[Reported Officially for the S ientific American.]

LIST OF PATENT CLAIMS

Issued from the United States Patent Office

FOR THE WEEK ENDING OCTOBER 16, 1853.

PROPELLERS—By Ebeneser Beard, of New Sharon, Me.: I claim the use of one or more flanges or rims placed circumferentially upon the blades of a screw propeller, as described.

SOFA BEDS—By E. B. Bowditch, of New Haven, Conn.: I claim the arrangement of hinging the ordinary sofa seat to the back rail of the sofa frame, in combination with the arrangement of hinging an under seat with the upholstered side down to the front rail of the sofa, so that said under seat, by lifting the ordinary seat back, can be turned out of the front of and on a level with the ordinary seat. thus forming a bed

I also claim the arrangement of hinging the stuffed back. to the top rail of the sofa, and attaching the back at the bottom to the top seat, by strips of iron, in combination with the arrangement of hinging the top seat at the back lower corner.

SHUTTLE MOTIONS FOR POWER LOOMS—By Wm. Crighton, of Fall River, Mass.: I do not claim operating the picker by a cam or a short shaft. at the side of the loom, but I claim connecting the two pickers with a rod or rigid connection, which receives motion from a single lever, and one cam, whereby both pickers are operated, as set forth.

[See notice of this invention on page 196, Vol. 8, Sci. Am.]

ATTACHING ARTIFICIAL TEETH TO THE METALLIC PLATE.—By H. S. Crider & David Williams, of Lancaster, Ohio: We claim securing the artificial teeth to a plate, by the usual method and afterwards fastening said plate on the alveolar ridge of the plate having the impression of the mouth, either by r vetting or the employment of soft solder, so as to prevent the application to the plate having the impression, of the intense heat required to secure the teeth, as and for the purpose set forth.

SELF-WINDING TELEGRAPHIC REGISTERS—By James J. Clark, of Philadelphia, Pa.: I claim the combination of the winding magnet, the break circuit wheel, and spring, with the train of wheels of an ordinary telegraph register, in the manner described.

STEERING APPARATUS—By Charles Flanders, of Boston, Mass.: I claim the combination and arrangement of the rope, the two sets of leading blocks, the sheaves in the after end of the tiller with one another, the tiller and windlass, so as to operate together and move the rudder, as specified.

OPERATING MILL SAWS—By Benj. Frazee, of Durhamville, N. Y.: I claim attaching a reciprocating saw blade to the main shaft, by means of a slotted lever and crank pin operating as set forth.

MACHINE FOR MAKING RAILROAD CHAIRS—By Robt. Griffiths, of Newport, Ky., and Geo. Shield, of Cincinnati, Ohio: We claim, first, hanging the fulcra of the clipping and bending levers eccentrically in boxes made capable of circular movement for the purpose of adjusting the said levers to their work with facility and accuracy, as specified.

Second, the method described of adjusting the angular set of the clipping and bending levers, by pivotting and adjustably connecting them to outer operative levers, as set forth, and whereby a varied inclination may be given to the cutting and bending of the clip to suit different thicknesses of blanks or forms of chairs required.

IMPLEMENTS FOR CUTTING CLOTH—By G. W. Griswold, of Carbondale, Pa.: I claim stretching the cloth or other material to be cut, over the two jaws of the stock, and holding it firmly in place by the clamp, whilst the knife divides it with a draw cut, as described.

(See engraving of this implement on page 372, Vol. 8 Sci. Am.)

INSTRUMENTS FOR PLOTTING—By Thos. Hinkley, of Hallowell, Me.: I claim the method or means of obtaining in the machine described, a compound or resultant parallel motion, the same consisting in a combination of pinions or gears and sunken racks (or racks provided with parallel bars), as specified, two sliding and rotary shafts, as arranged, connected, and supported so as to operate together, as described.

CUTTING BOOTS—By Daniel Lynahon, of Buffalo, N. Y.: I claim the tongue which first gives to the vamp a more exact crimped turn, secondly. covers the seam from being seen, and prevents it from ripping, and, thirdly, keeps the seams permanent by receiving the strain that comes on them when drawing on the boot.

POWER LOOMS—By Wm. Mason, of Taunton, Mass.: I claim the method of operating the warp beam to let-off the warps, and ease them in the opening of the shed, by means of the weighted cord acting on the periphery of a wheel geared to the warp beam and receiving motion from an eccentric or its equivalent, as specified, in combination with the mode of regulating the delivery motion by the action of the warps on a weighted whip roller acting by a friction strap on the friction wheel of the let-off apparatus, as specified.

