

New Inventions.

Wilson's Head Rest for Travelers.

What miseries have been endured by travelers, especially on railroads, for want of a suitable rest for "the weary head." An invention long sought after to meet this great want for every traveler has at last been struck off by the fertile brain of a well-known inventor, whose name it bears. It is so made as to be worn or supported upon the back or shoulders of a person, and it supports the head without being attached to a seat, or anything but the body of the wearer, whose head it supports, we may truly say, "in the lap of luxury." It can be folded up, and carried easily in the pocket, and every railroad traveler can thus furnish a head rest for himself, and sit at ease asleep or awake, by night or day. For persons who travel much by railroad at night, it is one of the best inventions ever brought before the public, and it will, no doubt, soon come into very general use. Measures have been taken to secure a patent for it, and more information may be obtained by applying to the Sole Agent, L. Philip Beers, 473 Broadway, this city.

Injunction for Imitation Trade Marks.

On the 16th inst. a case was tried before Judge Hoffman in the Superior Court, this city, and an injunction issued to restrain the defendant—W. Johnson—from imitating the trade marks on soap of the plaintiffs—James B. Williams & Bros. The Judge said:—

"In this case it is very clear that the plaintiff was the original claimant to the trade mark in question, and that the defendant, his agents, and others must be restrained and enjoined from selling, or in any way disposing of any soap in boxes or other packages with labels or wrappers containing the words 'genuine Yankee soap,' printed or written, or from advertising, selling, or offering to sell any soap whatever—unless the same has been manufactured by or procured from the plaintiffs—as and for genuine Yankee soap, and also from using the words in connection with the soap manufactured and offered for sale by him, and also for assimilating in any way, or using any imitation of the trade marks of said plaintiffs."

Patent Cases.

**Page's Saw Mill.**—At Albany, N. Y., on the 13th inst., a case for the infringement of Page's patent for improvements in circular saw mills, was decided in the U. S. Circuit Court, Judge Hall presiding. The parties were Page versus Phillips. A verdict was given in favor of the plaintiff. About fifty suits already commenced, hang upon this case.

**Woodworth Planing Machine.**—The Chicago Weekly Tribune of the 12th inst., states that a case relating to the patent on the above machine, was decided in that city on the day previous, after a lengthened trial of three weeks. The parties were Foss and others, as signees of the right for that city, against Goldie, for infringement of it. The jury gave a verdict in favor of the plaintiffs.

The Splitter.

This figure is a perspective view of an improved machine for splitting hoops, for which a patent was granted to Joseph and Sylvester Sawyer, of Fitchburgh, Mass., on the 23d of September last.

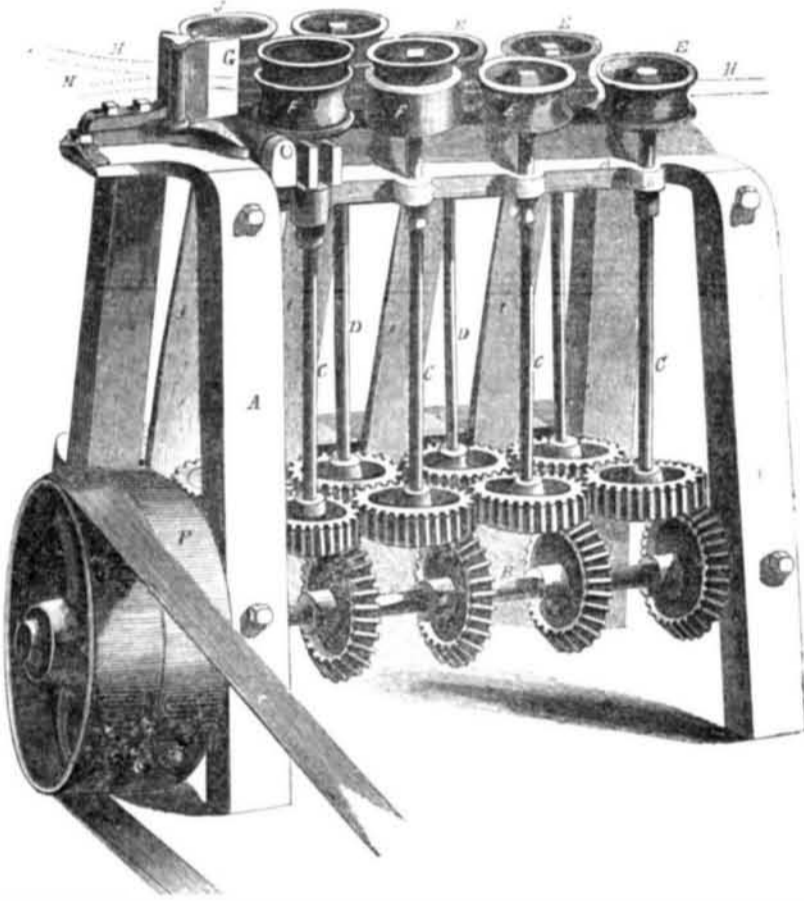
A is the metal frame of the machine, B is the driving shaft, and P the driving pulley. There are bevel wheels on this shaft gearing into corresponding teeth on the bottoms of spindles, C C C C. These are the spindles of the fixed feed rolls, which have cog wheels on the lower ends, gearing into corresponding wheels on the spindles, D D D D, of the opposite and self-adjusting feed rolls, and giving them a rotary motion. All the feed rolls, E E F F, have concave or grooved faces. H represents a hoop pole fed in at one end between them, and coming out at the opposite end split into two hoops. If the pole is only of a thickness to make two hoops, it is fed through but once; if it can make four hoops, each half is returned, and fed horizontally to the knife again, but only between the upper flutes of the hind pairs of rolls, F F. It

