

New Inventions.

How to Make Tea Properly.

The proper way to make a cup of good tea is a matter of some importance. The plan which I have practised twelve months is this: The tea-pot is at once filled up with boiling water, then the tea is put into the pot, and is allowed to stand for five minutes before it is used; the leaves gradually absorb the water, and as gradually sink to the bottom; the result is that the leaves are not scalded as they are when boiling water is poured over them, and you get all the true flavor of the tea. In truth much less tea is required in this way than under the old and common practice.—*Exchange.*

Galvanized Iron.

Iron is "galvanized" by the following process, which is a purely metallurgic operation, and has no connection with galvanism, as the name would imply: it simply means iron covered with zinc. The zinc is kept melted in an iron pan, and covered with sal ammoniac. The iron, after having been thoroughly cleansed by means of dilute acid and friction, is immersed into the bath of melted zinc, and stirred about until the surface has received a coating of that metal. When cool, it is nearly white, and may be exposed to the action of the air or water without fear of rusting. It is becoming almost universal in its application, and is very suitable for the roofing of warehouses and rough shanties on wharves.

How to obtain the True Meridian, or Twelve O'Clock Mark.

On a smooth, level surface, draw several concentric circles. In the center erect a perpendicular, three or four inches high. Any time in the forenoon when the end of the shadow touches any one of the circles, mark the place; in the afternoon when the shadow touches the same circle, make another mark—then draw a line from these points thus obtained; at right angles with this line, draw a line to the center, which will be the true meridian.

As the sun is on the meridian at 12 o'clock only four times a year, viz., April 15, June 15, Sept. 1, and Dec. 24, it will be necessary to add or subtract as the sun is either fast or slow in coming to the noon-mark. In this manner the true time may be obtained almost to the second. A table (this table may also be found in the *American Almanac* and most probably some others) for this purpose, and sufficiently correct for all practical use, may be found in the *Family Christian Almanac*, published by the American Tract Society.

Many persons think that a north and south line traced by a surveyor's compass is a true meridian, but this is a mistake, for a line found as above indicated will vary from one given by the compass. That this line is correct may be demonstrated thus:—when a perpendicular four inches high casts a shadow six inches long, the sun being on the east side of the meridian, and when on the west side it casts a shadow the same length, midway between the two extremes will be the true meridian. C. F. W.

Ashwood, Tenn., Sept., 1857.

Improved Corn Husker.

In countries like this, where Indian corn is one of our staple commodities, any apparatus or improvement on former apparatus designed to facilitate the preparation of it for the market must necessarily be valuable, and a knowledge of this fact has caused much inventive genius and adaptive faculty to be expended on a few machines of the same class as that shown in our engraving. Yet there are comparatively few corn huskers, and in most places corn husking is yet done by hand.

