

## ADDRESS TO COTEMPORARY EDITORS.

Since we launched our humble sheet, in 1845, we have never been without thousands of warm friends among the editorial fraternity, who have often made our hearts glad in trying hours, when, but for the friendly aid extended to our efforts, we might have been so much discouraged as to relinquish the great object for which we labor. When we enlarged the *SCIENTIFIC AMERICAN*, on the 1st of July last, you, gentlemen, evinced your good-will by such evidences as are always appreciated by the fraternity to which we all belong. We have steadily pursued our legitimate calling, leaving exciting political and religious discussions wholly out of view as not belonging to our sphere of duty. This course we mean to still pursue; we hope to make our journal not only welcome to every editorial *sanctum*, but also to every fireside, as a safe instructor in the fields of science, invention and discovery. We wish to be on the best of terms with you all, and do not design, by any criticism we may offer, to personally offend a single individual; yet upon all such subjects as properly come under our purview, we shall speak our opinions plainly, and if we hit the cherished notions of some, we cannot help it; they must endeavor to separate themselves, personally, from their pet theories. We remind you that this is the last number of the first volume of our new series; and if you will be so kind as to hint this fact to your readers, we shall feel truly and deeply obliged. If you do not thus honor us, however, we shall not make it a *casus belli*.

## OUR CONTINENTAL TELEGRAPH.

A great American telegraphic enterprise is now in the course of being carried out for uniting the Atlantic seaboard cities with those on the shores of the Pacific, then finally to stretch north, cross the Straits by a submarine cable to Asia, thence down through the Russian dominions into northern Europe. Parties are now engaged in constructing the line on the mail route between St. Louis (in Missouri) and San Francisco (in California), and about 300 miles are completed at each end. The New York Associated Press, in connection with that of other cities and two papers in California, have made arrangement for the conveyance of important news, semi-weekly, to and from California, between the telegraph stations, by the overland mail. When the California mail arrives at the Springfield station, in Missouri, the wires will be connected through to New York via St. Louis and Buffalo, a distance of upwards of 1,500 miles, and the news will be instantly transmitted through the agency of the Hicks Repeater—a new device by which land lines may be worked in a single circuit—and given to the public through all the leading journals of the country, in the same manner and to about the same extent as the public have been served with European news from Halifax.

## NEW MODES OF MAKING BREAD

Some of our English scientific cotemporaries have recently published a paper on the above subject, describing what is called "a new method of making bread," which is now practised in several places in Great Britain. The process, as described, consists in charging water with carbonic acid gas in a tight vessel, then introducing the flour, and kneading it with the aerated water; after which the dough is cut into pieces of loaf-size, and baked in an oven. Raised bread can be made in this manner with very great rapidity, and by a continuous process; whereas, by the common method, the flour has to undergo fermentation, and this action involves a considerable period of time to complete. By the fermenting system a portion of the carbon of the flour also passes off in the condition of a gas; and thus, with the tediousness of the old process, and the loss of some of the flour material, much has been said in favor of the *new* method, as it involves no such loss. We have been informed that it is in contemplation to organize a company in this city for the purpose of manufacturing such bread. We wish those who may engage in it perfect success, but we must state here that bread made in this manner is nothing new, either upon a small or large scale. On page 129, Vol. VI., *SCIENTIFIC AMERICAN*, the machinery is illustrated and the process described for making bread in a similar manner to that now proposed; but such a dietary material can never take the place of common leavened bread. It is so different in its taste and chemical character that it will not be used as a substitute. There is a small loss of carbon by the ferment-

ation of dough, but the chemical change produced in the starch generates some grape sugar, which imparts to leavened bread that palatable, sweet taste which is never associated with mere effervesced or *raised bread*—all of which has a cracker taste, which soon palls upon the palate.

The origin of leavened bread is unknown; we give the credit of this invention to Mother Eve, and ever since she baked loaves for Father Adam, this kind of bread has been preferred to all others by civilized peoples. It is our opinion that, although loaves raised by gas may be manufactured at somewhat less expense than fermented bread, they never can supersede it. In the use of machinery for kneading, and in coal as a substitute for wood fuel in bakers' ovens; also, in machinery performing other operations in bakeries, there have been great advances made during the past ten years; but in the chemistry of bread-making, so far as we know, there has been no improvement for centuries. Several practical bakers have informed us that there is great room for improvement in this department, but not by substituting effervescence for fermentation.

## WEEKLY SUMMARY OF INVENTIONS

The following inventions are among the most useful improvements patented this week. For the claims to these inventions the reader is referred to the official list on another page:—

## STEAM PLOW.

This invention relates to a novel way of attaching or connecting a gang of plows to a traction engine, whereby the plows, in case of meeting with any obstruction and their progress being materially resisted, are automatically detached from the engine as the latter proceeds, and all derangement of parts and breakage, which would otherwise occur, prevented. The invention also relates to a novel arrangement of the plow frame, its connection with the plows and engine, whereby the plows, which are connected in pairs, may conform to the inequalities of the ground, each pair independently of the others, and the frame admitting of being so actuated as to incline the plows and facilitate, when necessary, their being elevated above the surface of the ground. The invention further relates to a peculiar mechanism employed for elevating the plow frame, whereby the latter may be actuated so as to incline the plows and the mechanism stopped automatically when the frame and plows are sufficiently elevated. The credit of this invention is due to J. W. Fawkes, of Christiana, Pa.; the plow will be found illustrated in No. 11, present volume of the *SCIENTIFIC AMERICAN*.

