

IMPROVED STEAM ENGINE.

The steam engine of which we present an illustration is built for the purpose of being carried far from machine shops and skillful engineers; and the manufacturers have spared no pains or expense to get up an engine that will lessen the care of the engineer, and reduce the liability of derangement to the lowest figure.

The parts most exposed to wear are made of steel and bronze, and the balance, of the best hammered and cast iron. All the wearing parts are made very large, so as to present a large amount of surface to do the work.

It is a plain straightforward horizontal steam engine, without independent cut off, the introduction of which would complicate the engine and render it more likely to get out of order. But those which have been in use have exhibited an economy in the use of steam that many of the more complicated independent cut off engines cannot excel.

An idler rock arm is put in between the eccentric rod and the valve steam, so as to allow the engine to be run at a high rate of speed, and avoid all springing which so seriously interferes with the motions of the valve on high speed engines as commonly built.

The fly wheel with wrought iron arms is acknowledged to be the cheapest in construction and has the greatest proportion of its weight in the rim just where it is most effective. The defect of those heretofore made has been that they were not stiff enough sidewise. This fault Messrs. Snyder Brothers have overcome by spreading the arms or spokes apart (sidewise) at the hub, so as to brace against each other.

The second difficulty in ordinary wheels is the shrinking of the cast iron away from the arms and leaving them loose. This they have also overcome, and the arms of their wheels are solidly welded to the rim and hub; or, when preferred, they put a pulley fly wheel on their engines.

The piston is self-packing and the manufacturers state that it requires no care. One of them, 22' diameter, has, they state, been running in a saw mill for six years without repairs or care, and the interior of the cylinder to-day is as bright and smooth as a looking glass.

These engines are built to run at a high rate of speed, so as to develop as great an amount of power at as small a cost as possible; and to render this speed admissible, every part is finished with the greatest accuracy and made of the very best material. For further particulars address Snyder Brothers, Williamsport, Pennsylvania.

LATHE CENTER GRINDER.

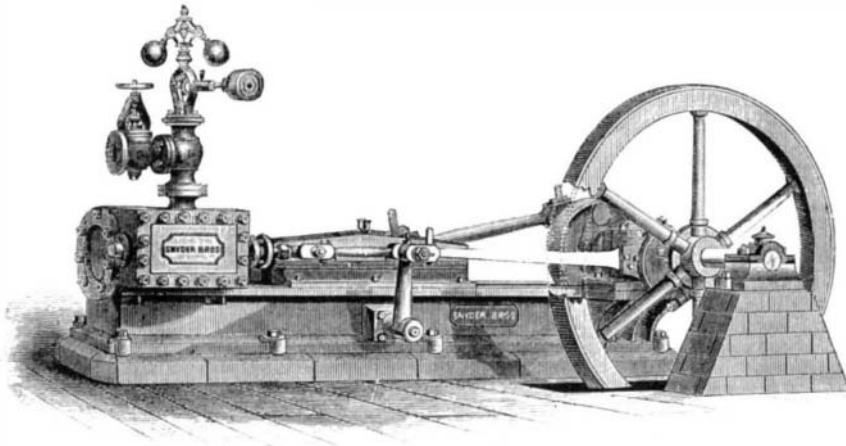
It is a common practice to leave the revolving or "live" centers of turning lathes soft, in which condition they are exceedingly liable to bend or indent and, by producing imperfect work, cause serious defects in the turned portions of machinery. The device herewith illustrated is designed to grind the lathe centers after they are hardened, by means of a Union emery wheel placed in an ingenious appliance readily affixed to the lathe. The cut shows the invention in position, A being the grinding wheel, which it will be seen can be placed in the tool post and as easily adjusted to its work as an ordinary turning tool. It is guided by the handle shown, and is actuated by the belt passing over the idlers and receiving motion from the cone pulley.

The simplicity of this device, its ready adjustability, and the facility with which it may be applied to engine lathes of all the various sizes and styles, will render it a useful and convenient addition to every workshop. An operative of ordinary skill can with its aid, it is claimed, true a pair of centers after they have been shaped and hardened in from two to four minutes and so perfectly that not the slightest variation can be detected. For further particulars address the Union Stone Company, No. 93 Liberty street, New York city, and 16 Exchange street, Boston, Mass.

