Scientific American.



[Reported Officially for the Scientific American.] LIST OF PATENT CLAIMS Issued from the United States Patent Office

FOR THE WEEK ENDING AUGUST 30, 1853. FOR THE WEEK ENDING ADJUST 34, 1853.

HEMP AND FLAX BREAKING MACHINES—By O. S. Leavitt, of Maysville. Ky.: I do not himit myself to the precise construction and arrangement of parts specified, as I have only described the mode of application which I have essayed with success.

I claim the combining apparatus, as described, in connection with the pieces which move alternately up and down, to hold the hemp of flax against the action of the combs.

MACHINE FOR DETRIBUTING AND COMPOSING Trep—By Wm. H. Mitchel of Brooklyn, N. Y.: I do not claim arranging the composing apparatus so that each type has to travel nearly the same distance to the point of delivery from the point at which it is dropped, as this has been effected by grooves, but I am not aware of any apparatus in which a combination of belts has been arranged with a view to all the types taking an equal time travel from the point of deposition to the point of delivery, thereby carrying the types with certainty, and avoiding all liability to stick or get inte disorder.

I do not limit myself to the precise arrangement of the

ry, thereby carrying the types with certainty, and avoiding all liability to stick or get inte disorder.

I do not limit myself to the precise arrangement of the belts as long as the same end is attained, neither do I limit myself to the number or size of the parts, as these must be varied to suit the types, and the capacity required. But I claim, first, the feeding belt or beits combined with the inclined plane, wheels, and grooves, to distribute the type in the manner specified.

Second, I claim the mode shown for forming the distributing stick, with the points, spring, lips, and keys, so as to drap one type at a time on its side, as specified.

Third, I claim the bridge and for a of groove to separate the thick from the thin types as they slide down the incline, as specified.

Fourth, I claim a series of belts of length increasing towards the point of delivery of the types, in combination with a diagonal belt to receive and convey the said types from the series of belts, to the composing table, or other point, in the order in which the types are dropped on the series of belts, as specified.

Fifth, I claim fitting take key for dropping the types so that it shall give a partial fotary motion to the shaft, to operate on the fork or any analogous device to drop the types.

Sixth, I claim the fork and blocking piece or stopper, to

system to the lork, or any analogous device to grop the types. Sixth, I claim the fork and blocking piece or stopper, to drop one type at a time, when moved by the key, or any similar means, as specified.

Seventh, I claim the composing wheel to receive and set up the types, either in the composing or distributing apparatus, as specified, and I claim the combination of the said wheel with the fingers on the wheel or with the bar, to supply said wheels, as specified.

GRAIN HARVESTERS—By Frederick Nishwitz, of Wil-iamsburgh, N. Y.: I claim, first, the combination of the ingers and cutters, or their equivalents, constructed, ar-

ranged, and operating as described.
Second, I claim the employment or use of the fianged pulleys, arranged as shown, for the purpose of throwing or detaching the grass or grain from the belts.

[A notice of this invention is published on page 228 of

GRINDING AND SHAPING METALS—By Samuel Darling, of Bangor, Me.: I claim the combination of the holder of the article to be ground with a grindstone or grinding disc, as set forth, se that the article and the stone will change positions relatively to each other during the ope-ration in three directions, namely, towards each other, and parallel with and transverse to the axis of the stone.

and parallel with and transverse to the axis of the stone.

Saw MILLS-By Andrew Ralston, of West Middletown, Pa.: I claim, first, sawing logs or other descriptions of timber into lumber by means of a reciprocating saw operated in a horizontal positior, as set forth.

Secondly, I claim such an arrangement and combination of the horizontal saw with the other parts of the saw mill, that the saw will run through and beyond each end of the log, or other description of material operated upon, and whilst in that position, will be automatically let down a distance equal to the thickness of stuff desired to be cut, and the motion of the carriage reversed to bring the saw again into action without stopping the machine, and so on until the log or other material operated upon shall be entirely sawn into the dimensions required, as set forth.

Thirdly, I claim connecting the operating mitman with

as set forth.

