# Srinntific Ammitum. 



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## REDICK'S CORN PLANTER.

Scientific American, CIRCULATION 16,000
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der in 6 months.

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-Steam Carriage for Plank Roads.
A Steam Carriage Company, for plaık roads, has been formed in this city, the capital to consist of $\$ 100,000$. We certainly wish the company all success, but it is our opinion that a system of that kind cannot work economically. That steam.carriages can be made to run on common roads at the rate of 10 miles per hour, is nothing problematical; this has been done, as we have seen them running at that rate with our own eyes-but they didnot pay in competition with horses. Great 1 m provements are stated to have been made in the new carriages. This helps the matter, no doubt, and those who have calculated the profit and loss, say they believe it can be made to pay. Our opinion is a different one, and nothing but a practical test-fair, full, and un-restrained-can settle the question. We hope the company will do this at an early period. If we are mistaken, we shall be most happy to give publicity to our own.mistake; if not we claim the privilege, as in the case of the Annihilator, " to make a note of the matter." We must say that we are somewhat in favor of the scheme-and our plank roads furnish a very fair and reasonable field for trial.

Rutland and Burlington Railroad The special meeting of the stockholders ot this road was held at Bellows Falls, on Wed nesday, the 17 th inst., to take into considera tion the present financial condition of the company. The stockholders voted, almost with out a dissenting voice, to issue 17,000 shares of new stock at one hundred dollars per share with the privilege of putting in an equal number of old shares, and making them both a six per cent. preferred stock.

A Conservative
Mr. Thompson, a member of the Legislature of Tennessee, declares himself opposed to all railroads. He regards them as injurious to the country and to the morals of towns, and was in favor of a law directing the Attorney General to prosecute the travelling orator who go about the country to advocate them - Exchange.

Can there be such a man living as this Thompson. We scarcely believe it; bnt it is not impossible.

The cars on the Ohio and Pennsylvania Railroad run now from Cleveland to. Pittsburg in twelve hours. What a change! A few years ago people took nearly as many days to go from the one place to the other.

The Erie Railroad Company is aboutto fund a new floating debt of three million dollars, by an auction sale, at 7 per cent.

The second track of the New York and New Haven Railroad is finished from New Have to Fairfield.

In Indiana there are now 450 miles of railroad completed and run over by daily trains There are 1,020 miles under construction.Well done Indiana.


The accompanying engravings represent an $\mid$ munication with the grooves and open it with
mprovement in corn planting implements invented by Mr. William Redick, of Uniontown, Fayette Co., Pa., and for which a patent was g
851.

Fig. 1 is a back view, and fig. 2 is a trans verse section through the hopper. The same letters refer to like parts.
A A are the wheels; B is an axle with quare ends fitting into like mortices. The wheels and axle move together ; $C$ is the hopper or seed box formed with two inclined planes, D. There are openings on each side of this hopper, which span the grooves, $a$, and the cells, $c e$, in the axlé, which receive and carry the grain to the seeding tubes. The openings in the bottom of the hopper, are proided with movable slats, $f g$, which slide in grooves cut in the sides of the hopper. The lats are of such width, as to afford communication at all times with either of the grooves, a, for drilling grain, or by moving the slats towards the centre of the hopper, to close com-

Figure 2.

