

**APPARATUS FOR COLORING PAPER, &c.**—Charles Williams, of Philadelphia, Pa. : I claim distributing or laying the color in the process of marbling or coloring paper, by means of an apparatus constructed so as to operate substantially in the manner and for the purpose described.

**SKATE IRONS.**—C. A. Williams, Robert Williams and G. A. Morse, of Bloomfield, Me. : We do not claim that portion of the studs included between the runner and the wood.

We do not claim the collar, C, nor the nut, N. Nor do we claim any heli spur which is not a continuation of a stud that is solid to the runner.

But we claim that portion of skate studs (solid to their runners) above the collars, C, upon which is cut the screw thread, T, in the manner and for the purposes substantially as set forth in the description.

**GAS BURNERS.**—A. H. Wood, of Boston, Mass. : I am aware that metallic plates or spreaders have been attached to oil lamps, for the purpose of facilitating the capillary attraction, and thereby aiding combustion, but metallic plates or spreaders which conduct the heat to a high above and around the orifice of the burner have never heretofore been attached to gas burners, and consequently I shall claim the combination with a gas burner, of the metallic spreaders or flanges, constructed as described. This arrangement of the spreaders has the effect of conducting the particles of coal tar, &c., that obstruct the orifices of gas burners as usually constructed, to the points of extreme heat, which in this case are in the flanges or spreaders, instead of in the orifice itself, as in other gas burners, thereby drawing, as it were, all the impurities from the orifice of the burner, and consuming them on the spreaders or flanges, leaving a kind of ashes upon the same, which can readily be removed.

I claim the combination with a gas burner of metallic flanges or spreaders, arranged near and above the orifice of the burner, for the purpose of spreading the flame and consuming the impurities of the gas, whereby the orifice is kept clear, as set forth, and this I claim whether the conducting rods be used or not.

**SAW MILL.**—John Pemberton, deceased, late of Jonesborough, Ind., assignor to Lemuel Pemberton, of said Jonesborough : I do not claim as new the devices below enumerated, but simply their relative arrangement, as specified, for the purposes set forth, to wit : first, The roller, T, ropes, t and u, to raise the bars, M and M', in combination with the pin, b, slide, X, lever, w', bar, N, and rock shaft, P, with its arms, rod, q, and lever, q', the whole being so constructed and arranged as to throw the feeding out, and the backing devices into gear, by operating the lever, e', and move the gate or valve to reduce the speed of the mill at the proper time, or after the saw cuts through the log.

Second, The arms, J, rock shaft, S', and bar, S, in combination with the projection or stop, e, connected to the lever, E, or its equivalent, to turn the ratchet wheel shaft and traverse the rack to set the log, as described.

Third, The ratchet wheel, F', bent lever and pawl, G, in combination with the pin, f, or its equivalent, in the lever, F, to stop the ratchet wheels when they have moved far enough, so as to prevent the log from being moved too far when it is set for a new cut.

Fourth, The pin, n, in the head block, and slide, X, in combination with the lever, W, which releases the hook, V, to let M' descend to increase the speed of the mill, as described.

Fifth, The rod, a, and stop, L, in combination with the slide, Y, and lever, U, so constructed and operated as to hold up the bar, M', after the log is sawed, and prevent it from descending and increasing the speed of the mill, and at the same time stop the apparatus which sets the log.

**TEA POTS.**—William Austin, (assignor to himself and William Oddyke), of Philadelphia, Pa. : I do not desire to claim the use of an interior casing for confining the tea in the inside of the same.

But I claim the plunger or presser, D, in combination with the interior casing, B, the whole being arranged in the manner set forth, or any equivalent to the same, and for the purpose specified.

**AUTOMATIC PAPER FEEDER FOR PRINTING PRESSES.**—William Bullock, (assignor to George W. Taylor), of Newark, N. J. : I claim operating the hands, or their equivalents, which effect the feeding of the sheet of paper in manner substantially as set forth, so that they have a greater capacity for moving the sheet than is necessary for the purpose.

I also claim controlling the operation of the hands, or their equivalents, upon the sheets of paper, by mechanism whose operation is dependent upon the position of the sheet being fed, so that the length of time during which the hands, or their equivalents, are permitted to act upon each sheet of paper does not bear any fixed relation to the movements of the other parts of the printing press.