MACHINES FOR FIGURING CARPENTERS' SQUARES—By N. Millington & D. J. George, of Shaftsbury, Vt.: We claim the combination of the revolving chase wheel, with the lateral moving anvil, by which the relative position of the square to be stamped, and the required chase, is so regulated that the line of the square to receive the impression, is brought under the chase, containing the desired figures, as set forth.

POWER LOOMS—By John Pender, of Worcester, Mass.; I claim the rest, in combination with the guides, when constructed as described.

LOOMS FOR WEAVING FANCY GOODS—By B. F. Rice, of Clinton, Mass.: I claim the application of compound levers constructed as described, to raising and depressing of harnesses or heddles, as set forth.

I also claim employing a finger attached to the vibrating lever, operating, as described, in combination with the crown wheel to move the figuring chain, as specified.

I also claim forming a groove in the bars of the figuring chain for the insertion of hooks or pins, or their equivalents, as specified.

AIR BEDS—By Jno. Scott. of Philadelphia, Pa.: I claim forming a bed of an air-tight india rubber cloth sack enclosed or enveloped in a pouch-formed mattress, composed of two thicknesses of ticking or other suitable material, between which is interposed feathers, hair, cotton, or other soft substance retained by proper quilting said mattress, conforming to the shape and size of the air sack when extended with air by flexible pipes.

LIFE-PRESERVING BUCKET—By Nathan Thompson, Jr., of Williamsburgh, N. Y.: I do not claim a double vessel, as such have been employed both as refrigerators and as retainers of heat.

But I claim, first, a double vessel, the space between the outer and inner side thereof being filled with cork or its equivalent, by which it is in a great measure secure against leakage, and retains sufficient buoyancy when punctured, and serves as a reliable bucket and life-preserver.

Second, I claim attaching the handle thereto by means of the tubes. the nicks in the handle, and the bending of the ends of the tubes therein, as described.

LIFE-PRESERVING SEAT—By Nathan Thompson, Jr., of Williamsburgh, N. Y.: I do not claim a life-preserving stool or seat in the general.

But I claim, first, the folding life-preserving seat, with a buoyant divided top constructed as described.

Second, the clasp, in combination with the surfaces on which it slides, constructed substantially as described, and operating to hold the stool either shut or open, as described.

IRON CAR BODIES—By Thos. E. Warren, of Troy, N. Y.: I claim the combination of the hollow sheet metal columns and panels, as described, with the through bolts, holding the top, bottom, and sides all firmly together, as set forth.

[See engraving of this excellent invention on page 388, Vol. 6, Sci. Am.]

CARPET STRETCHERS—By J. W. Weatherby, of Kingsville, Ohio: I do not claim the invention of rack and wheel, or any of these parts separately of themselves, but the general construction and arrangement, to save much time and labor. I therefore claim the general construction and arrangement of the carpet stretcher, made and operated as described.

DOOR LOCKS—By Linus Yale, of Newport, N. Y.: I claim introducing and applying the key from behind instead of in front, as is usual, by means of a permanent wrench revolving key-chamber and the passage, in the manner described.

APPLICATION OF HIGH PRESSURE ENGINES TO SCREW PROPELLERS—By Harry Whitaker, of Buffalo, N. Y.: I claim the direct application of the crank outside of the hull to side screw propellers, when such application is combined with or effected by a high pressure engine, arranged also outside of the hull, as set forth.

Bonnell's Patent Flouring Process.

[Continued from page 43.]