does not require so much power to feed in the half hoops, therefore the hind rolls are sufficient. G is the vertical knife against which the pole is fed, and which splits it. It is self-adjusting, so as to split the hoop pole straight through the center longitudinally, no matter how many knots may be in it. The adjustable rollers are allowed to give to the inequalities of the hoop poles; their upper necks are retained in boxes by the broad elliptical vertical springs, I I I I, which allow them to yield and accommodate themselves to knots,

&c., of the hoop pole, H; the knife, G, partakes of the same motion, so as to split through the center of the pole always.

As only one set of the feed rolls are self-adjustable, the knife must only move half the distance of these rolls, to stand in the center between them. This is accomplished by having a small rack bar under the table, connected with the collar of the last roll, J. This rack bar takes into a small pinion on the end of a very small stub spindle placed horizontally under the plate of the knife. On its op-

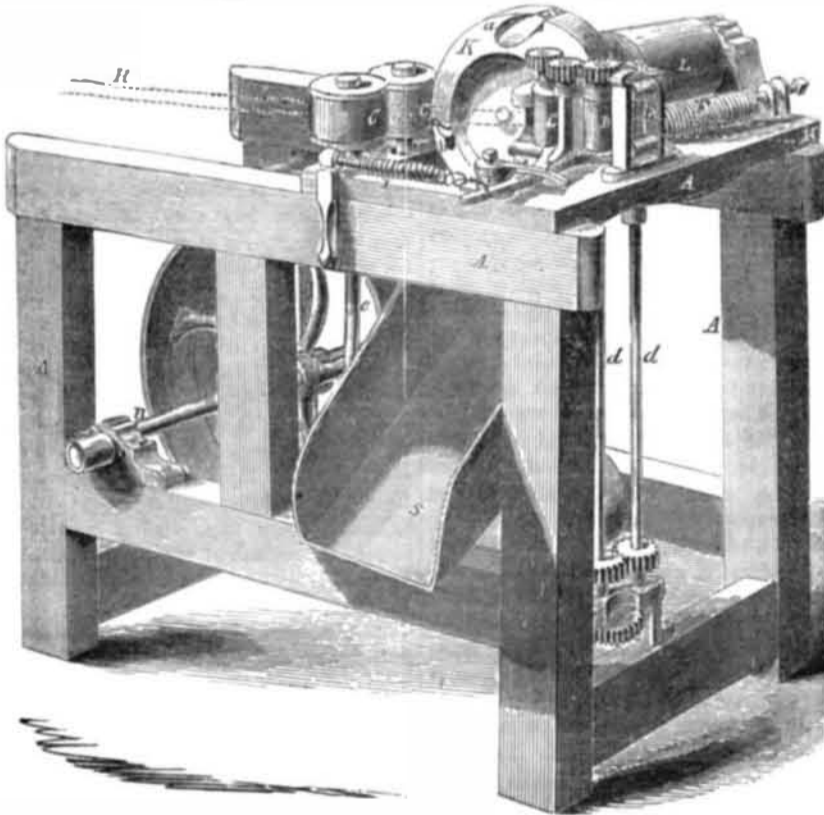
HOOP MAKING MACHINERY.



posite end, this spindle has another pinion half the size of the one mentioned; it takes into a small rack bar on the bottom of the plate of knife, G, and moves it in accordance with the motions of the feed roll, J, but only half the distance. By this simple arrangement the knife always splits through the middle of the hoop pole.

