NEW INVENTIONS.

Improvement in Horse Powers.

Mr. A. D. Brown, of Clinton, Jones Co. Geo., has taken measures to secure a patent for an improvement in Horse Powers. It consists in an arrangement of the gearing by which the shaft to which the last or fastest motion is communicated, is made to pass through the centre of the master wheel, said wheel being cogged on the outer periphery. Motion is given to the shaft above mentioned by a pinion on cogs of which mesh into the cogs of the master wheel, the arbor of the pinion works into the outer ends of travelling wings, the opposite ends of the wings encompassing the shaft which passes through the centre of the master wheel. The arbour of the pinion has a pulley upon it, and there is also a pulley upon the shaft aforesaid; a band passes around these two pulleys. The shaft or pole to which the horse is attached, is connected to the lower travelling wing. Motion being given to the shaft or pole by the horse, the pinion is turned by passing around the master wheel, and motion is communicated to the working shaft by a pulley on the arbor of the pinion. The power may be taken off the shaft for driving other machinery above or below the master wheel.

Improved Railroad Truck.

Mr. Abram Snyder, of Hawley, Wayne Co., Pa., has invented an improved truck for railroad cars, which consists in having three pairs of wheels to one truck, and each pair of wheels to be placed in a frame, the three frames being connected by a joint in such a way that each frame will conform to the curvatures or inequalities of the road without causing any strain upon the others. He employs cast-iron frames which cannot be employed in the ordinary trucks. On the upper surface of the truck, and over the joint is placed a circular rim, which serves as a guide to the pair of wheels in the centre of the frame. This guide prevents the centre wheels from getting off the rails, and it also is acted upon by the front frame, so that the centre wheels are assisted in turning or conforming to the curvatures of the road with as little friction as possible.

Measures have been taken to secure a patent.

Improvement in Burglars Alarm.

Messrs. L. J. Worden and E. H. Space, of Clinton, Oneida Co., N. Y., have taken measures to secure a patent for an improvement in Burglars Alarms which consists in securing the lever that acts upon the pallet in such a manner that when the lever is thrown up by the opening of the door or window, (to the casing of which the instrument is attached) and the pallet left free to be acted upon by the escape wheel, the lever will be secured by a catch when thrown off. The object of this is to prevent burglars, after entering a door or window, to stop the alarm. A button is also attached to the door, and so arranged as to act upon a lever and sound the alarm when the door is opened, or not to be acted upon, as may be desired.

Improved Machine for Cutting Sash and Mouldings.

Mr. C. B. Morse, of Rhinebeck, Dutchess Co., N. Y., has invented some good improvements on machinery for making sash and mouldings, for which he has taken measures to secure a patent. The cutter is formed of two circular plates placed on the same shaft, and so arranged that the said plates may be set at a greater or less distance apart as desired in order to cut different mouldings. The cutters are adjusted by set screws. He also employs shields which prevent the feed rollers from forcing the stuff against the cutters, when acting upon the end of the stuff to be cut out. The shields also prevent the rollers from loosening the grains of the wood, and also from forcing out pieces from the end of the rough material.