Thirdly, I claim connecting the operating pitman, with
the saw gate, through the medium of a secondary pitman, connected with the saw frame and saw gate, substantially as de cribed, so that the operating force shall
be applied in a direction nearly coincident with that of
the Saw in its successive positions, for the purpose set
forth.

MACHINE FOR CUTTING SHEET METAL—By Stephen P. Ruggles, of Boston, Mass.: I claim so hanging a traversing and a fixed cutting blade, one or both, as that their cutting edges shall not overlap or come in contact with each other, by which means I am enabled to divide sheets of metal without twisting or warping their edges, and at greats awing of power, substantially as described.

I also claim connecting theupper and lower portions of the frame when each carries one of the cutters on eccentric bolts, suitably provided with screw and nut or their equivalent, for giving the blades on the said two parts of the frame a perfect adjustment one above the other, as described.

PAPER FILIS—By Daniel Winslow, of Westbrook, and Perley D. Cummings, of Portland, Me.: We do not claim a file or bill holder as made of two plates of wood or pasteboard, or metal, held together and upon the file of paper by one or more elastic bands; but we clain the combination of the plates with the elastic bands, so arranged as that the side edges of the top plate shall be bent down upon fice bands and hold them securely, while the side edges of the bottom plate are turned, int left ar enough from the bottom plate for the bands to move freely between them and the said plate, the edge lips of both plates being so beat inwards, and rounded on the corners as to protect the bands from being chafed or worn, as described.

MACHINES FOR SPITTING LEATHER—By Charles Weston, of Salem, Mass.: I claim the arrangement, as described, for exerting a constant and uniform pressure upon the leather, and at the same time allowing the spring plate to yield to the inequalities of the hide, the same consisting in a spring rack for holding the arm which is connected to the spring plate, by the turning shaft and cams, as set forth.

APPARATUS FOR PURIFYING GAS—By William Wigston, of New York City: I claim constructing the scrubber or neat with a cavity, to receive the gas above the surface of the fluid, and partly submerged passages leading from the said cavity through the sides of the float to allow the escape of the gas from the cavity, and cause its distribution over the surface of the fluid in this streams to produce a diffused contact with the fluid, as described.

Mr. Wigston is an experienced Gas Engineer, and has introduced several valuable improvements in its manufacture. A notice of this invention is published on page 252, Vol. 8.]

MACHINERY FOR COTTING AND HENDING METALLIC DISCS—By Elliot Savage (assignor to Franklin Roys & Edward Wilcox.) of Berlin. (Donn.: I claim the combination and arrangement of the roller M with the roller B, and the bending roller, so as to operate together, and independently of the clamps, as specified.

Single Machines—By Elliah Valentine, of Palmer, Mass. (assignor to Abel Bradway, of Monson, Mass.: I clain the series of rollers &c., p aced above the platform, when they are combined with the ledges, which rise from the sides of that portion of the platform that receives the rived shingles to be operated upon, and so arranged that when a rived shingle is first carried forward, the said rollers will be elevated above its upper surface by the said ledges, and when the driver is drawn back, it will at the same time pass from under the sald shingle, and

from under the rollers, thereby allowing the shingle to fall upon the platform, and the rollers to fall in succession upon the upper surface of the shingle, for the purpose of giving to the said shingle auch a shape and position upon the platform, that it will be carried outwards again by the next forward movement of the driver and be operated upon by the dressing knives, as set forth.

FOR THE WEEK ENDING SEPTEMBER 6, 1853.

STRAW CUTTERS—By Ja.s. T. Asbury, of Taylorsville, N. C.: I claim the combination of the three cutting knives, as described, with the recessed arms, whereby one-third of the feed of straw is cut successively by each knife, the protruding uncut portion passing through the recesses in he arms during the operation, as specified.

of the feed of straw is cut successively by each knife, the protruding uncut portion passing through the recesses in he arms during the operation, as specified.