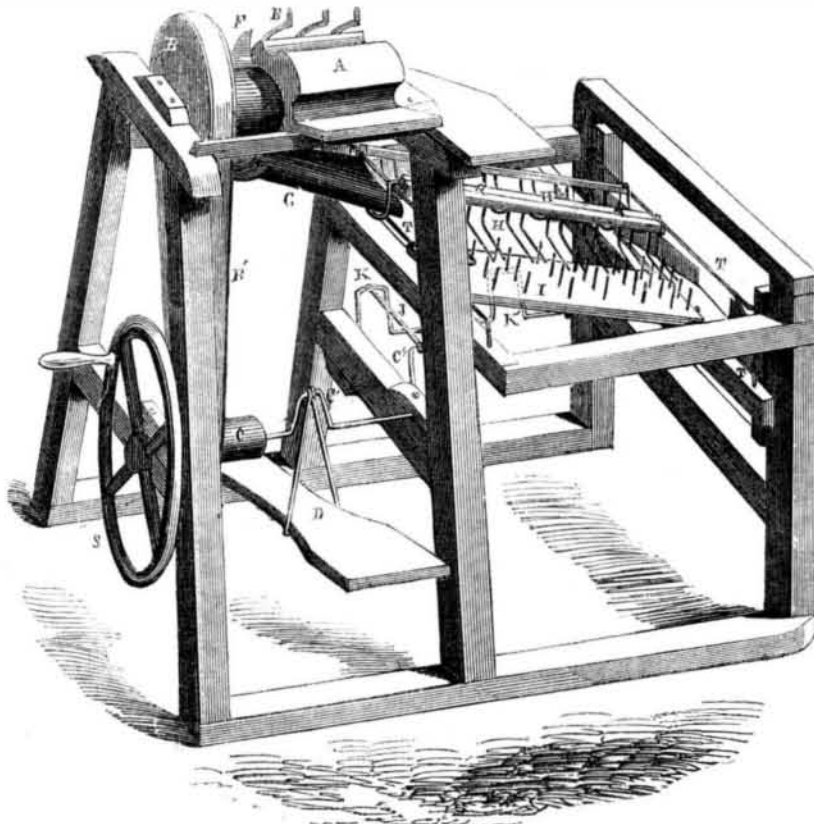
The accompanying engraving gives a perspective view of the whole machine. D is a treddle, by which motion is given to the machine, or it can be done by the balance wheel,

S. The motion is received by a crank, C', and a driving pulley, C, and by means of the belt, B', it is conveyed to B, on whose axle is fixed the deeply grooved cylinder, A. F is a concave knife, and E are spring wires. G is a trough, which carries the corn on to the platform, I, over the whole of whose surface

short stout teeth are placed. This platform is moved backwards and forwards under the rake, H, (which also moves up and down) on the guides, T, and both platform and rake obtain their opposite motion from the cranks, C'' J and K K'.

The operation is as follows:—The corn is

BACHMAN'S CORN HUSKER.

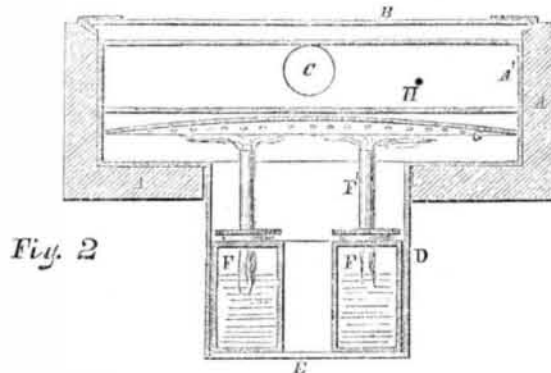
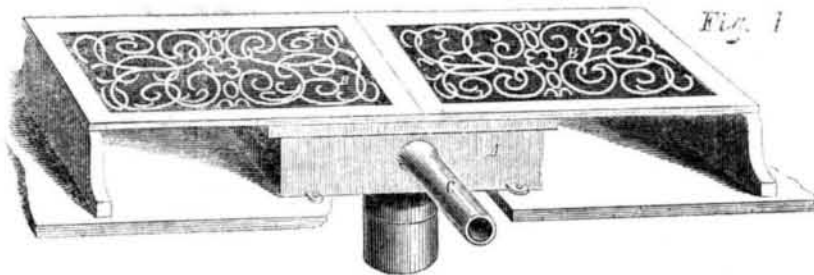


placed in the groove of A, with the butt towards the knife, F, and projecting just sufficient to be cut off; it is held in its place by the springs, E. It then passes into G, which delivers it on the platform, I, where the husk is torn off by the combined action of the sharp rake teeth and the motions of the platform and rake, and the corn turned out ready for shelling.

This is a simple and seemingly effective machine, which is not very liable to get out of order, but should it do so, its parts are easily accessible for repair. It may be mounted in a frame of wood or iron, as may be most convenient. Patented July 14th, this year.

For further information and particulars, apply to G. W. Bachman, the inventor and patentee, Clifton Springs, N. Y.

LEFFERTS' CARRIAGE STOVE.