Kid Skins and Kid Glove Making in England.

When dried, the skins feel hard and brittle, and have to undergo the process of staking (the next stage) to render them again elastic. This is done, says *The Leisure Hour*, by means of a semi-circular smooth edged iron plate fixed upright on the top of a stout piece of timber, across which the workman draws the skin, first in one direction and then in the opposite, manipulating it well with both hands until it is soft and elastic. It is then passed on to the parer, who shaves it to a like substance all over by fixing one half of the skin under a strong cord round an ash pole, grasping the loose end with his left hand, and carefully shaving it with his right by means of a circular knife of quoit-like shape and extraordinary keenness, removing the skin, reversing it on his pole, and shaving the other half in like manner, when, after a little polishing or stoning off, and padding down, it is finished. We may here remark that at every stage the work is inspected by a competent foreman before it is passed on to that which follows. The skins are now removed to another room, where they are examined and sorted for cutting into such kinds of

gloves as they are best fitted for in quality, size, substance, etc.; they are thence sent to the cutter (in lots, generally, of from four to five dozen) with full instructions for his guidance respecting every skin. The cutter, taking one skin at a time, stretches it to the fullest extent, and cuts it up by measure into plain oblong pieces of the required size, which he submits to be stamped while stretched out, as a proof of his correctness in measuring and marking, before finishing them off in the form he is required to give them. From the cutter these oblong pieces, called "trunks," are sent to the puncher, who, taking two or three pairs at a time, and placing them on the knife to which they correspond in size and shape (being so numbered by the cutter), puts them under a press, when the form of the glove is instantaneously produced, with all the

**SNYDER BROTHERS' STEAM ENGINE.**

necessary slits and openings, button holes, gussets, etc., for enabling the sewer to put them together. The thumbs and the forgettes or fourchettes, the pieces put between the fingers, are punched separately. The "trunks" now go to the trimmer, who, with a very fine cutting pair of scissors, removes any little roughness that may have been left in the punching, after which they are supposed to be finished, though they have yet to be again closely examined, so as to correct any faults and prevent any defective pieces being sent out to the sewer. Having passed this examination they are handed to boys, who fold each pair with its complement of thumbs, forgettes, and other pieces inside, and put them up into half dozen or dozen packets, each packet with full instructions for making, written on the band; the sewing materials are then added to each packet; and after being duly entered out, they are taken by traveling clerks to the various sewing stations throughout the county of Worcester, and into parts of Warwickshire, Oxford, Hereford, Gloucester, Devon, and Somerset. Each clerk will take out daily the number of

though not so large, are found near San Mateo, on the San Francisco side. They are all near the shores of the bay, and have been made of shells of the oysters and mussels that the Indians used as food, and which they evidently roasted to open.

The Horse Distemper.

By the account of an observer who has recently come from New York, we are confirmed in our impression says the *Field*, of London, that the disease among horses in America is identical with the well known influenza or distemper of horses in this country. Three horses said to be affected with the epizootic have just been landed in Liverpool from New York, and we are informed that two of the three are in good health; the other has only a slight cough. It appears that the animals manifested the usual symptoms—loss of appetite, nasal discharge, cough, and sore throat—at the commencement of the disease, but rapidly improved under simple treatment, and at the termination of the voyage two of them had quite recovered.

Influenza exists, we understand, among horses in Liverpool, and certainly also in London, although not to any remarkable extent. Cases of the disease came under our notice several weeks ago. In the event, therefore, of the affection assuming the epizootic form, it will not be necessary to trace its origin to importation of horses from America. The Irish Government issued an order on November 5, prohibiting the landing at any port in Ireland of a "horse, mare, gelding, foal filly, ass, mule, or jennet from or which, at any time after the 30th day of September, has been in any part of America."

No legislative action has been taken by our Government in the matter, nor under all the circumstances does it appear to be necessary to interfere with the very limited importation of American horses into this country.

