# Scientific American.

#### WHAT CAN BE MADE OF ORANGE PEEL.

It is related that a Chinese artisan of Canton, named Lim-Kao-Poung, who lived two hundred years before Christ, made a minute junk out of a dry bean pod. It was a masterpiece of skill and precision. The junk was provided with a rudder, cabins in the rear, a mast with its rigging, and a crew. Upon the exterior of the hull were engraved several sentences from Confucius. In order to recompense the maker, the Emperor, Tsi-Fou, awarded him 1,000 taels.

A number of objects, of which the manufacture does not require as much patience as the junk did, nevertheless resemble it in one respect, that is to say, in the abundance of the material of which they are constructed and the skill that has to be put to the test. Such are collars of carved filberts, chains of cherry pits cut out into rings, apricot pits metamorphosed into cocks' or parrots'

nuts, etc.

Small and very interesting objects can also be made of orange peel. The materials for the purpose are simple, and consist merely

heads, baskets made of horsechest-

of a very sharp penknife and a few splints of wood of different lengths.

Let us take an orange, says Lectures pour Tous, our French contemporary, and make four incisions in it at right angles, starting from near the base. With the thumb nail inserted under the rind, let us separate the latter from the fruit without tearing it. We thus obtain four quarters of peel united at the base. Now let us cut these quarters into thin strips by strokes of the knife blade given alternately from the free summit of the quarters to their point of junction, and from this point to the summit, in taking care each time to stop at a short distance from the extremity. We thus form a ribbon interrupted by four small lozenges, and obtain an entanglement of narrow strips. Let us arrange these upon the orange and wind a strip of the rind into a spiral and support it by a splint of wood thrust into the top of the orange. In this way we obtain an object that has somewhat the aspect of a pile of rocks upon which

If it be desired to obtain an animal less frightful than a serpent, carve the top of an orange, and here and there raise up a few bits of the rind, so as to form two pointed ears, four legs, and a little twisted tail; and, behold, we have a young porker that appears to be upon the point of grunting.

formidable serpents are erecting themselves in

Not content with being a carver of animals, the artist in orange peel may raise himself to the dignity of a portraitist. See this simple fellow who comes into being in measure as the knife indicates his two round eyes, his flat nose, his widely spaced ears, and his thick lips. It would be possible in two minutes to form in this way the portrait of an old woman

with her cap and spectacles, a clown with toupet and wig, or an old bewhiskered sailor smoking his pipe.

menacing attitudes.

If a bouquet be desired, there is nothing easier than to make it. Place an orange upon a vase, and, in the entanglement of the strips of rind, insert here and there a few pansies, the beautiful, velvety tints of which harmonize well with the warm colors of the orange.

# THE PROPOSED WIDENING OF LONDON BRIDGE.

As far back as the year 1800 a committee, in reporting the condition of the old London Bridge, recommended that this ancient structure, being no longer able to discharge its duties with proper regard to the safety of the public, should be removed. In its place was erected the present handsome

stone structure which constitutes one of the best pieces of work carried out by the celebrated Rennie. The work on the structure was commenced in 1824, and it was opened for traffic in 1831. After twenty-two years of successful service, the great increase in traffic, both pedestrian and vehicular, which was due largely to the close proximity of the railway station to the approaches on the Surrey side, led to the consideration of plans for increasing its carrying capacity. From the year 1853 to the present time there has been a constant agitation of the question, which

not even the opening of the Tower Bridge, half a dozen years ago, served to subdue. The first proposed scheme of enlargement, in which the width of the bridge was to be increased to 83 feet, was abandoned in consequence of Sir Benjamin Baker's opinion that it would be unsafe to extend the present foundations.

The present plan of widening the bridge, which is certain to be carried through, contemplates the lateral expansion of the whole bridge from 53 feet 5 inches to a width of 65 feet. The enlargement will consist of a widening of the ootwalks on each side of the



HOW TO CUT THE PEEL OF AN ORANGE.

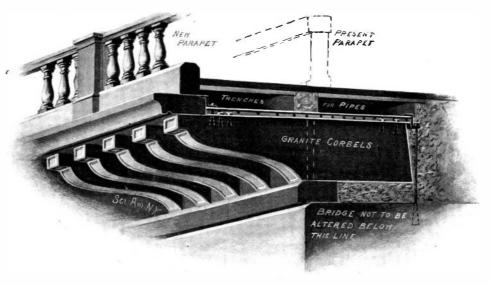
A YOUNG PORKER.

A PORTRAIT IN TWO MINUTES.