Net Cracers—By Philos Blake, Eli W. Blake & Jao. A. Blake, of New Haven, Conn. Ante-dated March & 1833.: We do not claim the use of jaws forced together by a lever, to crack nuts, since that device is found in the common nut cracker; nor do we claim the mere divergence of the jaws, irrespective of their position in relation to the axis of motion, since the jaws of the common nut cracker diverge when opened to receive a nut; and it also diverges in a plane which is at right angles to the axis of motion, and consequently nuts of different sizes are received between them at different distances from the axis; whereas, the jaws of our instrument diverge in a plane which is parallel to the axis of motion, and consequently nuts of different sizes are received between them, at the same uniform distance from the ratio of motion, which condition, or a near approximation thereto, is indispensable to the cracking of nuts of different sizes, are limited by stops in both directions, as described.

We claim, therefore, first, the divergence of the jaws in a plane which is parallel to the axis of motion, as described, whereby nuts of different sizes, are all received at a uniform distance from the enter of motion.

Second, whereby nuts of different sizes, are all received at a uniform distance from the center of motion.

Second, we claim the divergence of the jaws in a plane parallel to the axis of motion in combination with the wordshe have contemplated as on the intent of the axis whereby the line of the axis of motion is brought in close proximity to the acting faces of the jaws, without impairing free access to them to introduce and remove the nuts.

In the foregoing claims we do not intend to confide axis of motion, as of motion is brought in close proximity to the acting faces of the jaws with unimpairing free access to them to introduce and remove the plane of

MACRIME FOR EDGING LEATHER STRATS—By James Barnes, of Franklin, N. Y.: I claim the combination of the parallelogram and inverted dividers, as a regulating gauge to work in front of the edge of a curved knife, so that strips of leather of different widths may be rounded to feather edges, with the same perfection without the clange of knife or any part of the machine, the whole being as described.

PRINTING PRESSES. By Victor Beaumont, of New York City: I do not claim a type cylinder or any particular mode of holding the type in place or the using any por-tion of the periphery of the type cylinder for a distribu-ting surface.

tion of the periphery of the type cylinder for a distribu-ting surface.

But I claim, first, the combination of two or more im-pression cylinders with a type clinder, so arranged as to print all over on one side a continuous sheet of paper, as described.

Second, the combination of the eccentric and rod, and the folder, so arranged as to lay the continuous sheet in piles, after being print ed on one side, as described.

Third, the combination of the indented knife with the roller, and so arranged as to cut the sheet into proper ength, as printed.

PIANOPORTES-By Wm. Comp on PINOFORTES—By Wm. Comp on, of New York City: I claim the means shown and described for securing the strings into the angles of the T's by the combined operation of the up-bearing bridge or rest, to which the T's are connected, and crossing and drawing the strings to gether at said bridge or rest, for the purpose of relieving the sounding board or rest plank of vertica pressure, as specified.

Seating Presser Canisters.—By Henry Heart, of Brooklyn, N.Y.: I claim excluding air from articles put up in closed canisters, or other vessels, by providing the canister or other vessel with a metallic tube, or its equivalent, attached thereto, and after the air has been exhausted through said tube, pressing it together airtight, that it may be soldered or cemented to render the joint permanently air-tight, as described.

Horse Collars—By Jos. R. Lindner, of New York City:

a ciaim the union of the hame plate and collar, in combination with the lock plates, as set forth.

I also claim the triple fastening of the lock plates, in combination with the outward and backward spring of the hane plates, as set forth.

[A notice of this invention is published on page 52,

STRAW CUTTERS—By John Moyle, of Martinsburgh, Va.: I claim the combination of the rake and holder, construc-ted as described, for feeding the straw to be cut, and binding it to the box, as specified. PRINTING PRESSIS—By Chas, Montague, of Pittsfield, Mass, : I claim such a combination and arangement of the cylinder and bed, that whilst one sheet is receiving its impression, the sheet to receive the next impression will be carried forwards upon the cylinder, nearly to the bed, for the purpose of being in readiness to conmence receiving its impression the moment after the bed starts upon its next forward movement, as set forth.

