

NEW INVENTIONS.

Improvement in the Drawing Parts of Carriages, &c.

Mr. Duncan E. McDougal, of Union Village, Washington, Co., N. Y., has invented and taken measures to secure a patent for a very useful improvement in the drawing attachment of carriages, the nature of which consists in the employment of a single trace attached at each end to opposite sides of the animal, and passing round two pulleys attached to the vehicle in place of the whiffletree; the pulleys are also furnished with springs which have a tendency to draw them back towards the carriage or vehicle. The objects of this invention are the equalization of the draft on each side of the animal (one or two in a carriage) especially in turning; and also to prevent sudden straining upon the traces by jerking and quick starting. It will prevent much breakage of harness, and we do not see any difficulty in its application to plows and harrows.

Improvement in Bedsteads.

Mr. L. Newcomb, Jr., of New Bedford, Mass., has invented and taken measures to secure a very novel improvement on Bedsteads. The nature of the invention consists in having two bedsteads connected together—an upper and lower one—and so arranged that the lower one slides underneath the upper one, the said lower one having its footposts surmounted by clamps which fit or work into recesses cut on each side of the rails of the upper one. The rails of the lower one pass through mortise holes in the lower part of the foot posts of the upper one. By this arrangement, the lower one can be drawn out from the upper when required for use, but when not required it is kept in its recessed position, occupying, but little space, while it is very convenient in many cases where a spare bed is required.

Improved Method of Softening Horn in Comb Manufacture.

Mr. Aaron Cook, of Newtown, in the county of Fairfield, Conn., has invented and taken measures to secure a very great improvement in the heating of horn, &c., during the time of its manufacture into combs, &c. The common method is by having a hot furnace under the articles operated on, or by steam, the latter plan being most common. It is not a good plan for the horn, however, as it acts semi-chemically upon it, and injures its lustre. The improvement consists in employing heated air compressed and directed on the horn by a blower or bellows, so that it will act upon the exact part of the horn to be formed by the dies into the shape desired. This plan is greatly superior to the old modes, inasmuch as there is no chemical action on the horn, and the current of hot air can be directed in intensity as desired upon the particular spot most needed. It is also cheaper in every respect.

Improvement in Machinery for Sawing Timber.

The accompanying engravings represent an improvement in machinery for Sawing Timber, invented by Messrs. Alonzo & William Beswick, of Hornellsville, Steuben Co., N. Y., for which they have taken measures to secure a patent. Figure 1 is a front elevation; fig. 2 an end elevation. The same letters refer to like parts. The nature of the invention consists in a new construction and arrangement of the saw frame, by which the weight used in common sawing mills is dispensed with, and the inconveniences caused by the weight not falling as quickly as the downward motion of the saw, is obviated. A A are parts of the beams of the saw mill. B is a stationary upright post of timber firmly secured to the beams, A, and having its ends shod with steel shoes, b b', which terminate in an edge extending the entire width of the rocking beams. C C' are the rocking beams, they are formed of timber, and are fitted with steel plates, c c', at their centres; across these plates are slight notches which form the centres of the rocking beams, and rest on the edges of the shoes, b b', on the upright post, B. D is the saw; E E are the stirrups, having slots through which the ends of the saw pass and are secured by pins, e'; F F are straps of leather or other suitable material, by which the stirrups are

attached to the ends of the rocking beams; G G' are straps attached to the opposite ends of the rocking beams and to tension rods, g g'; the upper part of each is screwed at its end, and the lower one carries a swivel nut, H, which turns freely on its end, and is screwed on the end of the rod, g'; this swivel nut keeps the whole in position.

When the saw is attached to the end of the rocking-shaft, C C, the opposite ends are drawn together by screwing the swivel nut, H, on the rod, g, which operation tightens the saw, and

secures the rocking beams to their bearings, b b'. I is a moveable carriage sliding on the upper rocking beam, C, it has a strap, F, which carries the upper end of the saw attached to it by belts and nuts, and carries a screw rod, i, which passes through a fixed eye, K, secured firmly to the rocking beam, C. K is a nut screwed on a pin, i, at the back of the eye k, for tightening or slackening the saw as may be required, to bring the rocking beams parallel. The strap, F, which attaches the saw to the lower rocking beams, also the

Figure 1.