I also claim intermitting the operation of the hands, or their equivalents, upon the paper, while the latter is being drawn into the press by mechanism acting substantially as set forth.

I also claim effecting the progressive movement of the pile of paper by mechanism whose operation is dependent upon the position of the pile, substantially as set forth.

I also claim the combination of the flap guides and nozzles, or their equivalents, for stopping the movement of the forward edge of the sheet, and for releasing the same, in the manner described.

I also claim moving sheets of paper by automatic rubbing hands, or their equivalents, constructed substantially as set forth.

I also claim operating the stop cocks of the air cylinder and the flap guides by a cam, or its equivalent, whose movement is coincident with or bears a fixed relation to the movement of the fingers which draw the paper into the press.

**SEWING MACHINES.**—Jonas Hinkley, of Huron, Ohio, assignor to himself and F. A. Wildman, of Norwalk, Ohio : I claim, first, The method of operating the feeding arm or cloth mover, by the combined action of the pivoted bow, K, pressing lever, N, flexing strap, O, and vibrating plate, D, or its equivalent, as set forth.

Second, Mounting the vibrating plate, D, which imparts motion to the loop-forming hook and feeding mechanism, upon spring arms, h, arranged at right angles to a longitudinal spring, H, for balancing said plate in its vibration.

Third, Mounting the spool, T, upon a spindle having elliptical-shaped springs, which extend into and through the eye of the spool, as and for the purposes specified.

**MACHINES FOR PEGGING BOOTS AND SHOES.**—B. F. Sturtevant (assignor to himself and Elmer Townsend), of Boston, Mass. : I claim, first, Causing the hammer to descend each time a peg is driven a short distance below the stationary rest, for the purpose of compressing the soles, as set forth, and of relieving the shoe from contact with the rest, that it may be fed forward, as described.

Second, The arrangement of the hammer, X2, and stationary rest, H, constructed and operating as described, in connection with the weighted lever, as set forth.

Third, I claim the peculiar holder, p, for the blank, the same having several knife edges lying in the direction of the feed, operating in the manner set forth, to hold the last peg of the blank whilst it is being separated from the one preceding it.

Fourth, And in combination with the holder, p, I claim the pawl, A2, operating upon several points of the blanks, in the manner set forth, for the purpose specified.

Fifth, I claim sawing off the pegs in the machine by a saw operating in and through the trough through which the pegs are fed.

Sixth, I claim the spring, p2, in the end of the trough operating as described, for the purpose specified.

RE-ISSUES.

**TABLE.**—Joel Bryant, of Brooklyn, N. Y. Dated April 7, 1857 : I claim the construction and use of winches, whose bosses or drums, turned by cog wheels,

operate in connection with certain sheaves, wheels or pulleys, for carrying, operating and sustaining the fall or tackle used in hoisting or lowering the sails or cargo of vessels on shipboard, substantially as described, and for the purposes set forth.

**RAILROAD CAR SEAT.**—J. B. Creighton, of Tiffin, Ohio. Dated May 18, 1858 : I claim the employment of the movable backs of car seats, when used for the purpose of filling up the spaces between the seats, so that a bed may be formed, and this I claim whether accomplished in the manner shown or in any other manner substantially the same, whereby the same result is accomplished.

Second, The described method of forming and concealing, when not in use, in the spaces between the windows, an upper tier of beds, the same in arrangement with the device constituting the subject of the first claim.

**TREATING SULPHURETS.**—Alfred Monnier, of Camden, N. J. Dated August 11th, 1857 ; re-issued October 6th, 1857. I claim the process of treating native metallic sulphurets or arsenical sulphurets, in connection with the substances above described, in order to expel all or part of the sulphur and arsenic, for the purpose of obtaining therefrom sulphuric acid, and the metals as sulphates or oxyds.

DESIGN.

**STOVES.**—G. Smith and H. Brown (assignor to North, Chase & North), of Philadelphia, Pa.

Destroying Grain Insects.