A ROCK OVERRUN WITH SERPENTS.

bridge. This will be effected by means of granite corbels, or cantilevers, which will be 10 feet in length over all, 13 inches in depth at the outer end, and 2 feet 9 inches in depth on the inner half, which lies within the face of the present bridge, and will be built solidly into the masonry. The embedded portion is 4 feet 6 inches in length. Upon the upper face of these corbels and extending their full length will be bolted a 6-inch by 3-inch steel tee, and the connection will be reinforced by a 3 inch by 2½-inch steel angle at the inner end, which is riveted to the T and connected with the main structure of the bridge by long 1-inch bolts, which will be carried well down into the masonry. At the outer end a clamp, measuring 12 inches by 3 inches, and 1 inch in thickness, will be bolted



PROPOSED SCHEME FOR WIDENING LONDON BRIDGE.

to the tee, and will extend up and over the inner edge of the cornice. With a view to reducing the total weight on the outer edge of the extended footwalk, the present solid parapet will be removed, and an open balustrade, of the kind shown in our illustration, will be substituted. Some objection has been raised against this alteration on the ground that it will not harmonize with the rest of the design, and we agree with our contemporary, The Engineer, to which we are indebted for our information, that the tout ensemble of this handsome bridge will be in nowise

impaired by the change. The cost of the entire enlargement is estimated at about \$500,000.

#### Silkworm Gut for Fishing Lines.

The production of what is known as silkworm gut for fishing lines is a curious industry, says The Textile Record. It has followed the decline of silk culture in the vicinity of Murcia, Spain. The grub is fed as usual on mulberry leaves, but before it begins to spin is drowned in vinegar, and the substance that would have formed the cocoon is drawn from the body as a

thick silken thread. The thread is treated with chemicals, dried, and put up in bundles of 100.

#### Lucrative Patents.

The Century Magazine recently had an interesting article on our patent system, and possibly the most interesting section of it is that which relates to the success which has crowned the efforts of many inventors of novelties and labor-saving inventions. We quote as follows:

"Every one has heard not only of the enormous sums realized

from the great invertions of the last half century, but also of the large returns yielded by things apparently trining which have struck the public fancy or met the public need. The toy called the returning ball, a small ball attached to an elastic string, is said to have produced a profit of \$50,000 a year; the rubber tip on lead pencils has yielded a competence to the inventor; more than \$1,000,000 has been earned by the gimlet-pointed screw, the inventor of which was so poor that he trudged on foot from Philadelphia to Washington to get his patent; the roller skate has yielded \$1,000,000 after the patentee spent \$125,000 in England fighting infringements; the dancing Jim Crow is set down for \$75,000, and the copper tip for children's shoes at \$2,000,000; the spring window roller pays \$100,000 a year, the needle threader \$10,000 a year; from the drive well \$3,000,000 has been realized; the stylographic pen is credited with \$100,000 a year; and the egg beater, the rubber stamp, and the marking pen for shading different

colors with large sums. These are only a few examples among hundreds that might be cited. No wonder inventors are hopeful when they reflect that comfort for life and fortune for their children may come from a single fortunate idea."

## The Mosel-Saar Canal of Germany,

The Germans are persistently improving their canal system. The latest scheme relates to the winding Mosel, which begins in France and ends its course at Coblenz, where it empties into the River Rhine, a total distance of 514 kilometers (319 miles) by water, but in a straight line only 274 kilometers (170 miles). The proposed scheme will embody a length of about 200 miles and a level difference of 340 feet. 'The Mosel

at its source is 735 meters (2,411 feet) above sea level, and at its junction with the Rhine 58 meters (198 feet), the main incline in the river bed being in the upper course. To get over this difference of 340 feet forty-two needle weirs are planned. The cost, apart from the harbors, is estimated at nearly \$15,000,000. The scheme would also involve the straightening of about 40 miles of the Saar, which is a tributary of the Mosel; and this would bring the cost to about \$18,-000.000. The whole question was discussed at a special meeting held in Metz in the latter part of last June. Although the scheme would rival the Rhine-Elbe Canal, representatives of the Westphalian Coke Syndicate have given it their support. Like Westphalia Lorraine and the Saar district owe their development chiefly to the iron and

coal industry, though cement and brick making are also important.

## The Center of Population in the United States.

The center of the population in the United States is now at a point in latitude 29 deg. 9 min. 36 sec. north and longitude 85 deg. 48 min. 54 sec. west, which point is in southern Indiana about seven miles southeast of he city of Columbus. Since the last census of 1890, the center of population has moved westward about fourteen miles and south about three miles.