



New Inventions.

Improved Tuyere for Forges.

Mr. Samuel C. Camp, of Hartford, Ct. has made a valuable improvement on Tuyeres for forges, &c. which has been tried and found to operate with great satisfaction. Mr. Camp has taken measures to secure a patent for the improvement, which consists in making the revolving tuyere of a square rectangular form with openings of different sizes in the sides which can be operated in the most beautiful and easy manner, to regulate the draft.

The least improvement in Tuyeres is of vast importance in the iron manufacture, as upon the proper management of the tuyere depends in a great measure the success of the manufacture.

New Stave Jointing Machine.

Mr. Lorenzo D. Benson, of Pennsylvania, has invented a new improvement for jointing staves for barrels and hogsheads. The machine consists of planes operated by a reciprocating motion, cutting or planing in both the forward and back stroke of the pitman, and which can be set to joint staves of any bulge and cut them of any bevel. Each plane is made to do both the rough and smooth at one operation, that is, it is always set to do this, but the stave has to be shifted from the rough planes to the smoother. He has taken measures to secure a patent.

New Railroad Brake.

Mr. Benjamin Burling, of Danville, N. Y. has invented a new Brake, which is of a peculiar nature and is a good one. The brake consists of a shoe wedge placed close to the wheel on the side of the truck. When it is desired to be operated, by simply turning the wheel of the brake, as in the now common way of doing so, the wedge shoe is forced under the wheel of the car lifts it off the track at once, and with but little power exercised, this at once arrests the motion of the car.—Every person knows that the power of the wedge is one of the most simple and effectual in practical mechanics, but the secret lies in its useful application. Mr. Burling, for aught to the contrary that we can see at present, has hit upon a good invention, and by the advice of many good engineers he has taken measures to secure a patent for it.

Rotary Electro Magnetic Engine.

Mr. J. L. Pickeral, of Greenville, S. C. has invented a new and beautiful rotary engine to be propelled by electro magnetism. The only hope for a good rotary engine may be anticipated from the application of electro magnetism. The difficulty with steam rotary engines is to make them tight—this at least has been the objection to them, whether it was correct in some cases or not, we cannot positively say, but there is no packing required for an electro magnetic engine. There is always some power lost in converting a reciprocating into a rotary motion, and as a rotary motion is the best adapted to most purposes in operating machinery, such as propelling paddle wheels and shafting, it is no wonder that much ingenuity has been, from correct reasoning, applied to discover a good prime rotary power.

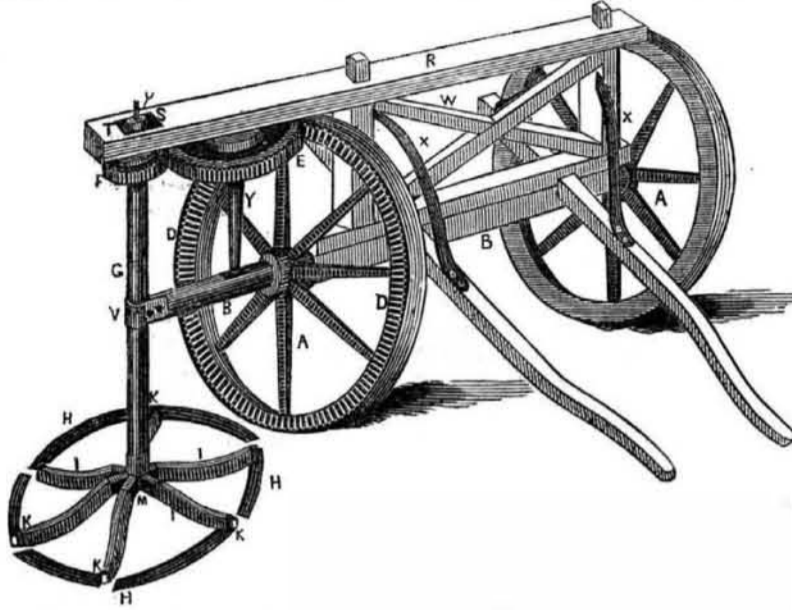
Steam Engine Brake.