PRINTING PRESSES-By Charles Montague, of Pittsfield. PRINTING PRESSES—By Charles Montague, of Pittsfield, Mass.: Having described my press for printing on a continuous sheet. I claim the combination of the intermittently winding cylinder and feed roller, or their equivalents, with the reciprocating pressure cylinder and bed, and rollers, arranged and operating in such a manner as to successively make an impression on the continuous sheet, at each movement of the bed, as set forth. In combination with a double set of inking rollers, I also claim the arrangement of the arms for inking both sets of rollers from a fountain placed vertically helow the impression cylinder, substantially as described.

FEED APPARATUS TO GAS GENERATORS—By Stephen Meredith, of Eric, Pa.: I claim the peculiar construction of the retort, as described, viz., having the retort of the cylindrical shape or of other suitable shape, and placing within it a revolving cylinder, which, as it rotates, constantly presents a heated surface to the fluid, and converts it into gas, preventing the fluid from cooling the retort, and also preventing the femalion of any incrustation on the same, as set forth.

[Our readers will find a notice of this useful invention on page 276, last Volume.]

BOTTLE FASTENINGS-By James Spratt, of Cincinnati, Ohio: I claim the application of the cup or cavity, and aperture, for scaling preserved edible substances, as set forth.

MACHINERY FOR PLANING METALS—By W. W. Spafford, of Boston, Mass.: I claim the combination of the receiving table or plate and its arm(composing the radial arm) the adjustable center-pins, or their equivalents, and the brace, together with the main planing table, and its supporting frame, the same being made to operate as specified, and for the purpose of adapting the planing machine to planing in curved lines, as set forth.

Counterpert Coin Detector—By Gideon B. Smith, of Baltimore, Md. I c aim a gauge or hole just large enough to permit the genuine coin to pass through, arranged in combination with a lever, acting below said gauge, balanced, so that the weight of such coin will depress it so as to let said coin slip down through said gauge, which is too small to allow any spurious coin to pass which is larger than the genuine, the lever being so balanced that any coin lighter than the genuine will not be heavy enough to depress it; so that all spurious coin, whether too large or too light, will stop in the gauge, while the genuine will slip through and fall out below, as described.

Corron Gins-By Henry L. Weeks, of Hannahatchie, Geo.: I claim, first, arranging and securing the boxes in which the ginning rollers operate, in a revolving or adjustable frame or box, or its equivalent, so that the rollers can be adjuted, or et at such an angle as may be

requisite or desirable, as the condition of the cotton or other circumstances may require, so as to discharge the seed, or facilitate the falling from the rollers after the cotton is drawn off by the rollers.

Second, giving to the feeding aprons, or equivalent feeding devices, different veloci les, for the purpose of spreading, distributing, or drawing apart, the balls of cotton, wo that sand and dirt may fall out, and not be rried to the ginning rollers.

Thirdly, passing the cotton, after it is ginned between double aprons, or equivalent devices, when said aprons or devices move with less velocity than the ginning rollers, for the purpose of compressing and making more compact the cotton after it is ginned.

Making Twister Gun Barrels—By Thos. Warner, of Chicopee, Mass.: I claim, first, a new manufacture of gun barrels, made out of solid bar, with the fibres of the metal having a gradually increased twist from the inside to the outside as specified.

And in the process I claim making twisted barrels by twisting a bar of metal of the required size, when in a heated state, and then boring out the caliber, for the purpose specified.

PADDLE WHEEL-By Benj. Irving, of Green Point, N. Y.: I claim arranging and combining the floats so as to form a series of buckets of rhombic, or substantially sizmilar form, as set forth.

We would state, that we have seen a working model of this paddle wheel tested with a model of those in common use, and the test was favorable to the new wheel. We would like to see this wheel fairly tried for some time on a stea: ship or steamboat, in order that all its qualities might be fully tested, in omparison with the common radial bucket wheel.

radial bucket wheel.

STRIW CUTTERS—Hy Thos. Allison, of Milton. N. Y.: I do not claim cutting straw in an oblique direction by means of spiral knives set obliquely around the periphery of a cylinder which has its axis set parallel with the axis of the feed trough, and which operate in combination with a parallel feed roller.

