

## New Inventions.

## New Planing Machine.

We learn by the Albany papers that Mr. Geo. W. Beardslee has now one of his recently patented planing machines finished and in operation. The machine was constructed at Townsend's Foundry, an establishment that will not let a piece of bad work pass out the gate, and a trial of its merits has been highly spoken of. On this trial it turned out fifteen-inch plank at the rate of 120 feet a minute, giving it a smoothness and evenness of surface, the most perfect, and a polish far better than could be given by the hand plane.

The knives or cutters are stationary but elastic, and the plank is carried through by a connected series of platforms, which, by an eccentric motion, reversing the course of each, performs all the functions of an endless chain. The plank is placed laterally (instead of horizontally, as in Woodworth's machine) and so is less liable to obstruction. The cutters are so combined as to throw off the shavings and keep the action of the machine free. We expect to be able to publish an illustrated description of this machine in a few weeks.

## Gravitating Hotel Annunciator.

Mr. L. A. Hudson has invented and taken measures to secure a patent for an improvement in annunciators for hotels, the name given being that mentioned above. It is stated to be much less expensive to construct and much easier kept in repair than any heretofore constructed or in use. He does not employ slides worked by cranks, like the common annunciator, but light balls as substitutes for the slides, and these are so arranged that a person in a room, by simply touching a wire, makes a ball come popping forward in the bar-room, saying, "Mr. Waiter, your presence is wanted in No. 11," or 12, or whatever room it may be.

## Improvement in Boilers.

Mr. W. J. McAlister, of Columbus, Muscogee County, Ga., has taken measures to secure a patent for an improvement in steam boilers, in which the fire box has a double casing at its front and sides, for containing water, and which communicates a branch pipe with the bottom of the boiler and sides.

## Swan's Water Wheel.

Mr. Nathaniel Swan, of Knox, Albany Co., N. Y., has applied for a patent for an improved water wheel, having the single disc with buckets placed upon it in such a manner that the wheel obtains, it is said, a greater leverage according to their size in comparison with others in use,—the buckets are placed in the direction of levers tangent with the circle.

## New Seed Drill.

Mr. Enoch Boughton, of East Bloomfield, Ontario Co., has taken measures to secure a patent for an improvement in grain drills for sowing seed broad-cast, which is a very excellent improvement. The grain passes down through suitable tubes, after which it strikes upon rods underneath, and is scattered right and left in a broad-cast manner on the earth.

## Improved Rotary Pump.

Mr. L. H. Meseley, of Poughkeepsie, N. Y., has invented and taken measures to secure an improvement in rotary pumps. This has some points of resemblance to the eccentric pump, it being nearly the same, but has its interior wheel hung concentrically on its axis, but works eccentrically in the inside of the cylinder in combination with pistons or sweeps hung on the pin concentric with the cylinder.

## The India Rubber Shoe Trade.

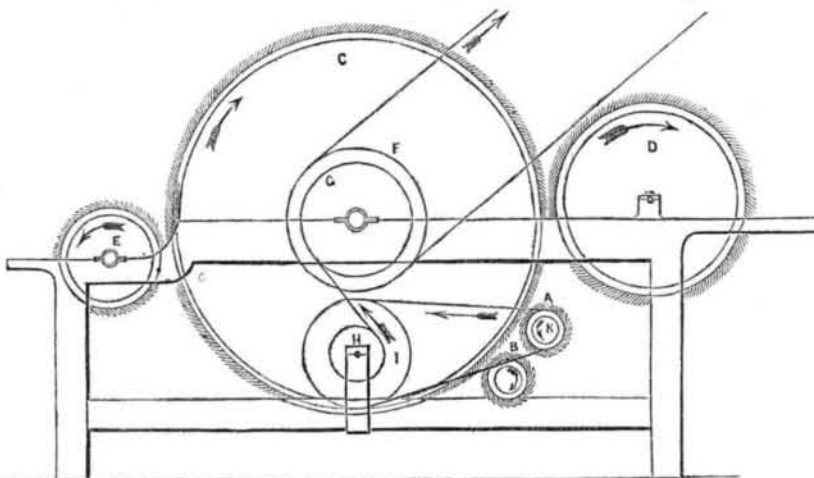
A statement has been published respecting the manufacture, cost, quality, and profits of the India rubber shoes, under Goodyear's patent, which is astonishing. The first cost to manufacture ladies' shoes is about 22 cents per pair, and the retail price is one dollar. The first cost of those for men's wear, is from 33 to 38 cents per pair. The daily product of the United States is over 15,000 pair. The process by which these shoes are made has