Agricultural science is perhaps the most important of all others, because we are dependent upon its results for the very stamina of life, and no subject in relation to it is of more general interest than the one which forms the topic of these remarks. The labors of the husbandman are frequently rendered abortive by the ravages of tiny insects, which devour his grain in the fields, destroy the fruit of his toil, and blast his hopes of an abundant harvest. The two most destructive of these insects are the Hessian fly, and the wheat-midge or red weevil. The ravages of the latter have been very destructive in some sections of our country during the present year. The attacks of both are confined to grain in the fields. The means which should be employed by farmers to prevent or mitigate their depredations are described by the distinguished State entomologist of New York, Dr. A. Fitch, also by Professor Hind, of Toronto, C. W., in his prize essay of 1857.

There is another wheat insect which is oftentimes very destructive to grain in heaps, namely, the true weevil (*calandra granaria*), and as the crops are now being "gathered into the garner," our remarks will be chiefly confined to it.

This weevil is a sort of small beetle, brown in color, having a slender body, and is about one-eighth of an inch long. The female lays her eggs in the wheat in the granary, and a single pair will produce six thousand descendants in one year. The young burrow in the kernels of the grain, consume the contents, and leave only the shells. So secretly are their operations conducted, that it is impossible to detect them by the simple inspection of the wheat. On throwing a handful of the grain into a bucket of water, those attacked with the insect will float, while the sound grains will sink, and in this manner their presence will be discovered. After a female weevil has deposited an egg in a grain, she closes the puncture with a glutinous substance of the same color as the husk, hence the difficulty of detecting the presence of this depredator when in its larvæ state. As one of these insects can be the means of destroying six thousand grains in a storehouse in a season, some conception will be formed of its means of destruction.

On the approach of very cold weather, developed weevils retire from the wheat, and seek shelter in crevices where they remain in a torpid state. They are not so destructive in the cold as in the warmer sections of our country, where certain methods for their destruction are more urgent and necessary. They avoid light, hence, if the wheat is kept in well-lighted granaries and frequently turned over, much will be done towards checking their operations. Authors, however, who have devoted much attention to their habits, have asserted that kiln-drying the wheat is the only effectual means of destroying them. It has also been recently recommended that wheat for storing up should be submitted to the action of a smut machine, to receive a thorough scouring, in order to rub off the glue with which the female conceals the punctures made for her eggs. The admission of

air into these small holes, it is stated, destroys the germinating powers of the eggs. It seems reasonable to us that by submitting wheat to a scouring process, then heating it in a kiln up to a temperature of about 120° or 130° Fah., it would be completely protected from the destructive effects of this insect in granaries.

A correspondent of the *American Farmers' Magazine* asserts that the weevil, midge, Hessian fly and rust may be exterminated from wheat by preparing it for sowing, as follows : Wash the wheat thoroughly in several waters in a tub, stirring it well until the water runs off clear. After this take two quarts of caustic lime to every bushel of grain, and mix it well with the wet wheat in the tub. The amount of water in the tub should just cover the grain, which must be left to soak for twelve hours. This lime lye kills all the seeds of the insects, and the wheat is then rendered fit for sowing by turning it over among dry wood ashes on the barn floor, and using a pound of the flour of sulphur to each bushel. It is stated that the sulphur protects the grain from the attacks of vermin, while the alkali dissolves the insect ova in the seed. Wheat thus prepared has yielded large crops in New England. We have seen this grain prepared for sowing by various modes, such as salt brine, lime and ashes, but we like the above method better than any hitherto known to us. Farmers residing in sections subject to the attacks of the Hessian fly, who do not sow fall wheat until October, should give this method of preparing it a trial. It cannot injure the grain, and we believe it will be the means of greatly benefiting it.

Preservation of Fruits.

As at this season of the year we have frequent inquiries respecting the best manner of preserving vegetables and fruit, we will present something which, we think, will be of benefit to many of our readers. A common way of preserving green corn to make succotash during winter is to boil it slightly in the ear, then remove the kernels from the cobs with a knife, dry them by a slow heat, and pack in tight cans. The same practice has been pursued with Lima beans, &c. A friend informs us that green corn, peas, Lima beans, tomatoes and various other vegetables, can be preserved without the use of tight cans and in a superior manner by drying them slowly at a low heat in the shade, until all their moisture has been evaporated, after which they are placed in stone ware or glass jars, and put away in a dry pantry. The best method of carrying out the operation is to place such vegetables in shallow earthenware plates, and arrange them around a stove until they (the vegetables) are thoroughly dried. They should be steeped for an hour in warm water before they are cooked. Most of the vegetables employed in cookery may be thus preserved, and retain all their original flavor.

