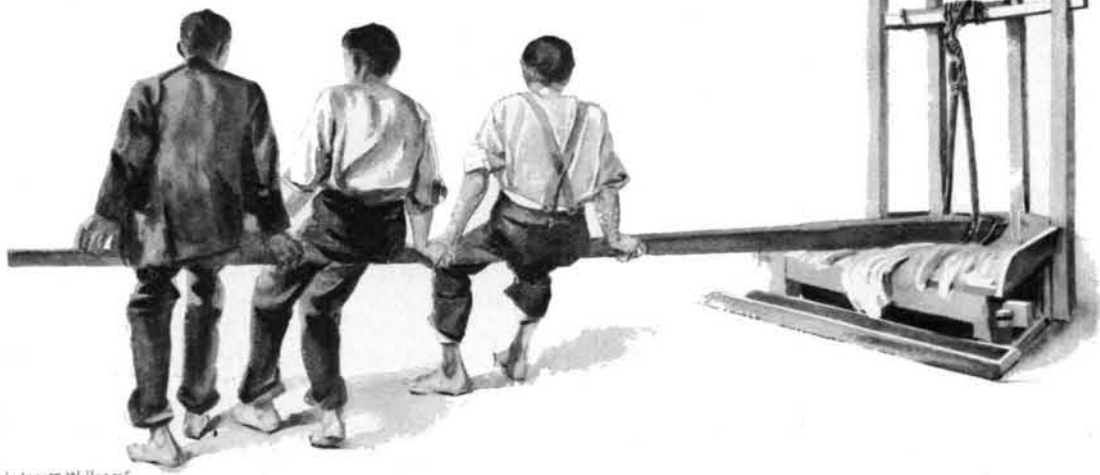


**The Congressional Library.**

The National Congressional Library was established in 1800, but during the war with England was destroyed, together with the capitol, in 1814. Many documents destroyed then it has been impossible to replace. Part of them, however, were duplicated in the library

**MAKING SPAGHETTI.**

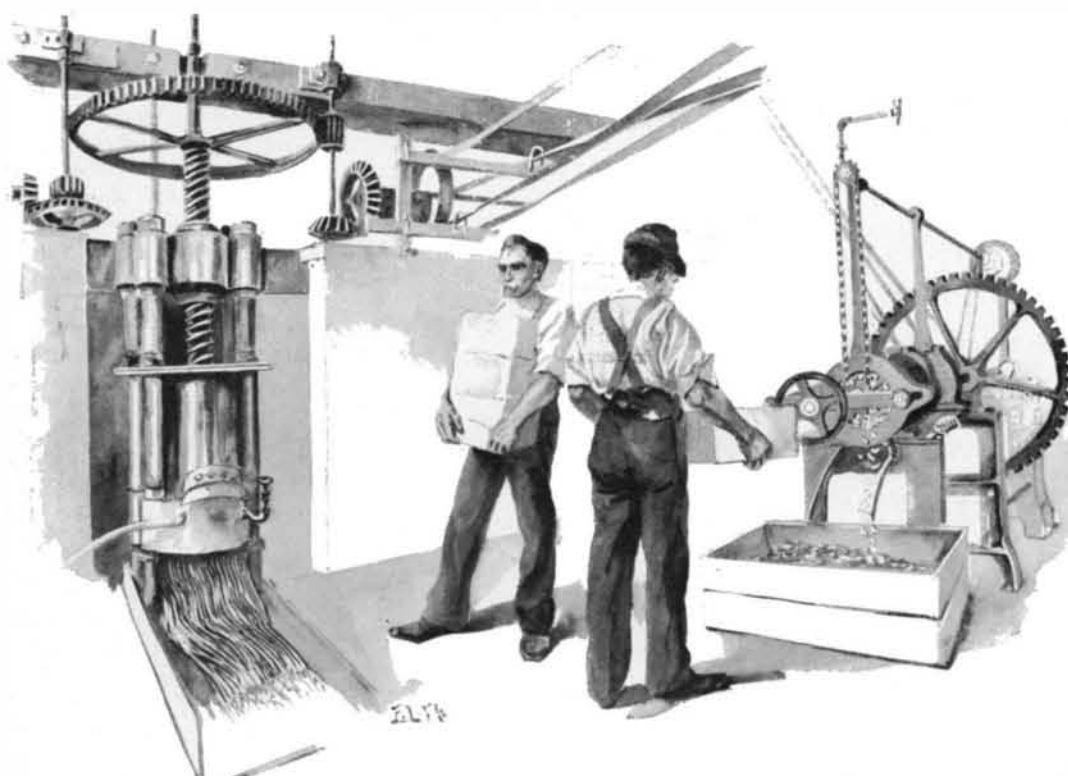
Every country and nation has certain prepared foods that are distinctly peculiar to that place or people. These are often the standard articles of nourishment, and frequently combine the elements of nutrition with inexpensiveness, so that they serve as general and per-