A patent has just been sealed in London by Mr. J. Mills a working mechanic, and a Mr. Donistrophe, of Southgate, England, for a new improvement to arrest the motion of a steam engine in a shorter time than has ever been done before. As the patent is not yet enrolled a full description of it has not been given to the public, but we have received some information relative to its operation. It has been applied to a steam engine of 30 horse power in the Factory of Messrs. Smith and Booth Southgate, and it is thus described by an eye witness. "We were taken to one end of the spinning room when the machinery of the whole mill was in operation and the engine at full speed. A valve was then opened which

admitted the atmospheric air, instantly choking the condenser, shutting off the throttle and water valves and opening the blow valves.—The instant this was done the fly wheel made only one revolution and a quarter, while in the ordinary manner of stopping an engine, it makes generally five revolutions. So complete is the simple piece of mechanism that although the whole machinery throughout the mill was stopped so suddenly, yet not a single

thread was broken and all remained ready for resuming work. The machinery that accomplishes this is a safety pneumatic valve which can be placed in any room in the factory and by means of pipes can work as well as if close to the engine. If a person is caught by a belt, the machinery can thus be stopped at once, before the unfortunate person is drawn around the shaft. The invention can be applied to high pressure engines and water wheels."

MOWING MACHINE.



This is a machine invented by Mr. William Boone, of New Hope, Missouri, for cutting hay, and patented in November, 1848—and it has its whole course nearly to run yet.

This is a perspective view of the machine and shows its operation very plainly. A A, are the wheels of the cart. B, is the axle, which extends out and by a clasp V, supports the pendant scythe shaft G. W, are diagonal braces, and X X, angular braces supporting the cross beam. One of the wheels of the wagon is constructed with cogs D D, on its outer rim. Y, is a vertical shaft running in a bearing on the axle B, and into a bearing in the cross beam R, above. E, is an intermediate wheel on the top of Y, meshing into the large cog wheel F, on the pendant shaft, to communicate motion from the wagon wheel when the wagon is drawn forward to revolve the scythe shaft G. This all will understand. The pendant shaft G, is constructed with a number of radial box-shoulders in which are inserted bolts M. I, are the snathes, which are formed with clasps on their inner ends, which hook over the bolts in the shoulder boxes and form a hinge for the snathes. H, are the scythes. The shaft G, is secured in the cross beam R, by a box S, in the beam, in which revolves the cap T, which is the

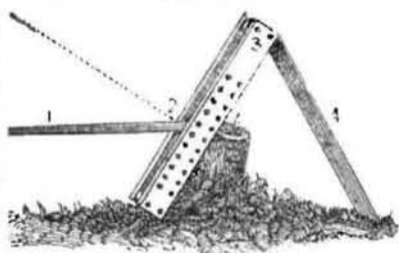
shoulder of the shaft and is retained by a ski-fer or wedge U.

When the wagon is moving forward the shaft G is revolved and the scythes have a horizontal wheel motion. There are six scythes forming segments of a circle, and they can be set to cut at different angles from the horizontal plane by wedges inserted below the ends in the shoulder boxes. When the scythes are revolved they cut the grass on their convex side and throw the swathe in towards the wheel. The great beauty about this machine is the simple manner by which the snathes are secured in the radial boxes, for the scythe has but to be turned up to be sharpened. The great difficulty with a number of such machines, has been the want of a proper compensation connexion to secure the snathes snugly and yet allow the scythes to be whetted without much trouble. This improvement of Mr. Boone, removes the evil alluded to and accomplishes what has been long desired in such a machine.

Mr. Boone is stopping in this city at present and would be happy to sell State, County or single rights of the above machine.—Letters addressed to him, at Dunlap's Hotel, New York, will receive prompt attention.

Simple Stump Machine.

FIG. 1.



This machine consists of a triangular scaffold, a lever and hook. 3, 4, is the scaffold, 4 being the brace and 3 the fulcrum frame. This fulcrum frame is made of two thick oak planks, about eight inches wide and seven feet long pinned together at the ends through a piece of four inch scantling between the planks. These planks have holes bored in them about 3 inches apart, through these holes pass two stout iron bolts across for the lever to rest upon. No. 1, is a pole about ten feet long and four inches in diameter. The inner end of the lever is banded round with a strong iron hoop and into its centre is driven a strong iron bar about two inches in diameter and two feet long, with two notches near its extremity about five inches apart; and in the middle between the said notches a hole is bored to receive the link in fig. 2. The links

and hook are made of good iron as stout as may be required.