Peaches, plums and such like fruit may be preserved in good condition as follows :—The fruit (which must be perfectly sound) is placed in air tight "self-regulating cans," then boiling hot sirup made in the proportions of one pound of white sugar to one pint of water is poured in up to the top covering all the fruit. For a few seconds air globules will rise to the surface ; when these cease ascending, the covers are put on the cans, which are then put away in a cool, airy place. Fruit or vegetables, preserved by sirups, and put up in tin vessels, do not have such a good flavor as those which are put up in stoneware vessels ; at least this is our experience.

At a late meeting of the Cincinnati Horticultural Society, this subject formed an interesting feature in the proceedings. One member stated that he had found it beneficial to gather his fruit in the morning while it was cool, and to keep it in an airy place. Pears should be gathered before they were fully ripe, and allowed to mature after picking, in a cool, clean cellar, in such a position as not to press upon one another. Another member

stated that he had tried two methods of preserving pears ; one was by packing them with oats in barrels ; the other by wrapping each in a piece of dry paper, and placing them in boxes in the same manner that oranges are packed for shipping. This was found to be far the best system. Another member—Mr. Buchanan—stated that he had the Virginia greening apple perfectly sound at that time (August). It was of last year's growth, and was put away in a tin-box in a cool, dark cellar. It was generally conceded that fruit kept best in a cool, dark situation. Moisture, light, and heat are active agents to cause and promote vegetable decomposition ; fruits for preservation should therefore be secluded from such influences.

A correspondent (C. Campbell) of the *American Agriculturist* describes the following method, which has been successfully pursued by him for preserving grapes. The clusters—all sound and fully ripe—are carefully placed in open shallow boxes, about six inches deep, with a sheet of dry paper between each layer. They are then set in a dry, airy place, and thus kept for ten days, during which period they sweat, and the moisture passes off. The lids are now put on tight, and the boxes set in a dry, cool place, where the grapes will not freeze. Grapes thus treated and packed will keep fresh all winter. It is asserted to be a superior mode of preserving to that of packing them in dry bran or between layers of cotton wadding.

Currant Wine.

In answer to the request of a correspondent, we give the following recipe. Bruise eight gallons of red currants with one quart of raspberries. Press out the juice, and to the residuum after pressure, add eleven gallons of cold water. Add two pounds of beet root sliced as thin as possible, to give color, and let them infuse, with frequent stirring, for twelve hours ; then press out the liquor as before, and add it to the juice. Next dissolve twenty pounds of raw sugar in the mixed liquor, and three ounces of red tartar in powder. In some hours the fermentation will commence ; when this is complete, add one gallon of brandy, let it stand for one week and then rack off and let stand two months. It may now finally be racked off, and placed in a cool cellar where it will keep for years. The cider white wine is a pleasant beverage ; here is the recipe. Mix sixteen gallons of apple juice, sixteen pounds of honey, four ounces of white tartar, enclose in a bag one ounce each of cinnamon, cloves and mace, and suspend them in the wine while fermenting. When this fermentation is complete, add one gallon of rum.

Poison of the Common Toad.

It is an ancient and common opinion that toads and salamanders possess a subtle venom ; this, however, has been generally deemed fabulous by those engaged in scientific pursuits. MM. Gratiolet and Cloes, in a report to the French Academy, show that there is in reality some foundation for the common belief, and that toads and salamanders do secrete a deadly poison. These gentlemen inoculated small animals with the milky fluid contained in the dorsal and parotid pustules of these animals, and found it productive of fatal effects in a short space of time. A turtle-dove slightly wounded in the wing and inoculated with the liquid secreted by the salamander, died in terrible convulsions in eight minutes. Five small birds inoculated with the lactescent humor of the common toad, died in five or six seconds, but without convulsions. The liquid of the pustule of the toad, even after being dried, kills birds, though not with the same rapidity as when fresh.

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