The actual amount or proportion of bran proper, found in the wheat, necessary to make a barrel of superfine flour, is so inconsiderable that its mixture with the flour could do little good, and its rejection no hurt, if with it there was not rejected and lost a large amount of flour material, that is highly nutritious, by imperfection in the manufacturing and separation. The only injury that would follow by finely pulverising the bran, and incorporating the whole of it with the flour would be, the reducing its texture or color below that standard fixed by arbitrary custom as a test of its value, hence, as that custom must be complied with, the art in the manufacture consists in getting the greatest possible amount of flour and nutritive material from the wheat, and rejecting just so much of the bran as will leave the texture of the former agreeable to the standard fixed by society. To do this it must be apparent that the primary and most important desideratum in manufacturing wheat into flour, is perfect and uniform pulverization of all and every part susceptible of being made, or that it is desirable to make into flour. Could this be done, but little judgment or skill is required to separate the flour by bolting and reject the bran. But perfect pulverization cannot be attained by one process of grinding, and the reasons are obvious, when we come to examine the different constituent properties of wheat; the different proportion of these properties in each different variety; the amount varying, too, as the climate in which it is produced varies; mode of culture; time and manner of harvesting, and the different degrees of moisture and dryness found in each crop when delivered at the market or in the mill. Then there is a great difficulty in keeping the mill stones dressed, and otherwise in a proper and perfectly equal condition, besides their operation and effect is constantly subject to variation in motion, and by the atmosphere affecting both the grinding and bolting in its various changes. If the wheat was all in a proper and equal condition in other respects, being composed of about 60 to 70 per cent. of starch, which is soft, porous and tender, and from 16 to 22 per cent. of gluten, which is hard, tough, and elastic, there would still be great difficulty in producing perfect pulverization. The gluten is located in a thin layer around the outside of the starch and immediately under the outer coating of the grain, to which it adheres with great tenacity, and if we attempt to grind so "close" and fine as to divest the bran of all this valuable material, and at the same time reduce it to a proper degree of fineness to sift through the bolts, the extra friction required is liable to reduce the starch too fine, and to produce too much heat, which, affecting the oily or fatty matter in the grain, and uniting with the fine particles of flour forms a sort of paste, and not only glazes the mill stones, but fills the meshes of the bolt cloth and destroys or greatly retards the bolting. Flour ground in this manner may look well enough to pass inspection, but as the angular or gritty quality is too much destroyed, there is a want of what millers call "body" to it, and it is found inferior for bread. If we grind "high" or coarse enough to preserve the good grinding property or conditions of the mill stones, avoid glazing, and preserve a good body to the meal, which ensures good bolting; we cannot divest the bran, feeds, or offal, of the gluten, and a portion of the flour will be so unequally pulverized, that coarse bolt cloth must be used to ensure a "yield," and to associate with the flour that desirable nutritive property which the partially ground particles are known to contain, and which, if obtained by the use of coarse cloth, subjects the flour to be "scratched" in market, by letting through with the flour fine particles of bran, which hurts it only for inspection. If this coarse flour is sifted out, as it usually is, with No. 4, 5, 6, or 7 cloth, and returned back to the superfine bolts, which are covered with 9 and 10 cloth, it is evident but a small portion of it passes through them, and incorporates with the superfine flour, but it passes along the bolts until reaching again cloth of sufficient "mesh" to let it through, is thus returned *ad infinitum*, over-laboring and wearing out the superfine bolts, and is subsequently thrown off with the feeds or offal, or a large proportion of it, making a loss of nutriment to the flour and of profit to the manufacturer.

To obviate these difficulties I propose, by my improved process, to intercept the whole body of the offal, or that which shall be equivalent, as it leaves the tail of the superfine bolts, or at any other convenient place, and instead of passing it into the subsequent bolts, as is usual, submit it immediately and continuously to a second grinding through an auxiliary mill fitted and adapted for that purpose. By this means the starch, having been bolted out, the offal is divested of all the remaining flour material, and all the coarser particles may be pulverized to about the same degree of fineness as that previously bolted out through the superfine bolts. The offal thus ground to any degree of fineness desired, is thrown into the succeeding bolts, or flour dresser or dusters, which should be covered with fine cloth (9 or 10) or any equivalent material; when the flour is separated from the offal, and from the head of the return bolt, the best flour may be sent back or returned to the cooler or superfine bolts, to be incorporated with the superfine or other flour, or it may be packed or used as a separate article of any desired quality.

The flour material being, by the re-grinding, perfectly pulverised and reduced to the same fineness of the starch, the bolt cloth necessarily requires to be finer than that formerly used on all the bolts or dusters, except the superfine, and those used for dividing the feeds, and from the head of each bolt or duster used, the best flour produced should be sent back or returned —not to the cooler in all cases, as usual, but to the head of the next preceding bolt. The next best flour produced along the middle of each bolt should be returned to the head of the same bolt, or back to its own head. And the brown specky material sifted through near the "tail of any bolt," should be sent with the offal to the head of the next bolt or duster that succeeds it. By this means there is no coarse or partially ground flour going back to the first bolts as formerly. The labor on each bolt is uniform and equal, and the flour sent to the superfine bolt from the return bolts, having once been bolted through fine 9 or 10 cloth, will readily pass through the superfine bolts and incorporate with the flour. This bolting, dusting, sifting, and separating may be continued to any extent desired, and if the rule above indicated is carefully observed, or that which shall be equivalent, the fine particles of bran may be perfectly separated from the flour, and the perfect pulverization of the grain will ensure the greatest possible yield of a rich nutritious article of flour, possessing "good body," being ground to an equal degree of fineness and not too fine.