To operate this simple machine, it is set up as seen in fig. 1, with the notches of the lever resting on the cross bolts of the frame, and the hook is then hitched to the root of the stump. Now elevate the end of the lever, (which needs a short pole attached by a ring at the end to make a long one,) withdraw the left hand bolt and raise it one hole higher; now depress the end of the lever and raise the right hand bolt; and so on as high as you wish.

FIG. 2.



This machine will cost only a few dollars and to those who know anything at all about the power of a lever, we hope that they will not forget the expression of Archimedes—"Who should the Roman from inverted wrecks And proud to save the Syracusan State, Cried in his joy with grand effects elate, (While crowds exulting shout their mirth,) Give where to stand and I will move the earth."

Travelling Organ.

An organ of large dimensions has been built by Mr. H. Erben of this city, for Dr. G. R. Spaulding of Albany, to accompany a travelling Circus. It is named the Apolonicon, and was driven through the streets of our city on Thursday of last week with an organist who performed some beautiful airs on it. The carriage was built by Mr. J. Stevenson, and is a splendid piece of workmanship, and so constructed with springs that the huge organ, 20 feet long, 10 feet high and 6 wide, is not in the least affected by jolting. The organ has two octaves, of pedals and 8 stops; three composition pedals to connect with keys, beside coupling stops. With this a travelling band is to hear its dead march performed *a la grande mode*.

Improved Furnace Bars.

Mr. Geo. W. Fellows of this city, has invented an improvement in grate bars which promises to be of importance to all who use steam power. The improvement, consists in so constructing the bars as to prevent their being "burnt out," by the intense heat to which they are subjected. They differ from the common bar only in being slightly arched, and having on their upper surface, upon which the fire rests, two small, longitudinal grooves. These grooves become filled with ashes and thereby keep the bars comparatively cool.

A set of these bars have been used for some time under the steam boiler in the establishment of the New York Sun. They have endured twice as long as the ordinary constructed ribs, and are still good.

Rice Field Irrigator.

The Charleston, S. C. Evening News says that Mr. Wm. Leiby of that place has constructed a steam engine moving on wheels, the purpose of which is to render the cultivation of rice independent of the rise and fall of the tides. By means of a wheel with buckets attached, water is brought from the river to a point of discharge three feet from the level whence it is received. The engine in full action is of eight horse power, and the quantity of water which it can deliver when so worked may be estimated from the result of an experiment. With the application of less than half the full power, it discharged fifteen hundred gallons a minute. The quantity of water, and the elevation at which it can be delivered, is in proportion to the size of the wheel and the motive power.

This invention promises to be of great value to rice planters and we commend it to their attention.

Interesting Discovery.

The Paris Correspondent of the Courrier des Etats Unis, describes a marvelous discovery, which has just been made, relating to the important subject of coloring grey hair:

The new system succeeds in bringing about the internal coloring of the hair. The discovery is borrowed from the Chinese, who have succeeded in reaching and transforming by means of medicine and a peculiar diet, the liquid which colors the pilous system and giving to white and red hair a black tint which maintains itself during the continued growth. It is by this method that the Chinese have been able to claim the title from the highest antiquity of the black haired nation.

M. Debay has published a treatise upon it—and as the bones of living animals have been colored red by making them eat madder, and the internal wood of trees has been changed to different hues by watering the roots with liquid metallic salts, he wonders that this discovery has not before been made by those who thus experimented. The hair and the beard belong to vegetable life, and are disposed to the same phenomena. In fact, says M. Debay, after a sufficient quantity of ferruginous salts has been introduced into the body, the circulation takes them up, the blood loaded with these substances deposits them in the follicles of the hair, which in turns pours them into the oil of the hair, and this oil, saturated with iron, becomes black, and the whole hair with it.

The above has an old appearance, and if we mistake not, is to be found in a number of the Glasgow Mechanics Magazine for 1825.—We should not like to try the process at any rate.