But I claim the construction and arrangement of the adjustable feed roller, which is made gradually tapering from its ends to its center, or middle, in the line of a curve, and arranged at an angle to the axis of the feed trough, and made to operate in combination with the cylinder of straight knives, and thereby facilitate the operation of the machine, as set forth—this arrangement rendering the machine less expensive and more easy to be managed and kept in order.

[This is a very simule improvement and is likely to

[This is a very simple improvement and is likely to take the place of spiral knives which have been so much in use ; it operates on the same principle but under a different construction.?

CORN SERILERS—By L. H. Davis, of Kennet Square, Pa.: claim the introduction of the wheels and arms attached of the springs, and regulated by the screws, as descri-ted, for the purpose of stripping the ear of the kernels,

a specified.

I also claim the flanges upon the gear covering for protecting the gearing from the admission of shelled corn, as set forth.

CORN SHELLERS-By Porter Dickinson. of Amherst Mass.: I claim the combination of the revolving spring shellers, with the tooth rollers, operating as described.

IRON CAR BRAKES—By Stephen Movee, of Springfield, lass. I claim the spine having the point of suspension and socket, with the open spaces and brace plates, in ombination with the rubber or friction surface plate, as at forth.

set forth.

BRICK MACHNES-By Hram Sands, of Cambridge,
Mass., and Gary Cummings, of West Derby, Vt.: We do
not claim the mode of operating the mould carriage by
means of a crank acting upon bars running across or attached to the mould carriage, as that has been employed
before in the brick machine of James Dane, patented October 24, 1848: nor do we claim the mode of operating the
pressing piston, by means of a lever, actuate by revolving cams, and connecting od; nor do we claim the arrangement thereof with the cam shaft made to passbeneath the pug mill, and thus operate the mould carriage by means of a reversing gear explied to said shaft,
as the like arrangement is contained in the patent of
Dane, Healy & Cummings, Aug. 5, 1851; ante-dated June
14, 1851.

Dane, Healy & Cummings, Aug. 5, 1831; ante-dated June 17, 1831.

But we claim the modification of such arrangement, by substituting for the shaft, with reversing gear, the shaft with continuous motion operating the carriage, and producing the intervals of rest, by means of the crank pin acting alternately upon the stude connected with the mould carriage, whereby we obtain greater certainty and precision of action in the machine, with greater simplicity and durability.

Also, in combination with the piston and the lever, we claim the slot in the ever, the slotted bearings and the mevable fulcrum pin, the connecting fork and hand lever, the same being for the purpose of increasing or diminishing the amount of pressure of the piston on the clay in the mould, as specified.

PRINTER'S INE-BY Samuel H. Turner of Brooklyn N.

PRINTER'S INK.—By Samuel H. Turner, of Brooklyn, N. Y.: I claim the employment of colophoric tar, produced and combined as stated, both in the manufacture of printing ink, and also as a varnish used by printers to modify the condition of their ink to suit the temperature of the weather, and the kind of work to be executed, as specified.

DESIGNS MILK STOOL FRAME-By P. A. Palmer, of Leroy, N. Y. COOK STOVE | By Frederick Schultz, (assignor to Chas, & Samuel Gilbert, of Philadelphia, Pa.

PARLOR STOVE—By Garrettson Smith & Henry Brown (assignor to J. G. Abbott & Archilus Lawrence,) of Philadelphia, Pa.

Stove-By S. W. Gibbs, of Albany, N. Y. (assigno to North, Chase & North, of Philadelphia, Pa.

COOKING STOVE-By Wm. F. Gray, of Penn Township, Pa. (assignor to Abram & Jos. Cox, of Philadelphia, Pa.

Tanning .-- Eaton's Short Process.

The annexed specification is that of Prof. Eaton, for which a patent was granted on the 10th of August, 1852. Many inquiries have been made of us-respecting its nature, merit, and the kind of leather produced by it. We must say, it is "the eating of the pudding which affords the best evidence of its good or bad qualities."