(To be Continued.)

Preserving Animal Substances.

MESSRS. EDITORS:—In number 45, July 23, vol. 8, Scientific American, I notice an article under the head—"To test the purity of water," which reminded me of something peculiar that I had seen myself. It has been stated that rain water was an antidote to cholera; while in England, two years since, on a visit to the distinguished Andrew Crosse, Esq., the great chemical electrician, among other experiments, he placed a putrid ox hide in a bath of electrified water, where it remained four hours; when taken out it was as pure from smell as when it was taken from the animal. In reflecting upon this experiment afterwards, it occurred to me that if such an effect can be produced upon a dead mass, that it must inevitably produce equal effects upon the living, hence I applied Crosse's discovery to electrified baths. Referring to the assertion that the use of rain water was an antidote to cholera, I tried to examine into the causes, why. That it is the purest water will not be denied, unless it be electrified water, patented by Crosse, and illustrated in vol. 7, Scientific American. Now if rain water passes through the atmosphere in its descent, (which is always more or less charged with electricity,) and descends electrified water, which is an antiseptic, may not this be the cause why rain water, in its constant use, is an antidote to cholera? I am, very respectfully,

W. H. R.

Havana, Cuba, 15th Sept., '53.

[Although we have seen it stated a number of times, that rain water is an antidote to cholera, we have no positive testimony in proof of the alledgment. If it is an antidote, it is not owing to its antiseptic qualities, which are far inferior to those of many spring waters. Rain waters are no more electrified than well waters, because, when they fall to the earth, they are in a state of equilibrium, electrically, with the earth.

Large Ship.

The "Newburyport Herald," referring to the launch of the Great Republic, says:—

"Mr. McKay, we hear, will immediately commence the construction of a ship larger than this, which he is to build by contract.

"The theory has been started of building a ship so large, that she will pass through the ocean with comparatively little motion, ploughing directly through the waves, without rising upon them, and so high above them that the highest waves will always be below the decks. It is a daring thought, but in view of what has been accomplished already, who will venture to denounce it as absurd? There are those bold enough to predict, that a ship will yet be built that will pass through the stormy waves on the ocean with as stately a progress as a vessel of a hundred tons through a river in the same gale."

[That such a ship can be built we have no doubt at all, but it will have to draw about 50 or 60 feet of water. Such a vessel could enter very few ports in the world, because there is not a sufficient depth of water to float such a vessel. It would not be wise, we think, to build vessels of such magnitude. There is certainly a limit to the economic size of vessels, but what that is we cannot tell, nor can any other person at present; experience alone can settle this question. A ship named the Columbus, built at Quebec, in 1824, by Charles Wood, was nearly of as large tonnage as the Great Republic. It was launched with 4,000 tons of cargo on board. It was 300 feet long, 50 feet in breadth and 30 feet deep. Her speed was so very great that she took *only* 54 *days* to cross the Atlantic, anchored safely in the Downs, and in a storm was afterwards driven on the coast of France, and wrecked. There is certainly a great difference betwen the voyage of the Columbus, 54 days, and the Sovereign of the Seas, 14 days—so much for 29 years progress.

Guano Accumulations.

A writer in the "North British Agriculturist" states that he has examined all the Islands in the rainless latitudes of West Africa, and that all the guano that was found upon them has been removed. He states that one foot of guano accumulates on Halifax Island in Angra Pequina Bay in three years. This would amount to 1333⅓ feet in 4000 years. This certainly overthrows all the arguments that were advanced to prove the great age of this planet by some who have calculated that the guano of the 300 feet hills in the Lobos Islands required a ccumulations for ages before, it is recorded our world was created.

The Great India Rubber Case.

On the 20th *inst.*, at New Haven, Ct., Judge Ingersoll refused to grant an injunction in the case of Horace H. Day versus L. Candee & Co., of New Haven, which was argued there a few weeks ago, before the U. S. Circuit.