**MANUFACTURE OF SPAGHETTI--KNEADING THE DOUGH.**

of Thomas Jefferson, which was purchased by Congress, and consisted of 7,000 volumes. The library had grown to 55,000 volumes in 1851, when by an accidental fire it was reduced to 20,000 volumes. The next year Congress appropriated \$75,000 to replenish it. Since that time it has grown steadily. The library proper occupies the entire western projection of the capitol building. The new and recently built separate structure will afford room for the natural expansion and give more opportunity for classification and arrangement. The growth of the library has been due in part to the liberal Congressional appropriations, averaging in the last ten years \$11,000 per annum, but more to the results of the Copyright Act and the consolidation with the library of the Smithsonian Institution. The largest private donation to the National Library has been that of Dr. Joseph M. Toner, of Washington, who, in 1882, presented his private library of over 27,000 volumes. According to the regulations of the copyright laws, each work copyrighted in the United States must be deposited in the Library. This part of the law went into effect in 1870, when the Patent Office library was deposited in the National Library, says Self-Culture. The National Library is distinct from the libraries of the Senate and House of Representatives.

**The Completion of the Boston Subway.**

The first trolley car ran through the completed part of the Subway on May 15 to test the roadbed and the rails. The trip was uneventful, everything being in excellent working order. A force of over 200 men is now employed in laying tracks and making electrical connections. It is expected that Sections 1 and 2 will be open for public travel Bunker Hill Day, June 17.

**PRESS FOR MAKING SPAGHETTI AND MACHINE THAT CUTS HALF-INCH LENGTHS.**

As an article of commerce it has a considerable importance, being sent from the manufactories in America to many other countries, as well as supplying the consumers in this country.

A large supply of Italian spaghetti and macaroni in America is made in Boston. The manufactory is located in the Italian quarter of that city. It is a three-storied wooden structure, each story being utilized for different processes in the manufacture. The lower floor has all the machinery that moulds into form the raw masses of dough, while the two upper floors are devoted to drying, packing and assorting. A large wooden trough, capable of holding a great quantity of flour, is in a small ante-room.

The flour is poured into this trough, in as large a quantity as is desired for one batch of dough. This is mixed thoroughly with water, and stirred about by a man, who uses a wooden paddle, or, if necessary, he is not over-scrupulous about the use of his hands as mixing implements. The flour and water is stirred about until the whole mass becomes a batch of heavy, tough dough, and cannot be longer stirred by the hands. This mass is then separated into several pieces and taken to a low, wooden, table-like stand, upon which it is spread. Suspended over this stand is a great wooden beam, hinged and pivoted at one end by fitting into a cup-like iron socket, and hung partly by a stout rope.

The other end extends over the table, quite a distance (about 10 feet), and is rounded and tapers somewhat. The part of the beam that is immediately over the table is wedge-shaped on its under side. When not in use it is hung out of reach, so as not to interfere with the workmen; but when the dough is placed upon the stand, it is taken down and extends over the mass. Three and often four men seat themselves upon the rounded end, and by concerted signal commence to hop, carrying with them at each spring the beam upon which they are seated. This they continue, not ceasing until they describe a semicircle, the beam swinging on its pivot and the wedge-shaped part coming down upon the dough repeatedly, denting it in long narrow strips. Backward and forward these fellows hop with the beam,

**PREPARING FOR DRYING.**

until at last the dough is chopped into an elastic consistency, that is desired for its further use. This is the only effectual way of kneading dough when in such a mass. When it is at length well kneaded, the beam is suspended out of reach, and one of the men cuts the lump into blocks about 14 inches square, with a large knife. This is then taken to a great machine, which converts it into the desired form, either macaroni or spaghetti. This machine has a large upright cylinder, and into this is forced a great steel plunger, which fits very snugly, pressing whatever may be in the cylinder into a most compact mass.

The dough is placed into this cylinder, and packed as solidly as possible, when the machinery is set in motion, and slowly the plunger forces its way by means of a powerful screw down upon the dough.

The bottom of the cylinder has a metal plate, perforated and furnished with mandrels.

As the dough is pressed ever tighter it finally escapes through the perforations in the form of macaroni or spaghetti. The dough, being moist and tough, does not break as it comes out, and when a quantity is in the receiving trough, it is cut off by a workman with a large knife and carried to a framework over which lie bamboo rods, upon which it is hung. The workman separates piece by piece, spreading it the length of the rod, and with large shears cuts it evenly at the ends.

This he continues until the cylinder's contents are exhausted, and then takes the rods of spaghetti and puts them upon racks, at the ceiling of the room, where it hangs until ready to be taken upstairs.

Another machine similar to the first, except that the cylinder is horizontal, prepares the cut pieces of macaroni.