John W. Lefferts, of Brooklyn, N. Y., is the inventor of the simple means here represented for providing a source of heat, by which the feet may be warmed in sleighs or other vehicles. This stove, as it may be very properly termed, is inserted in the bottom of the vehicle, a principal portion being below the ordinary floor. Fig. 1 is a perspective view, and Fig. 2 a vertical section.

A represents a case, which may be of wood. B is an iron grate, which may be either plain or ornamental. C is what may be termed a smoke flue, to convey away the products of combustion. D is a bottom box, or casing

of metal, which projects through the floor. E is a bar or adjustable stop, extending across the bottom of D. F are annular vessels, which serve as lamps, and will contain a sufficient quantity of alcohol to support the combustion for the length of journey desired. F' are wick tubes, and G a perforated plate, which is mounted above, to distribute the heated gas rising from the lamp. H is a circular plate mounted above G, and which is continuous at its central portion, but has large apertures near its periphery, so that the heated gases ascending through the perforations in G are compelled to spread themselves

over the whole surface of the stove before they can rise through H. It will be observed that there is still another plate entirely continuous, extending quite across beneath the grate, B, and which prevents the possibility of any flame or extremely heated gas rising to that level, and ensures a just sufficiently intense radiant heat rising through B to warm the feet placed thereon.

The demand for such a device is very severely felt, especially by those in whom the circulation of blood is feeble, and by those who start on long or cold journeys inadequately dressed. Many cumbrous and troublesome expedients are now resorted to, in the shape of heated bricks, and the like, to supply an evanescent heat. This device provides for an almost unlimited supply, if necessary, and whatever the quantity of heat the lamp is prepared to furnish, will remain continuous throughout the journey, or until the fuel is exhausted.

For further particulars address J. W. Lefferts, 120 Sands street, Brooklyn, N. Y., or 194 Bleecker street, this city.

Useful Information about Boilers.

Messrs. Editors.—We run our works with a high pressure steam engine; the water is supplied by a well. For years the boiler remained clean inside—no incrustations whatever. A while since we made a change in our mode of heating the water to be pumped into the boiler, and caused the escape pipe to open into the heater instead of passing through it, as before. In a few months we found the boiler-plates were giving away over the fire. On examining the boiler, we found that the oil from the valve chest and cylinder which had passed through the exhaust pipe into the heater, thence into the boiler, had formed a black carbonaceous crust upon the bottom of the boiler in spots, to the thickness of three-eighths of an inch or more—one spot being just where the boiler gave way. Upon throwing a piece of this scale on hot coals it burned with a smoky flame, and with the odor of fresh pork being fried. The oil we were using was lard oil. We immediately altered our heater, and the boiler is as clean as before. I write this for the benefit of others similarly situated, and to prevent accidents.

M. C. BURLEIGH.

Great Falls, N. H., 1857.

[The above communication was received during the summer, and by accident mislaid. We now publish it with pleasure, as it contains information which will be valuable to many.—Eds.]

The Money Panic.

Owing to the difficulty experienced by persons residing in many parts of the country in obtaining bills of exchange on New York, the usual enthusiasm in regard to competing for our annual prizes does not seem to be evinced this year. There was never a better time than the present for our friends to strive to earn a prize of three hundred dollars, or smaller sums, according to individual industry and perseverance; and from the foreshadows of coming events, we predict it will be found that there has not often been a winter in which one or two hundred dollars would have done a person in moderate circumstances more good than in the approaching one. It is an easy matter for almost any one to obtain fifty or more subscribers to the SCIENTIFIC AMERICAN, at \$1 40 per annum each; and last year one of the prizes was awarded to a person who had procured only about that number.

Remember, reader, that *Fifteen Hundred Dollars* will be distributed, on the 1st of January next, to those industrious competitors who may have sent us the fifteen largest lists of subscribers. The hard cash to pay these prizes is already in bank, and no matter how bad the times may become, we intend to be sure in making our promises good, as we have heretofore done.

For inducements to clubs and for list of prizes, see the last page.