SPECIFICATION OF A. R. EATON, OF ROCHESTER, N. Y., FOR IMPROVEMENTS IN TANNING

LEATHER My invention consists of a combination with my tanning liquor of certain substances which have the effect of facilitating its action, and also of preventing the extraction or other matter of the bark or substance, from which the tannin is obtained, from acting injuriously upon the lea-

In order to tan hides and other skins by my improved process, they may be first soaked, unhaired, and bated by the usual processes

When the bating is accomplished they are ready for the tanning liquor, which may be pre-

stances, which facilitate the action of the tannin, and, at the same time, prevent the extractive matter of the decoction from injuring the leather. One of the most convenient sources of taunin is the ordinary "Terra Japonica," or catechu of commerce, and it is especially adapted to my process, as the chemical substances which are mixed with it prevent it from having any injurious effect upon the leather, however strong the decoction be made. 'To tan with this substance, prepare a solution of one hundred and seventy pounds of japonica in a sufficient quantity of soft water to receive one hundred calf skins. This solution is best prepared by steeping the japonica in hot water and straining the liquor through a cloth when cold. To this liquor add eleven pounds of sulphate of potash and six pounds of alum (double sulphate of alumina and potash.) The bated skins are immerset in this liquor after the grain has been set by a weak tanning liquor, a greater or less period, according to their thickness and porosity. Sheep skins are thoroughly tanned by an immersion of fr m one to ten hours in the liquor. Calf skins require to be immersed from one to six days, and hides require a proportionably longer period, which varies from six to twenty days .--After the first hundred skins have been tanned, there is still much tannin left in the liquor as well as a part of the alum, and the whole of the sulphate of potash; it is therefore brought up to its original tamin strength by the addition of japonica alone, and is employed to tan a succeeding parcel of skins.

In the process above described, the sulphate of potash induces so rapid an action of the tannin upon the skin that the extractive matter of the vegetable substance from which the tanning liquor is made, has not time to act; this is peculiarly the case when japonica is the substance employed, as it is well known that if bated skins be submitted to a liquor made from it alone, in the ordinary manner, they are spoiled, for the catechuic acid injures the animal fiber, while, by combining sulphate of potash with the liquor, the injurious influence of this acid is prevented. The alum improves the quality of the leather, as a portion of the alumina of the alum combines with the gelatine of the skin and adds greatly to the impermeability of the leather. Alum is not essential in tanning calf skins.

If japonica cannot readily be obtained, tanning liquor may be prepared from sunac, or the various barks generally employed, by adding to the decoction sulphate of potash alone, or sulphate of potash and alum.

Leather tanned by the process above described is remarkable for its pliability, strength and impermeability. The former of these properties is believed to result from the absence of vegetable extractive matter; the strength results from the fact of the animal fiber being uninjured by the process; and the impermeability is due both to the thorough action of the tannin and to the alumina combined with the leather.

Having thus described my process of tanning leather, what I claim as my invention, and desire to secure by Letters Patent, is the combination of sulphate of potash with the tanning liquor, substantially in the manner and for the purpose herein set forth.

[We have tested, for six months, a calf skin tanned by this process, in a pair of boot uppers. It has proved to be excellent wearing leather. It was stated to be tanned by this process in six days; but the skin was no doubt a good one, independent of the method by which it was tanned.

We cannot-in a chemical point of viewsee what superior effects can be produced in tanning by the sulphate of potash, any more than the chloride of sodium (common salt,) the use of which has been long known to tanners, excepting some change takes place in the sulphated salt itself, whereby the sulphur unites with the skins and produces a vulcanizing effect-which change cannot take place by the process described, so far as our experience and reasoning ex-

Bedouin Arabs Distanced.

When, on the 6th of June, a locomotive was run for the first time on the Egyptian Railroad, pared from any vegetable substance from which the Bedouins galloped alongside on their hortantin is usually obtained by adding to the de- ses for some time, until they found they had coction of the substance certain chemical sub- no chance of keeping pace with the locomotive.