



Our weekly List of Patents and Designs contains every new Patent, Re-issue and Design emanating from the Department, and is prepared officially, expressly for the Scientific American, and for no other paper in the city, consequently other journals are obliged to wait the issue of the "Sci. Am." in order to profit by the expense to which we are subject, and of course must be one week behind. Those publishers who copy from this department in our columns, will, in justice to us, give proper credit for the same.

#### LIST OF PATENT CLAIMS

ISSUED FROM THE UNITED STATES PATENT OFFICE,

For the week ending May 14, 1850.

To O. P. Allen, of Ringe, N. H., for improvement in machines for slitting clothes-pins.

I claim cutting the sides of the outer end of the slot or fork of a clothes-pin on a regular sweep, by means of knives formed alternately on each side of the circular saw which cuts the straight part of said slot, and in the direction explained, whether said knives be made of portions of the plate of said saw, and bent outwards as described, or in separate pieces, and attached to said sides of said saw.

To A. Atwood, of Troy, N. Y., for improvement in Stoves.

I claim the air chamber in which the air is heated previously to its admission to the fuel, in combination with the spiral apertures by which the heated air is caused to impinge on the upper surface of the fuel, substantially as described and for the purpose specified.

To L. Bissell of New York, N. Y., for improvement in connecting rods of steam engines and other machinery.

I claim the application of prepared india rubber, or of any similarly effective substance, in the parts forming the joints of connecting rods of steam engines and other machinery for the purposes of preventing jars and breakage of the parts, when a reciprocating motion is changed to a rotary, substantially in the manner described.

To B. F. Broomell, of London Grove, Pa., (Assignor to I. Jackson), for improvement in steaming grain preparatory to grinding.

I claim, in combination with a steam pipe and grain passage the deflecting partition for directing the steam upward and the grain downward, whereby the current of grain is steamed by direct contact with the current of steam at the moment before entering the mill, substantially as herein described.

To H. C. Brown, of Xenia, Ohio, for improvement in balancing sash.

I claim, in connection, the grooves in the sash, the distribution of the several pulleys and friction wheels, and the cord attached to the bottoms of the sashes instead of their tops, whereby the cord and pulleys are kept entirely out of view.

Second, The combination of the barrel axle, ratchet wheel and pin, with its case or bearings, or their equivalents, with the cord and pulleys, the whole arranged and operating in the manner and for the purpose herein described.

To D. H. Chamberlain, of Boston, Mass., for toothed segment lock for firearms.

I claim the movable toothed segment and escapement or spring pawl, or any mechanical equivalent thereof, (the said segment and escapement being arranged within the trigger,) and the toothed segment or arc of the hammer in combination together, and with the trigger, hammer and stock, and made to operate substantially in the manner and for the purpose above set forth.

To T. M. Collins, of Marion, Ark., for cylinder and trough gold washers.

I claim the separating gold or other heavy substances from others of less specific gravity and water with which it may be mingled by the use of a wheel or cylinder and trough, the periphery of the former and the bottom of the latter being covered and constructed substantially as herein set forth.

To N. Colver, of Boston, (Assignor to N. Colver of Boston, Mass., & W. S. Damrell, of Dedham, Mass.) for Revolving Jaw Wrench.

I claim the revolving jaw block and feather, as combined together, and with the screw shank, and made to operate, substantially as herein specified.

To A. Combs, of Farmington, O., for improvement in connecting the skeins with axles.

I claim the combination with the skein of the screws, for the purpose of tightening the skein on the axle tree, as set forth.

To J. C. Dodge, of Dodgeville, Mass., for improvement in preventing fibres from winding on drawing rollers in spinning machines.

I claim the improved manner of applying and using the roller, the same consisting in placing it not exactly in contact with the lower front drawing roller, but at a distance therefrom, and by means of separate or additional machinery, giving to it a rotary motion at the same velocity and in the same direction with these of the said lower front drawing roller, the whole being in the manner and for the purpose set forth.

To J. Houghton, of Ogden, N. Y., for improvement in machines for washing table furniture.

I claim the construction of a cylinder with a cylindrical rack supported by an upright shaft resting upon and being within and supported by the cylinder, the rack having within it a conical rack and hoop to receive and hold table furniture, in combination with a curb containing a horizontal wheel with buckets to throw water upon the cylindrical rack; the whole supported by a frame, and by these mechanical means cleansing the surface of table furniture without the use of hands, the entire machine being arranged, combined, and operated substantially as herein fully set forth.