## FIRE-KINDLERS.

The improvement of Mrs. Bellinger, of Mohawk, N. Y., relates to self-kindling blocks for fires; these are ignited like common friction-matches. The new composition now patented always insures the quick ignition of the materials, and preserves them from being affected by moisture in the atmosphere, thus rendering them well adapted for transportation to distant places, and for long keeping. Such fire-kindling agencies are now become almost a general domestic necessity; they are very convenient and useful. A previous patent secured by Mrs. Bellinger on fire-kindlers was pirated by several parties. Such persons will not be trifled with, should they make like attempts in this case. These kindlers and friction-matches are manufactured at Mohawk, N. Y., at the works of Mrs. Bellinger, and they are transported to this city to the wholesale agent, Isaac S. Clough, Pearl-street, New York.

## SHINGLE MACHINE

This invention relates to an improvement in that class of shingle machines in which the shingle is rived from the bolt with parallel sides and then shaved or planed in taper form. The object of this invention is to obtain a simple machine for the intended purpose, and one that may be very readily manipulated by a person of ordinary tact or ability. The invention consists in the employment of a reciprocating bed with a riving knife attached and connected with planers and other necessary parts, whereby the riving and planing or shaving operations are performed simultaneously and automatically. The inventor of this improvement is E. R. Morrison, of Brooklyn, N. Y., who has assigned his entire interest to E. C. Hills, 12 Platt-street, this city.

## CARRIAGE WHEELS.

This invention consists in connecting with, or securing the spokes into the felloes, in such a manner that they

will be less liable to become loose or break off in the felloes than by the present mode. It also consists in a novel manner of securing the tire upon the wheel so that it will be effectually prevented from slipping off, and so that the tire will not be impaired in strength by drilling holes through it for the admission of bolts, as is at present resorted to. It also consists in welding upon the inside of the tire, plates of suitable thickness which overlap the joints of the felloes, and which have female screw threads cut into them for receiving the ends of the bolts which secure the felloes and tire rigidly together at these points, thus adding greatly to the strength and durability of the wheel. This improvement was designed by Joel Y. Schelly, of Hereford, Pa.

## CANDLE MOLD.

The object of this invention is to facilitate the removal of the candle from the mold and prevent the inconvenience which frequently results from the "sticking" in the molds heretofore commonly employed, and to this end, the nature of the invention consists in constructing the mold of two tubes one fitted within the other, and with a "tip" of elastic or yielding material, the outer tube being rigid and as much larger than the candle as to admit within it the inner one, whose interior is of the desired size of the exterior of the candle, and which is made with a longitudinal slit and to possess such elasticity that when not confined within the outer one to such a degree as to keep the edges of its slit close together, it will expand and release the candle which has been molded in it, and the tip being fitted into the inner tube. The credit of this contrivance is due to H. Halvorson, of Cambridge, Mass.

## NEEDLE WRAPPERS.

This invention consists in a very simple improvement in the kind of wrappers in which needles are ordinarily sold, by which the needles are enabled to be taken out one or more at a time, as required for use, without unfolding the wrapper to such an extent as to run any risk of dropping them out, and without the necessity of handling any one of them but that or those desired to be taken out, and so rendering them liable to rust. The inventor of this improvement is Robert Crowley, of this city.

## MOWING-MACHINE.

This invention consists in connecting the cutter-bar to the frame of the mowing-machine, by means of braces which are hinged to the frame in such way that the finger and cutter-bar are thrown to the side of the machine parallel with the face of the driving-wheels, or in other words, that the cutter-bar may be placed in a horizontal position, at right angles to that which it assumes in cutting, for the facility of transportation from field to field, or when the machine is not to be used for mowing purposes. This improvement was designed by L. G. Kniffen, of North Salem, N. Y.

## BEEHIVE.

This invention relates to an improvement in that class of beehives which are provided with movable frames to support the combs. The object of the invention is to render the frames more accessible than hitherto, and also capable of being manipulated or adjusted with much greater facility so as to admit of the combs being thoroughly examined and renewed if necessary with great celerity. The invention also has for its object the varying of the capacity of this hive to suit the size of the colony, so that the temperature of the former may be kept in a proper even state, favorable to its occupants. This invention further has for its object an economical means for admitting of the adjustment or manipulation of the hive necessary for the examination of its contents and the operating or working therewith. This device has been patented to T. S. Underhill, St. Johnsville, N. Y.

## WHEEL VEHICLES.

This invention relates to a novel mode of attaching the front bolster of the vehicle to the front axle, whereby a positive or rigid attachment of the thills or draught pole to the front axle is obtained, and all unnecessary play and rattle hitherto consequent on said attachment avoided, and a more durable and desirable vehicle secured. The patentee of this invention is A. R. Bartram, of Fairfield, Conn.

**BOILER PATENT.**—The Examiner, Dr. King, has reported in favor of the extension of Montgomery's boiler patent, granted Dec. 26, 1845. At the time of going to press, the Commissioner had not decided the case. This is an important patent.