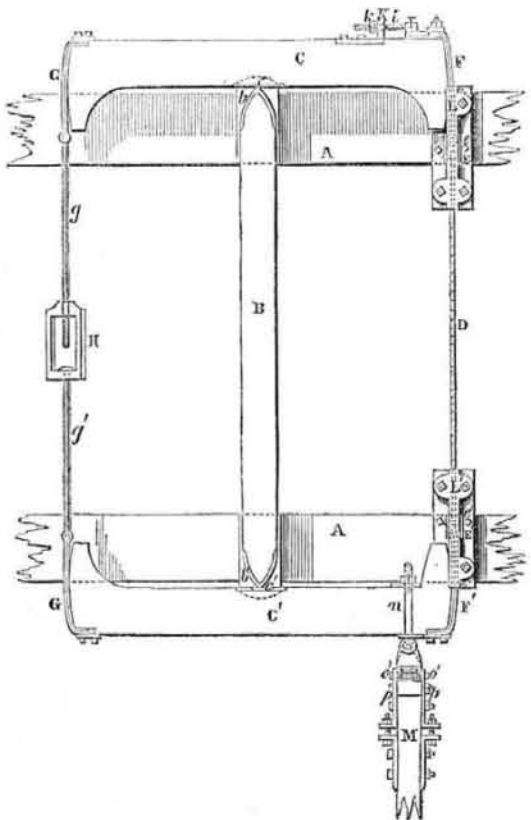
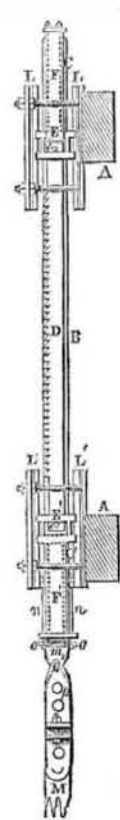


Figure 2.

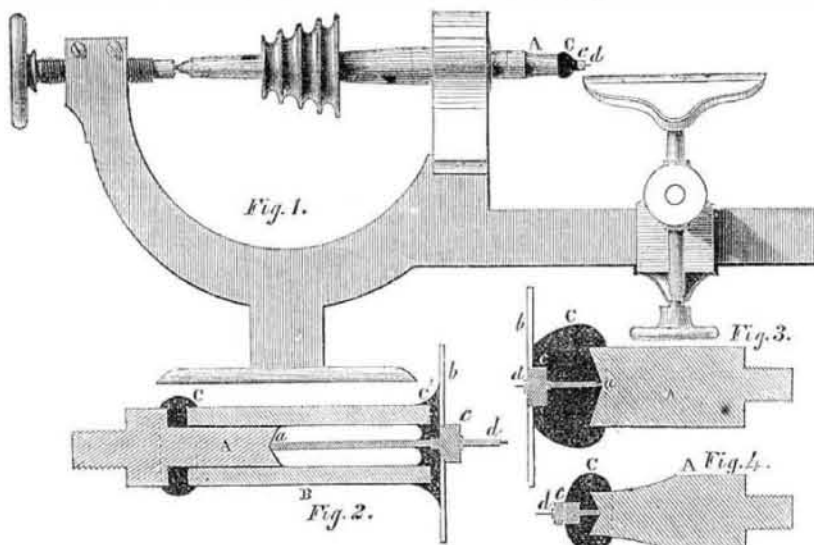


straps, G and G', are secured to the ends of the rocking beams by bolts and plates, L L' L L', which are guides attached to the beams, A A, for preserving the motion of the stirrups, E E', to keep the saw in a vertical position. M is the end of the connecting rod, which communicates motion to the saw frame from the shaft of the water wheel; it is connected to the frame by two joints, the upper of which allows it to move in a line with the rocking beams, and the lower one in a lateral direction so that the connecting rod may accommodate itself to any direction of the first mover from the centre of motion of the saw frame; m is the intermediate link which carries the pins of each joint; n n are rods attached by nuts and plates to the lower rocking beam, and are pro-

vided with eyes at their lower ends, in which the pins, o o, on the intermediate link, m, work and form the upper joint. p p are cheeks provided with eyes, in which the pins, o' o', work and form the lower joint. The timber is moved to the saw by the common carriage. It will be observed that the rocking beams are so mounted on centres as to produce very little friction, and by the tension rods they are kept parallel between the ends opposite to those to which the saw is attached, and a movable strap of the saw secures it to the upper beam. A universal joint connects the frame and the connecting rod of the wheel shaft, thereby making it particularly applicable to water wheels.