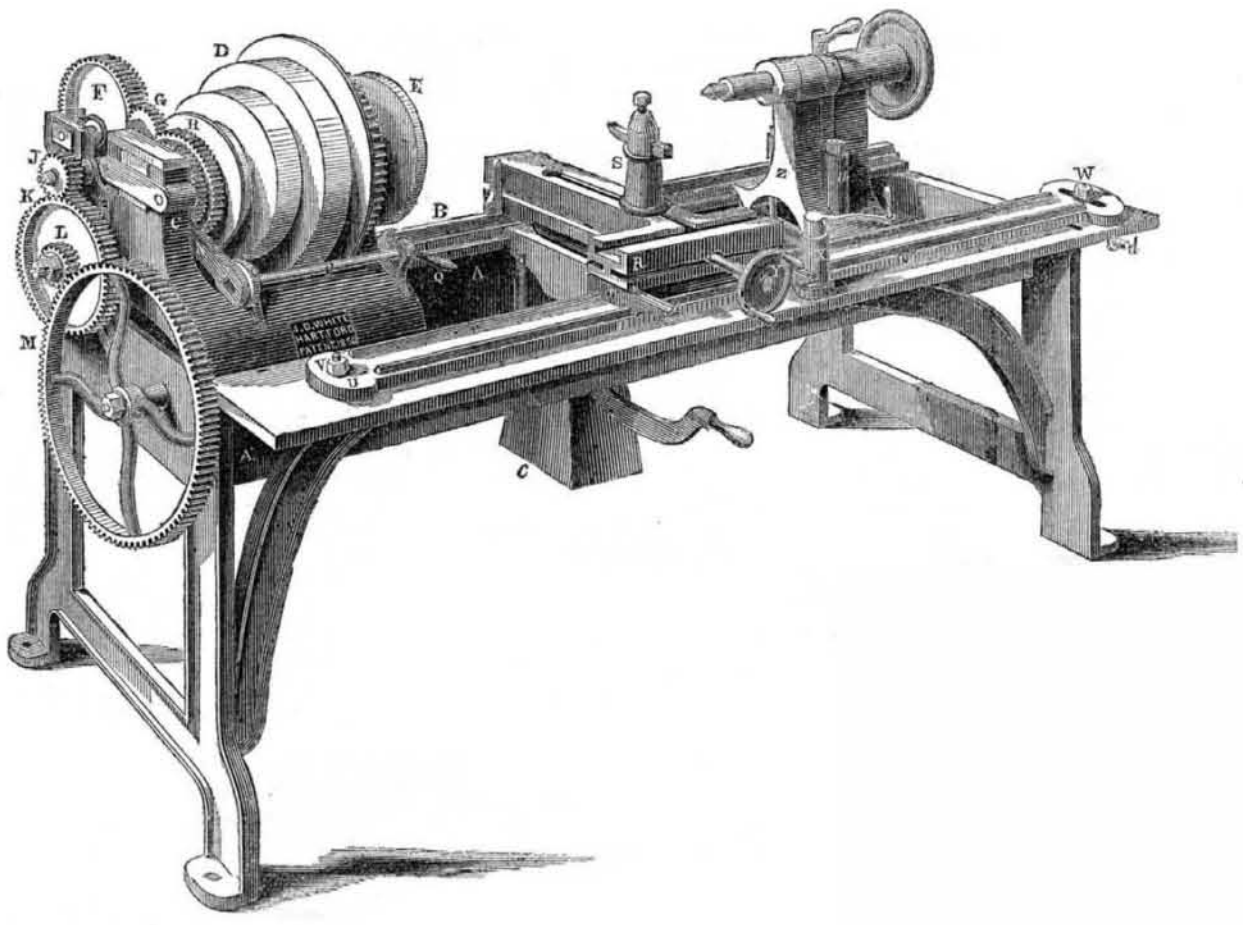
Improvement in the treatment of Calf Skins During the Process of Tanning.

Mr. Henry Halsey, of Windsor, Hartford Co., Conn., has taken measures to secure a patent for a very valuable improvement in the treatment of calf skins during the process of tanning the hides, whereby the hacks are removed, and finished skins for boot and shoe uppers rendered much more marketable. The improvement although it removes the hacks, also renders skins more uniform in thickness, therefore they are much smoother. The improvement will no doubt soon be introduced into the art, for the manufacture of upper leather is one of the most important in our country. Every improvement should receive prompt attention from the trade in general.

New Electro-Magnetic Engine.

We learn by the last number of the London Mechanics' Magazine, that Messrs. Harrison have provisionally registered a new electro-magnetic engine, which appears in principle not good. It is said to consist of induced magnetic power of compound coils which draw within a suitable aperture, or repel therefrom a series of plates of soft iron, or permanent steel magnet. The inventors state they can obtain any length of stroke by reciprocating action, and they reduce the effect of the secondary currents to retard the motion of the moving magnet. The larger the engine, the greater is the economy of it stated to be. They have got the principle of Prof. Page, but have not such a good arrangement. They are a little behind him with their invention although they state that they have been experimenting for years. The inventors state "they have obtained a power cheaper than steam; we do not believe it."

WHITE'S IMPROVED LATHE.



The accompanying engraving represents a Lathe of Mr. J. D. White, of Hartford, Conn. a patent for the principle of taper cutting being granted to him on the 21st of May, 1850.