A knife, pressing close to the head of the cylinder,

revolves by a cogwheel arrangement, cutting the issuing macaroni evenly and uniformly. This drops into a receiving box and is put by a workman upon a cloth stretcher to dry.

When the spaghetti that is hung above is dry enough, it is taken down and carried to the second floor, where another workman takes it off the bamboo rods, and lays it in the same order upon a long cloth bottomed stretcher. This he accomplishes by placing



HUNG ON BAMBOO RODS TO DRY.

the rod of partially dry spaghetti upon the stretcher and then rolling the rod away by pushing at either end.

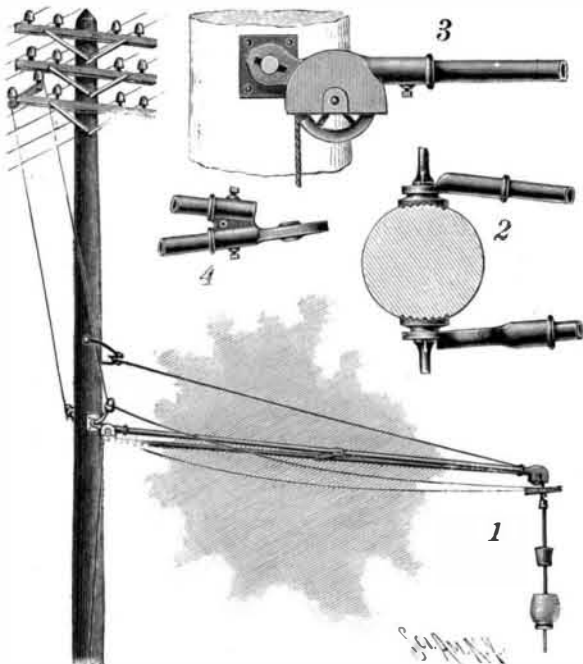
These stretchers are then piled upon racks one over another until ten or more high.

Here they remain until the spaghetti is thoroughly dried, when it is packed in boxes, usually twenty-five pounds per box, and at length is sent to the consumers. The short variety is taken to the next story, where it is spread upon a large canvas and remains until very dry, when it is put into barrels and finally reaches its market.

EMERY LEVERETT WILLIAMS.

#### A MAST ARM FOR ELECTRIC LAMPS.

The illustration represents a light and strong construction of an overhanging mast arm or bracket from which electric lamps are suspended, one which may be readily applied to a post and adjusted to posts of different sizes. It has been patented by Joseph J. Shickluna, of No. 316 Potomac Avenue, Buffalo, N. Y., and is being introduced in Canada by the Shickluna Mast Arm Company, of Port Colborne, Ont. Fig. 1 represents the application of the improvement, Fig. 2 being a cross section and Fig. 3 a side view of the connection of the inner end of the arm with the post. The arm consists of a pair of forwardly converging members, made of gas pipe or tubing, connected at their front ends by a head, as shown in Fig. 4, the head also comprising a pulley casing in which is an outer guide pulley over which passes the cord from which the lamp is suspended. The side members of the mast arm have at their rear ends eyes or bearings which receive pivot pins formed on base plates secured to the post by screws or



SHICKLUNA'S MAST ARM FOR ELECTRIC LAMPS.

otherwise, and in the rear end of one of the members is a pulley casing in which is the inner guide pulley over which the suspension cord passes, the cord passing through the hollow member connecting the two pulley casings and thence to the lamp. The side members of the mast arm, at or near their middle, are connected by a yoke or bridge, made in two sections, adjustable upon each other, whereby the members may be somewhat contracted or spread apart at their inner ends, as may be desirable in connecting the arm to posts of different diameters. Simple means are provided for locking the eyes of the side members removably on their pivots. A supporting wire or cable sustains the mast arm in its horizontal position, the wire extending outward from a yoke on the post above the mast arm to the outer pulley casing. Upon loosening the set screws of the several sockets the parts of the mast arm can be separated and compactly shipped.

#### The Spoiling of a Horse!

The following description of the method employed by many persons in handling horses, which we find in the Journal of Medicine and Science, is not simply amusing, but conveys useful suggestions to all who own or have horses to manage, either in the stable or on the road:

Enter the stable with an appearance of great hurry and flurry; rattle open the sliding doors, and, if there are any swinging doors or shutters, throw them back—each with a loud “bang!” This will wake the horse up, and, if he happens to be a nervous animal, will increase the chance of his running away, before the day is over, about fifty per cent.