thereby) upon the truck wheels, $F$, and upon into and rest on the shoes, $K$, which open the which wheels, it is allowed to move until the furrows into which the corn drops, the earth marker comes over the exact spot. The le- closing over it after the usual manner of drillver, $E$, is then pulled down, and the marhine ing other grain. Corn, or other grain or seeds, commences planting again on the proper. line. By this arrangement corn can be planted in precisely straight lines both ways, and in cultivating the corn, there is no danger in overrunuing the rows.
The truck, F is supportedon a bar, G , which rests on its journal in the rear project.ons of theshafts, H , and in which journals it may free$y$ turn. When the machine is being moved from field to field, or unused, the lever is thrown up towards the hopper and staple, as represented, this brings the whole machine on to the truck, which is prevented from falling back by a strap or chain (not seen) which is attached to the axle of the truck, and is fastened to a brace between the shafts in front of the hopper. The seeding tubes, J, pass up through the shafts and have funnel-shaped mouths, as shown in fig. 2. , for receiving the grain from
the grooves, $a$, or either of the rows or cells, $c e$. The bottoms of the seeding tubes pass the cells, $c$, for planting in check rows, or by sliding both slats, $f g$, towards the centre o the hopper, to close communication between it and the grooves and cells, ac, and open it with cells, e, for planting in step-rows. The wheels have markers, $h$, on them; they may be made of metal and bolted to the felloe of the wheel. They correspond in number with the cells, or their divisions of them, so as to be an index of each deposit of grain. The markers may be made like $i$ (fig. 1), a sharp scoop, for hard ground. The markers repre-
 in the axle, and make a mark precisely opposite the gratn dropped from each or sald cells, When the cells, $e$; are used, the markers tally only each alternate row, and when drilling ir. the corn by the grooves, a, no attention whatever need be given to the markers. When the markers do not match the marks of pre vious rows, the lever, E , is thrown up bring ing the whole weight of the seeding machin (and which is entirely raised off the ground can by this arrangement by means of the
slides, $f g$, be planted in three different ways, slides, $f g$, be planted in three different ways,
viz., by means of the groove, $a$, in drills; by the cells in check and step rows; either of them being effected by a simple adjustment or move ment of the said slides.

The claim is for the combination of the the cells, $c e$, so that by moving to clats, $f$, towards the centre of the hopper and open it with the cells, , grooves the cells, $c$, for planting in lides $f$, or by moving both of the slats o lowards the centre of the hopper er, and with the cells, $e$, for planting in "step rows," This simple and beatiful in "step rows." worthy the attention of our farmers. Mor ed to Mr. Redick.
[NUMBER 16.
Stone Cutting Machine in a Railroad Tunnel One of Wilson's stone dressing machines, the same as the one illustrated and described by us in No. 14, we hear is employed in the tun nel of the Troy and Greenfield Railroad, which is now being cut through the Hoosac Mountain. The machine is worked by a steam engine. To show what it could do, a block of granite, ten feet long and four feet wide, was placed on a carriage and submitted to a single cutter, guaged to cut two inches from its surface. It passed over the entire stone in twenty-two minutes, and cut off 1,600 pounds of rock, leaving the same as smooth as any hammer dressed stone.

Improvements in Running Belting.
The accompanying engraving represents vertical section of a plan for relieving long belting from strain, invented by Mr. Nathaniel Nuckolls, of Columbus, Ga., who has taken measures to secure the same by patent. It is well known that a long belt involves a great deal of friction, because it sags in the middle, and hugs very tight on the pulleys. A

represents a pulley on the main line of shafting, and B is a pulley on a secondary shaft, to be driven by the belt, D , coming from the large pulley, A. It will be observed that the belt, D , does not run over the pulley, B , in the common way that belting is put up. It passes first over a small pulley, $\mathbf{C}$, then behind pulley, B, and comes forward like the letter, S , over the small lower pulley, C , and back in a direct line, horizontally with the periphery of the pulley, A. G is a beam in the ceiling of the room, and to it is secured a hanging frame, F, into which are secured two small pulleys, C C , running in bearings in the said frame. Over these two pulleys, C C , are hung two belts, one at each side, and the large belt, D , runs between. The dotted line, $E$, shows one of the small belts, which runs around the pulleys and acts on the face of the larger pulley, $B$; this keeps the long belt, $D$, taut, prevents it from sagging at the middle. The small frame, $F$, is free to swing.
More information may be obtained by letter addressed to Mr. Nuckolls.

## Wild Orange Wine.

We see by some of our Southern exchanges that a delicious beverage is now made out of the wild orange, heretofore deemed useless
The wild or bitter orange is first deprived f its juice by strong pressure on large quantities of the fruit; the juice is put into barrels, closed up; and allowed to ferment for a few months. By this process it loses its bitter taste, and becomes clear and limpid. It is then bottled, a wine-glass full of old cognac being poured into each bottle, together with a small quantity of sugar. The liquid thus formed is not a cordial or liqueur, but appertains specially to the class of wines.
The bitter orange abounds on almost every plantation in the States. It has hitherto been egarded as an almostuseless, product, except now and then when necessity compelled it to replace the lemon. It was but an indifferent substitute, however.
A new cotton factory, recently erected at Reading, Pa., by Senator James, of Rhode Island, has been put into operation.