thus far been kept a secret. This art is of great value and has not yet been discovered in Europe. The profits on this business will reach almost two millions of dollars in the year, and the present manufactories cannot supply the demand. Shoes which weigh nine ounces per pair have only about three and a half ounces of rubber, the other materials being worth only from one to six cents per pound. One girl can make from twenty to thirty pair per day, for which her wages

are two to three cents per pair. The expense of curing or heating twelve hundred pair does not reach three dollars.

[The material commonly used for mixing with India rubber to make black overshoes, is lamp-black. It is mixed with one third or even less of India rubber. Goodyear did not make the discovery of this mixture. The curing of India rubber goods by steam heat, is said to be an English discovery. The India rubber controversy is a complicated one.

## DYSON'S PATENT CARDING ENGINE.—Figure 1.



The accompanying engravings represent an improvement in the Carding Engine, commonly employed in cotton or woolen factories for the purpose of stripping and clearing the main cylinders of such carding engines while running. It is the invention of Mr. J. Dyson, of Fulton, S. C.

The principle of the said improvement consists in the employment of two cylinders, surrounded or clothed with teeth of metal, in the form of wire or other forms adapted to the end in view, mounted with proper journals in suitable bearings, below the main cylinder of the carding engine at any convenient point between the feeder or licker, and the doffer cylinder, and driven by the main or other shafts of the carding engine; and so adjusted as to operate upon the surface of the main cylinder, and upon the surface of each other, and to strip and clear the main cylinder to the extent required, and to return the strippings to the main cylinder, to be carded over, and to be delivered to the doffer cylinder,—it being a leading principle in the said improvement, to adjust the number or quantity of the teeth in the stripping or cleaning cylinder, in such way as to cause it to remove the stripping in such limited quantities in each revolution of the main cylinder as will always enable the latter to deliver a sufficient amount of the carded material to the doffer cylinder, and with due regularity.

Mr. Dyson constructs a cylinder of wood or metal, one or both, of a convenient size, to form the stripper, say from three to six inches in diameter and of a length equal to that of the main cylinder, having it turned perfectly true and suitably prepared for receiving the teeth of metal in the form of wire, or any other form desired, and adapted to the end in view. If teeth of wire are employed, he prepares a narrow fillet of leather, and inserts therein one, two, or more rows of teeth of the usual form and size of card teeth, or coarser if desired. This fillet of wire teeth is fastened at one end of the cylinder, and carried spirally round the cylinder, and fastened at the opposite end, being secured throughout the intermediate space by tacks or otherwise, thus forming a perfectly regular spiral fillet of teeth around the whole length of the cylinder, as shown at A, fig. 2.

The cylinder, A, thus furnished with the spiral fillet of wire teeth, and ground and sharpened after the manner of card cylinders, is next mounted with proper journals in suitable bearings under the main cylinder, C, at any convenient point between the feeder or licker, E, and the doffer cylinder, D, and in a parallel direction with the main cylinder, C, as shown in figure 1, the teeth of the spiral fillet being set as near those of the main cylinder as possible, without touching, and pointing in an opposite direction to those of the

latter, is also made to revolve in an opposite direction to it, and at a speed causing the surface of the teeth or periphery of the stripper, A, to outrun the surface or periphery of the main cylinder, C, about one fifth or one-fourth, if so much be necessary.

He also constructs another cylinder, B, termed the receiver and forwarder, of about the same dimensions of the stripping cylinder, A, and clothed with card filleting of the same description as usually employed for small cylinders of carding engines, and in the same way with the teeth set in an opposite direction to those of the main cylinder, which, being ground and sharpened in the usual manner, is mounted with proper journals in suitable bearings under the main cylinder, C, and immediately in advance of the stripper, A, and parallel thereto, and in the direction of the licker, E, as seen in figure 1, the surface of the teeth being set as near as may be without touching,

FIG. 2.



and made to revolve in the same direction as that of the main cylinder, C, or in an opposite direction, as may be most convenient, but at a speed greatly below it.