Influenza, like epizootics in general, only spreads rapidly and extensively when the conditions are favorable; the occurrence of a few cases every spring and autumn excites no attention.

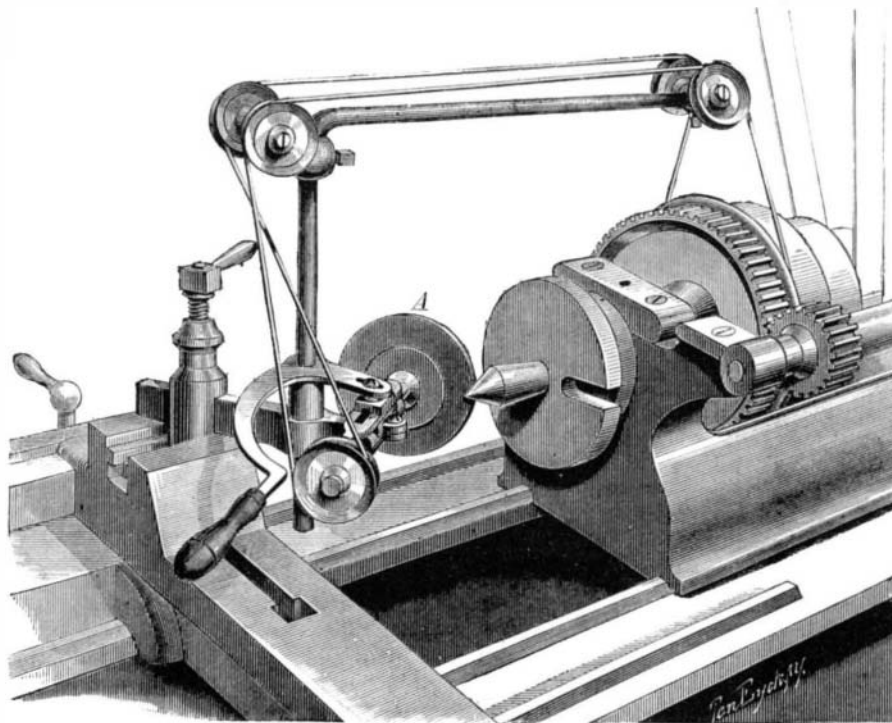
Sea Sickness in the Horse.

It would be a happy incident for the poor animal if it could always relieve itself by vomiting. Alas! it cannot; this relief is quite exceptional. The sufferings of a sea sick horse are intense. The stomach tries to relieve itself, dry retchings follow, and reach such a climax that the blood is driven into the head and into the brain, and finally the poor animal succumbs to apoplexy and dies in great torture.

New Process of Bleaching Animal Textile Fabrics.

MM. Samal and Berouson have recently patented, says the *Chronique de l'Industrie*, a new method of bleaching animal textile fabrics by means of a feeble solution of the sulphurets of sodium and potassium. These products act in a remarkable manner in removing the gum in preparing silk and in scouring wool. In practice, in the first case, the bath should be boiling; in the second, the temperature of the alkaline sulphuret should not exceed 50° C. The more difficult it may be to remove the gum and prepare the silk, the less the solution should be sulphuretted; in some instances the proto-sulphuret may be employed.

The inventors have also used in the same manner the aluminates of soda and potash.

**LATHE CENTER GRINDER.**

dozens required for his particular station, and bring home made goods to a like extent, the quantity varying with the population of the different localities. All these goods when brought in from the makers have yet to receive the last finish, that is, the "topping," button and button holing, etc., and this is done by hands in the city of Worcester, within easy reach of the manufactory. The gloves are now completed; but they must still be "dressed," or put into straight and attractive form; they are then subjected to their final examination by an expert and, when passed by him, have the firm's name stamped inside one glove of each pair; after which, being neatly made up, banded in half dozens, and put into small boxes or cases, they are labeled and sent off to the London warehouse, whence they are distributed to every part of the kingdom, the colonies, America, etc. Messrs. Dent and Co. now employ nearly seven hundred hands within the walls of their manufactory, and about five thousand sewing people, etc., outside.

A WISE man's thoughts walk within him, but a fool's without.