on sale are from elsewhere, especially the agates. A fossil lingula from the Niagara limestone, found along the line of the river, came to me from the hands of Joseph LeConte, one of the greatest of American geologists, is a souvenir of a visit to the falls with a party of geologists. As we come nearer home I am reminded of a day spent in Utica searching for the American imitations of the old Flemish blue stoneware. Unfortunately, the maker persists in adorning his wares with German legends, but still an interesting collection of "steins" can be procured. In Albany, an enterprising jeweler had made in Austria some articles of the brilliant decorated Hungarian glass, which, even though made in Europe, have designs that recall local events of the times of the Patroons.

In New England souvenirs run largely to pottery. Rare bits of the Chelsea faience are still occasionally

shall be as similar as possible and that their multiplication shall occur at the same epoch, in order that such elements may unite intimately, and that the graft, firmly fixed, may give the results that are expected from it. Much has been written upon this subject, which is not yet exhausted. However, all are agreed upon one point, and that is that it is indispensable that the plants associated shall belong to the same family, if not to the same genus, in order that the graft may take. If there are any exceptions to this rule, they must be very rare. It is curious to find, even, that some species placed very near each other in classification absolutely refuse to unite, and that the adhesion of others proves of short duration. We may here quote a few remarks from the pen of a master in the art of grafting:

"The explanation of the sympathies and antipathies in the grafting of different species is still wanting. No explanation, either, has been given as to why certain genera can be grafted upon others without the reciprocal being possible. For example, the apple does not succeed upon the pear; while we have seen the latter living for some years upon the former. The pear adopts the quince, and even the white thorn, as a subject, but these plants do not render the same service to their ally. The service, medlar, quince and quickbeam, which are so unlike each other and the white thorn, all sympathize with the latter. The peach and apricot graft upon each other with difficulty, while both succeed upon the almond and plum. All the cherries graft upon the mahaleb, but the latter grafts upon no cherry."

The number of such examples that have been revealed by experiment, but that it is almost impossible to foreknow a priori, might be still further increased.

Grafting has rendered and is still rendering great service in the multiplication of sarmentous plants such as clematises, or, again, of peonies, and even of certain arborescent species which are refractory to propagation by slips; and it is then upon roots that the grafting is practiced, the subjects selected being vigorous species or varieties always belonging to the same genus.

It is also possible to graft annual plants when these have stalks or branches that are sufficiently fleshy, and a striking example of this is shown in the accompanying engraving. It cannot be said, however, that this process has entered into practice, and up to the present it has been merely a matter of curiosity. Carrière, who was a practical man and an indefatigable investigator, tried the most diverse kinds of grafting, and among other results, obtained a crop of tomatoes upon stems of the bitter-sweet. Mr. C. Baltet, an experimenter of