This hoop-splitting machine is very simple, and all its parts are strong, and not liable to

get out of order. It runs at the rate of 300 feet per minute, and can be driven by one horse-power. One horse power machines are built at Fitchburgh, Mass., which are warranted to run this machine. The improvement embraced in the claim relates to the method of hanging the knife and connecting it with the self-adjusting feed rolls for retaining it midway between them, and parallel with the direction of the pole, H.



The Planer.

This figure is a perspective view of the machine for planing hoops after they are split by the above described machine. The patent was obtained by Messrs. Sawyer for this machine on the 6th of May last.

A is the frame, B is the driving shaft, with

a driving pulley upon it. Through a series of gear wheels—hidden by the shaving's spout, S,—motion is given to the delivery rolls, C C, (the spindle, e, of one is shown) and to the guide feed rolls through spindles, d d. D E are the two front feed rolls. H represents a hoop fed in between them in front, and de-

livered finished at the back end of the frame. The off feed roll, E, is allowed to give, and accommodate itself to the inequalities, knots, &c., of the split hoops. Its collar is connected with the coiled spring, F, thus rendering it elastic. The feed roll, D, is fixed on a rigid spindle. G is the guide roll; it is secured on a small swing frame, of which the spindle of roller, D, is the axis. This small swing frame is held in place by the coiled spring, J, which imparts to it elasticity, and allows it to give to knots and inequalities on the hoops, and yet guides the hoops firmly to be planed by the cutters.

K is the cutter head; it is dish-shaped on the face, is secured on a horizontal shaft, and driven by a band passing over pulley, L. It has four knives on its periphery, two, a, for removing the rough particles, and two finer ones, b, set a little further in, for finishing the inside of the hoops. The cutters revolve in vertical circles; the finisher plauers, b, are adjusted with great exactness by set screws passing from behind through the cutter head.

Fig. 2

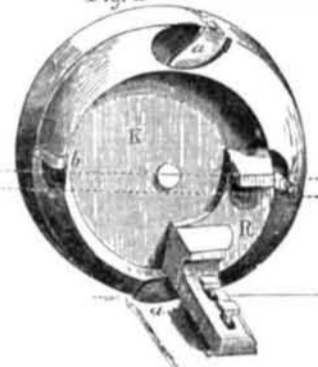


Figure 2 is a perspective view of the vertical gauge plate. Its sole is secured in the table of the frame by adjusting screws, and its gauge plate, K, rises vertically to fit close to the dish part of the face of the cutter head, K, allowing the latter to revolve freely. This gauge plate is rigid, and the inside of each hoop is pressed against it, and prevented from being forced over beyond its line towards or against the cutters.

When knots on a hoop are forced against the adjustable roll, G, the pressure against it is then increased, and were it not for this gauge plate, K, the hoop would be urged by the knots too far towards the cutters, and thus thin parts would be cut in it. This gauge plate, therefore, constrains the hoop to be planed in line always, no matter how knotty it may be.

One of the delivery rolls is also self-adjusting. At the end of the coiled spring, F, of the feed roll, E, there is a set screw for adjusting the tension of the roll; there is also a screw on the opposite end of the shaft of the cutter head for adjusting its position. The pinions on the top of the high feed rolls take into one another, to give motion to the guide roll, G.

This machine planes at the rate of from fifty to seventy hoops per minute, and two horse-power is warranted to work it. All the parts are simple, and these two machines form a complete set of hoop-making machinery. The hoops produced by them are well-finished, very accurately split, and are exceedingly uniform in strength. A set of these machines can be seen in operation by applying at R. A. Robertson's, No. 115 Pearl street, this city. Further information can be obtained by letter addressed to the American Hoop Machine Co., Fitchburgh, Mass.

SPLENDID PRIZES.—PAID IN CASH.

The Proprietors of the SCIENTIFIC AMERICAN will pay, in Cash, the following splendid Prizes for the largest Lists of Subscribers sent in between the present time and the first of January, 1857, to wit:

- For the largest List, \$200
- For the 2nd largest List, 175
- For the 3rd largest List, 150
- For the 4th largest List, 125
- For the 5th largest List, 100
- For the 6th largest List, 75
- For the 7th largest List, 50
- For the 8th largest List, 40
- For the 9th largest List, 30
- For the 10th largest List, 25
- For the 11th largest List, 20
- For the 12th largest List, 10

Names can be sent in at different times and from different Post Offices. The cash will be paid to the order of the successful competitor, immediately after the 1st of January, 1857.

See Prospectus on last page.