To J. L. Mott, of New York, N. Y., for improvement in Cooking Stoves.

First, I claim making the cover of the feeder projecting in front with curved sliding doors, substantially as described.

Second, I claim forming the bottom grate by casting projections from the edge of the fire back, or the equivalent thereof, substantially as described.

Third, I claim giving the required strength to the fire brick lining of stoves to prevent them from breaking or separating when cracked by the heat, by the insertion into them of metal rods, wires, or wire cloth, substantially as described.

Fourth, I claim the combination of the two series of flue tubes arranged one above the other and with a space between them all for the circulation and radiation of heat; for the purpose of giving a greater heat at the bottom of the oven, substantially as described; and this I also claim in combination with the above arrangement of flues, as described.

And lastly I claim the method of supporting and bracing the door or doors by means of the bracing rod hinged to the door and passing through a hole below (or the equivalent thereof) and being against the bottom of the stove, or a stop, or the equivalent thereof, substantially as described.

To H. Patterson, of Templeton, Mass., for improvements in Splint machines.

I claim the combination of the circular or tubular cutters, their lateral wing knives or cutters, their rib knives or cutters, and the waste escape passage for the waste strips, substantially in the manner and for the purpose set forth.

I also claim the improvement by which I am enabled not only to make round or cylindrical splints, but to introduce them to the dipping frames, that is I do not claim the combination of cutters dipping frames and passage leading from the cutters to the dipping frames, as these have been before invented and used for making square splints and setting them in the frames, but I claim, in combination with cutters for forming the round splints and passages, for receiving them and conducting them to the dipping frames, the passages, for the escape of the waste wood or strips, they being applied together and made to operate in connection with the reducing plane iron, and the plates, substantially in the manner and for the purpose herein described.

To A. S. Pelton, of Clinton, Conn., for improvement in threshing machines.

I claim the peculiar serrated and duplex conformation of the beaters, substantially in the manner and for the objects herein described,

that is to say, consisting of a pair of plates, diverging rectangularly from each other, and the latter consisting of teeth chamfered off from their inner side at their points as represented.

To O. L. Reynolds, of Dover, N. H., for improvements in sewing machines.

What I claim is, 1st, the adaptation of the bearded needle, such as is used in knitting or stocking frames, in combination with the manner of closing the beard or hook thereof, previous to drawing it back with the thread, to prevent the point tearing the cloth, by passing through the hole, in the plate, in the manner substantially as herein described.

Secondly, the combination of the spring thread leader or guide, the arched spring, and friction roller, for the purpose of leading the thread under the point of the beard of the needle.

[An engraving of this invention will appear in the Scientific American, in a few weeks.]

To W. Scarlett, of Newark, N. J., for improvement in Suspender Buckles.

I claim the constructing a buckle by combining a curved plate, with an angular lever, substantially in the manner herein set forth.

To J. Trees, of Salem, Pa., for Shell Propeller.

I claim giving the shell of a submerged propeller the form of a section cut from the open extremity of sea shell of the class of which that represented in the drawing may be considered a type, the mouth of the helical tube at which the water enters being of greater area than its hinder extremity at which the water is discharged.

To J. N. Warren, of Buffalo, N. Y., for improvement in the joints of stove-pipes.

I claim the stove pipe herein described as a new article of manufacture.

#### DESIGNS.

To J. Hutchinson, of Troy, N. Y., (Assignor to Deborah Powers, A. E. & N. B. Powers, of Lansingburg N. Y., for design for painted floor cloth.

To W. Race, of Seneca Falls N. Y., for design for stoves.

#### More About the World's Industrial Convention.

The following points of principle have been decided by Her Majesty's Commissioners, in answer to inquiries made by the Local Committee for the city of London:

1. Juries will be selected to award prizes; but no competitor for a prize in any section will be allowed to act upon a jury to award the prizes in that section.

2. It is not intended to require of exhibitors that they should of necessity be subscribers.

3. It is not intended to exclude any person, whether he be the manufacturer, designer, inventor, or proprietor of any article, from exhibiting it, whatever may be the regulations under which he may hereafter be required to do so.

4. Some misunderstanding having arisen from the use of the words, 'counting houses' in the building prospectus issued by the commissioners, they intend only to have such officers as will be required for taking money at the doors, distributing tickets, selling catalogues, and conducting the other business of exhibition, and not offices for the sale of articles intended to be exhibited, and not the transaction of commercial business; and the commissioners can therefore give no facilities for the sale of articles, or for the transaction of business connected therewith.