The engraving is a perspective view, and the lathe is one of the best construction, and the workmanship is of the best description. On page 267, of Volume 6, is an engraving of Mr. White's double lathe for turning the axles of railway cars; an account of the nature and principle of this invention, is there set forth, and it requires but little to be said about that at this time. This is a view of the principle applied to the single lathe. That principle is a movable slide to guide the rest, and which can be set at various angles so as to turn tapes, and at the same time it is equally as good as any other lathe for every kind of work a lathe can perform. B is a slide on one side; the other is covered by the *way*. C is a fixed standard of the gearing; D is the train of pulleys; E is the live centre; E G F J K L M are the train of gear wheels and pinions for the different kinds of turning, &c., to give the requisite velocity to the screw shaft, and M is the gear wheel of the same. This shaft passes through the screw eye on the slide rest, (but which cannot be seen) in the usual way. R is the slide rest; S is the tool stock with the cutter inserted in it; Y is the screw for setting the tool at the proper distance to act on the article to be turned; Z is the movable poppet centre head; *a* is a screw bolt (there is a like one on the other side) to fasten it down on the table; U is the movable way to be set in and out at various degrees, to cut tapers. It guides the slide rest R. V is its pivot axis. W is a screw to fasten it at the movable end. It works in the slot, the use of which will at once be perceived. This movable guide way is reversed quickly by a pinion on Y, working into a rack, *b*, on the edge of the guide way. *c* is the draught weight. Q is a handle to operate the rod, P, and an eccentric lever, N, to throw the gears in and out, with pinions on the back shaft, for changing the velocities as mentioned; *d* is a screw for setting the movable guide way in and out to the proper distance. This lathe is well adapted to chucking, and its utility for parallel and taper turning is self-evident. By using a card of reference, this lathe can be set in an instant to cut the same taper a year hence, which may be cut to-day.

This lathe is for sale at Leonard's machine depot, No. 106 Pearl street, this city, where it may seen, an examination of it will be of interest to all machinists. Mr. White is now manufacturing these lathes. He produces none but the very best work.

Transfusing of Blood.

The French papers state that a very interesting experiment has been lately performed at the Hotel Dieu of Lyons. A female was brought into the hospital who had been seized with violent hemmorage. Her condition seemed desperate. Death appeared imminent, inevitable.

Doctor Delorme suggested transfusion.—This was at first combatted by the other physicians as offering no chance of success, but was finally assented to, as, the case being a desperate one, it could do no harm, even if it did no good. One of the young aspirants, residing in the hospital, offered to furnish the blood necessary to the operation. A syringe was immersed in warm water and kept there till it became of a temperature a little higher than that of blood in circulation. The proper vein in the arm of the sufferer was then opened, and a fine canula, or tube, was introduced to some length. The other end of the tube was then fitted to the syringe, which was enveloped in warm towels, and in which was the necessary quantity of pure human blood. The operator then gently forced into the veins of the dying woman the revivifying fluid.

At this moment, as she afterwards declared she felt a grateful warmth spread over her body, without having the reasoning faculty strong enough to trace it to any cause. Soon after she recovered, in a great degree, her senses and eye sight. A few hours later, a reaction manifested itself so violently, that the physicians were seriously alarmed. It seemed as if death might result as well from too much —too active vitality—as from vitality too much exhausted and enfeebled. But a calming potion soon diminished this unnatural action, and the patient has since been regularly improving. The last intelligence from Lyons states that it is now hardly possible that a relapse can occur, and that the cure may be set down as complete.

The America.

Quite an interesting discussion has sprung up in the columns of the London Mechanics' Magazine, respecting the merits of the model of the Yacht America. It seems to be conceded (and how could they help it?) that she is much superior to any of the British-built Yachts; J. Scott Russell comes out upon the strength of it, and other vessels he has built, in presenting a good argument in favor of the wave line theory.

Borax.

This very useful article is extensively manufactured in Tuscany: no less than 7,500 lbs. of boracic are produced every day. The revenue amounts to 10,000,000 francs per annum. Borax is a sub-carbonate of soda, and is much used for welding purposes, also as a wash for the hair, and as a gargle for diseased throats.

Ontario and Huron Railroad.

The Ontario and Huron Railroad, connecting lakes Ontario and Huron, we learn from the Chicago Democrat, is to be completed in fifteen months, at a cost of $2,000,000 of which $1,700,000 has already been provided. The western terminus is Goodrich. Immediately after the completion of the road, a line of steamers will run between Chicago and Goodrich, in connection with the road, and a line of steamers on Lake Ontario.

Kossuth.

This great patriot, and perhaps the most fluent speaker in the world at the present day, will soon be on our shores. The members of the press in this city are preparing to give him a spirited reception.