The following is the claim of the patent:—"I claim the cylinder, A, surrounded or clothed with a spiral fillet of metal teeth, in the form of wire, or with teeth of metal of the form and description mentioned and described in the fourth specification, as arranged and employed in the 3rd and 4th specifications, in combination with the main cylinder, C, and with the cylinder, B, or with the main cylinder only, to strip and clear the latter, by a self-acting contrivance, while the carding engine is in operation. I also claim the cylinder, B, in combination with the cylinder, A, and the main cylinder, C, as applied to receive the strippings from the former and to deliver them to the latter."

This improvement was patented in 1849, and the inventor is now fully prepared in every respect to sell rights, and all the informa-

tion requisite about the same can be obtained by letter. It is no untried invention—it has been fairly and fully tested, and its merits acknowledged. It can be seen in operation in the Atlantic Mills, Lawrence, Mass., and in the Whittenton Mills, near Taunton, Mass. After three days running in the Atlantic Mills, without being stripped by hand, the cylinder was examined, and was no more filled up than when it had run ten minutes. Mr. Dyson has a factory in Fulton, S. C., and is a gentleman of great practical and theoretical knowledge.

## Cotton Gins.

MESSES. EDITORS—As you are in the habit of noticing and remarking upon all the inventions of the day, I send you a rough sketch of a drawing from the Letters Patent of Mr. Lewis G. Sturdevant, granted in July, 1841. The number of the patent is 2,190. The drawing is by A. L. McIntyre. Mr. Parkhurst sent a drawing to us (by request of the Agricultural Society of this place) of his Carding Gin, which so nearly resembles the one enclosed, that I thought it would not be amiss to acquaint you with the fact. There is a mystery in this matter of patents that some people do not understand.

Mr. Sturdevant makes his cards by cutting teeth on wire and winding it around a cylinder. He makes his roller or beater, as he calls it, by putting strips of iron lengthwise in a wooden cylinder. His brush is not unlike that of the common gin. But, in his specification, after describing his method, he says the teeth may be made in some other way, but they would in his opinion be more troublesome and cost more to repair them. His beater, he says, may be made of cast-iron, and channelled out of the solid metal for beaters.

Mr. Parkhurst makes his cards out of plate, with firm teeth, and places them close together to resemble cards. His roller is made of cast-steel, and channelled out of the solid metal. His brush is without bristles, but seems to occupy the same position as Mr. Sturdevant's.

Now, the simple questions I wish to ask, are, first, what is the difference between these gins? and, second, can a man make slight alterations and improvements on another's patent, and obtain exclusive right to make and sell such machines over the head of the first inventor? Yours, JOHN DU BOIS.

Greensboro', July 1, 1851.

[It is sometimes very difficult to give an opinion about the infringement of patents. The questions to be asked in the above case are, How much has Mr. Sturdevant invented? and, Does Mr. Parkhurst infringe upon his just claim? The claim of Parkhurst appears to us to be for what is called an improvement different from that of Sturdevant; here are his claims:—

PARKHURST'S CLAIMS.—1st. I claim arranging the metallic rings composing the burring cylinder, so near together that no burs or seeds, &c., can fall in between them, the rings having hooked teeth cut in the periphery, as described, and so placed around the cylinder as not to have the teeth on any two adjoining rings to come opposite each other, by which the wool or cotton is drawn in below the surface of the rings, and the seeds or burs are cleaned off. 2nd, I claim the combination of the cylinder, constructed as above described, with the feeding cylinders and trash cylinder, to separate the fibres of cotton wool from impure substances,

There can be no doubt but what Parkhurst's claim embraces the idea set forth in the remarks of Sturdevant's patent, viz., "the teeth made some other way—more troublesome, and cost more to repair them." There is no claim for Parkhurst's brush. The only way to settle such a question would be by putting Sturdevant's Gin and Parkhurst's together, and taking the opinion of gin makers and planters respecting the identity of the two. The Patent Office, no doubt, decided upon the dissimilarity of the two inventions. In patent trials, the opinions of experts are taken respecting the identity of the inventions at issue—the opinions of witnesses qualified to judge correctly, it may be said, decide all questions of infringement.