(Signed) J. S. RUSSEL.

STRAFFORD N. NORTHCOTE.

#### The Tea Culture in South Carolina.

Dr. Junius Smith, of Greenville, South Carolina, in a letter dated May 1st, speaks of his experiments in growing tea in this country as highly successful. The plant maintains its original physiology and follows its Chinese pattern, putting out its foliage at the same period that it does in China. All Dr. Smith's plants have taken root, the buds began to develop leaves about the 20th of April, though the spring has been backward, and he could then collect a sufficient quantity of leaves to make first rate tea. He says the leaves are most tender and delicate, and he can now understand why it is that we cannot obtain the first quality of tea from China. The first growth of the leaves is so delicate that it is

quite impossible to divest it of humidity by firing or roasting to sustain so long a voyage, besides the almost certainty of utterly destroying its rich and precious aroma. When the tea is cultivated here, this process of roasting may be dispensed with. With variety of soil, abundance of cheap land and facilities of transportation, Dr. S. thinks that if we do not cultivate our own tea, we ought to be tributary to those who call us barbarians.

#### What is Dirt?

Old Doctor Cooper, of South Carolina, used to say to his students, "Don't be afraid of a little dirt, young gentleman. What is dirt?—Why nothing at all offensive, when chemically viewed. Rub a little alkali upon that 'dirty-grease spot', on your coat, and it undergoes a chemical change and becomes soap. Now rub it with a little water, and it disappears; it is neither grease, soap, water, nor dirt. 'That is not a very odorous pile of dirt,' you observe there. Well, scatter a little gypsum over it and it is no longer dirty. Everything you call dirt, is worthy your notice as students of chemistry. Analyze it! It will all separate into very clean elements.

"Dirt makes corn, corn makes bread and meat, and that makes a very sweet young lady that I saw one of you kissing last night.—So after all you were kissing dirt—particularly if she whitens her skin with chalk or fuller's earth. There is no telling, young gentleman, what is dirt. Though I must say that rubbing such stuff upon the beautiful skin of a young lady is a dirty practice. 'Pearl powder', I think is made of bismuth—nothing but dirt."

#### Cotton Factories South and West.

It has been estimated that there are now in operation in Georgia 40 cotton mills, employing near 60,000 spindles, and consuming 45,000 bales of cotton annually. In this estimate, which seems to be below the true mark, no calculation is made of the paper mills, bucket factories, iron establishments, flouring mills, &c. In Tennessee, it has been reported to the Secretary of the Treasury that there are 30 factories, employing 36,000 spindles. In South Carolina, the Hon. William Gregg says there are 16 factories, containing 36,500 spindles and about 700 looms, consuming 15,000 bales of cotton per annum. He estimates the capital invested in these establishments at about one million of dollars, and the number of operatives they give employment to, at 1,600. There are in Alabama 12 factories, with a capital of \$500,000, containing 12,580 spindles and 300 looms, and consuming about 5,500 bales of cotton annually. It is said that machinery for others is contracted for, sufficient to make the number of spindles 20,000, and the looms 550. In these four States there are 98 factories and 140,000 spindles. On the Ohio river it is estimated that there are factories which, taking them in the aggregate, run 100,000 spindles.

#### The Straw Hat Trade in Michigan.

Nearly every day we notice, says the Detroit Tribune, large quantities of straw hats shipping from this city, east and west. The trade has become quite an important one in our State. The Malcomb Gazette says, "we have made some enquiries as to the number of straw hats purchased in this village during the past winter, and found that the number would exceed twenty-five thousand, the estimated value of which is about twenty five cents each, making the aggregate value of the straw hats purchased \$6,250." This is only one county, and there are many others that will show a like result.

#### Deflexion of Iron Girders.

From experiments made by Mr. Fairbairn, of Manchester, it appears that iron loses a great deal of its strength when heated above 220°, and its uncertainties are great below the freezing point. Mr. Clark, the engineer, has described the effect of the sun of the great Conway Tube, when shining for half an hour, to be so powerful as to lift the tube vertically one inch. It is the opinion of Brunel that iron girders should not be tested with a weight exceeding the greatest load it has to bear, as the object in testing is to ascertain the soundness of the casting, which may be judged of by its appearance under the load.