When you are ready to enter the stall, order the horse, in a loud, rough voice, to “stand over”—at the same time squeeze in and poke your thumb into his ribs. Back him out with great haste and violence, and with such a short turn that he cannot fail to tread on his own feet and back his hips against the side of the stall. Drop the halter and go in search of the harness; if the horse stirs, grab him and yell “Wow!”—the correct stable pronunciation of “Whoa.” Adjust the back part of the harness gingerly, so as to give the horse the impression that you are afraid of him; then draw up the saddle girth with all the quickness and vigor you are capable of. If the horse snaps at you for this, throw up your arms and jump at his head or strike him in the face. If he declines to lower his head for the adjustment of the collar, put your arms around his neck and swing downward with your whole weight—perhaps you can weigh it down. Force the bit into his mouth with your thumb, and, standing on tiptoe, struggle with him until you have succeeded in pulling his ears and forelock into place, and put your finger into his eye.

If the horse continues manageable, lead him toward the carriage with the reins trailing on the ground behind him. If there is a door you can leave unfastened, so that it will slap against him as he passes the doorway, do so, and, if he has occasion to step up or down a step, be sure you check him up so that he will perform the feat with a series of plunges and stumbles. Have the shafts propped up, and as you lead the horse under them kick the prop out, thus letting them drop on his back. This will accelerate his motions and teach him to keep an eye on the carriage, which he will henceforth regard as a monster. Run the vehicle down onto him and punch the ends of the shafts into his thighs, or, if you cannot manage to do that, run one of them between his fore legs. Swear, jerk the horse, pull the shafts into place, and adjust the lugs. Keep yelling at the top of your voice, “Wow!” “Back!” “Get over!” etc., to keep the horse awake and show that you are master of the situation. Twist the traces carefully, and leave either one holdback or the shaft girth unfastened. If the driver does not get killed before he has a chance to discover this arrangement, he can get out and alter it.

If you are going to drive, take up the reins and cluck to the horse as soon as you put your foot on the carriage step. If he does not start off at once at a gallop, jerk him and strike him with a whip; but, if he is a good horse and you have followed the foregoing directions carefully, he will probably be only too ready to

start. In that case jerk him and yell “Wow!” “Back!”—always say “back” when you say “whoa”—the horse will remember the combination and back somebody off a precipice some day instead of stopping on the brink. Drive him at the top of his speed from start to finish, first on one side of the road, then on the other, jerking and whipping him continually, and yelling from time to time. This will make the horse respect you, excite the admiration of the lower classes, and endear you to the populace generally.

If you have occasion to stop on the street, either do not tie the horse at all or tie him to something he can take with him if he wants to go away. If the weather is chilly, it will toughen him to leave him uncovered; but, should you choose to blanket, throw the blanket over him so loosely that the first breeze will turn it over his head. A cold wind blowing on the chest of a heated horse will refresh him greatly, and if he stands in the gutter with melted snow and ice water running around his heels, so much the better.

When you return to the stable, let the horse cover the last few rods at the top of his speed, and pull him up with a loud, triumphant “Wow!” Now don't miss a glorious opportunity to try the disposition of the animal. Unfasten all the attaching straps but one holdback, and start the horse out of the shafts. When you see the result, yell like a fiend. The strap that remains fastened will first make the shafts punch the horse in the stomach. Then pull all the harness off his back; if he does not kick, it is a sign that he is a good horse—there is no mustang in him. If it is winter and the horse much heated, either leave him in the stable unblanketed or put the blanket on at once and leave it on, wet, all night. A draught of cold air, from the



DETAIL OF WORK IN COMPLETING THE DRYING OF SPAGHETTI.

opening above the manger to the door behind, blowing the whole length of his body, will help to season him. If it is summer, slop his joints with cold water and give him a couple of swallows to drink—a “couple” means any number, from two to a hundred.

If the horse is tired and exhausted, do not forget to feed him at once. He might starve to death if you left him for an hour. A heavy feed of corn will please him greatly, and a generous allowance of corn meal will make him look nice and fat—probably before morning. A liberal dose of ginger, pepper, or “condition powders” will scare away any evil spirits that may be hovering about, and make everything all right.

If the horse is not dead by the next morning, you can fix him up at your leisure and thereafter conscientiously recommend him as “tough;” but should he be so unreasonable as to die during the night, you can console yourself with the reflection that it was not your fault—the animal was constitutionally weak.

#### Mailing Scientific Books Abroad.

It is hoped, now that the Universal Postal Congress is in session at Washington, that measures will be considered by it for the raising of the limit of weight upon a single book which may be sent through the mails to foreign countries. At present the limit of weight allowed by national agreement is 2 kilograms (about 4 pounds 6 ounces). Of course books of a popular nature usually come under this weight, but this rule practically shuts out a large number of valuable scientific books. The cost of producing scientific books is so great, and the sale of them is so limited and is attended with so many difficulties, that the whole world must be looked to for a market, so that it is a hardship to those who wish to purchase the same, to have them sent by express at large expense. As the law now stands the scientific books would appear to be discriminated against, but if the limit of weight were raised to 3 kilograms, most of them could be carried.