More information may be obtained by letter addressed to the inventors.

IMPROVEMENT IN SECURING PIVOTS, PINIONS, &c., OF WATCHES IN CHUCKS.



The accompanying engravings represent an improvement for the purposes stated, for which a patent was granted on the 15th of last July to the inventor, Mr. James M. Bottom, of this city.

Figure 1 is a side elevation of a lathe; Figure 2 is a longitudinal section of the chuck with a pinion and pivot attached in it, and figs. 3 and 4 are also sectional views.

In fig. 1 the watchmaker's lathe of the common form is represented which need not be further described, as the improvement relates to the chuck and its parts. The nature of the improvement consists in employing a chuck with a left-hand centre, on which a tube may fit, projecting over the end of the chuck, and which screws into or is connected with the mandril for making it revolve, and the watch

staff or pinion to be operated on being secured to the chuck, which is so constructed, by having adhesive cement filling the left-hand centre of the chuck and the tube, that the usual mechanical means to hold the pieces in the chuck, and sliding puppet, are dispensed with. A is a chuck of any desirable length, with a screw on one end for securing it to the revolving mandril in the usual way. a is a left-hand centre, and B, fig. 2, is a surrounding tube (the section views are on an enlarged scale to that of fig. 1) well secured; b c d represent a wheel, pinion, and pivot of a watch, shown in proper position for operation in the chuck. C' C are pieces of adhesive cement, (C, fig. 2, to make the tube tight on the centre, and C' to secure the wheel, pinion, &c., in the tube. C C, in figs. 3 and 4, are pieces of the adhesive cement to secure the wheel, b, pinion, c, and pivot, d, in one figure, and only the pinion, c, and pivot, d, in the other. The claim of the patent is for "the employment of adhesive cement for securing staffs, pinions, &c., of watches or time-pieces for lathe operations, in combination with a chuck, A, sliding tube, and a left-handed centre, as illustrated and described. The engravings represent the position and arrangement of the articles ready for operation. The pivot, d, is placed in the centre, and then it is surrounded with the adhesive cement, C, which is made to be easily softened with heat, but hard and solid when cool. The advantages of this method of securing wheels, pinions, and pivots of watches in the chuck, for operation, are very obvious to all those who are engaged in the business. The cement, as the engravings show, presents a large and firm adhering surface, whereby those delicate parts of watch and chronometer work are nicely secured and held in their proper position for correct operation. In this case the true centre is very speedily obtained. The ordinary mechanical devices for retaining such work are dispensed with, and the necessity of having a second sliding puppet centre is obviated. As the pinion or pivot, however small, is firmly held in its place in the chuck, much time, generally consumed for fixing the work by the ordinary mechanical adjustments, is saved. This is also a more simple plan than the old way, and is therefore a saving of expense, while, at the same time, the delicate articles are not so liable to be broken in the securing and working of them. The pivot or pinion thus held can also be operated on by a graver or other appropriate tool by one hand, while the other can hold a powerful magnifying glass at any suitable distance, in place of spectacles, as now employed, for working with the drill bow. The advantages of this simple improvement are of no minor importance to watchmakers and repairers, and we are assured that the rights have met with extensive sale since the invention was patented.

More information may be obtained of the patentee, No. 16 John street, this city.

Ship Propeller Invention.

Mr. M. M. Clark, this city, has taken measures to secure a patent for a new method of making paddle wheels. The blades are placed outside of air and water tight drums, the said drums being boxes surrounding the wheel shafts. The object of this invention is to buoy up the paddle wheels, the air-tight drums being intended to answer the purpose of floats, and for this purpose they are so secured so as to be capable, by the manner in which they are attached to the side of the vessel in flanges, to rise and fall, in other words, have accommodating bearings.

Improvement in Horse Powers.

Mr. T. Sharp, of Albany, N. Y., has taken measures to secure a patent for an improvement in Horse-Powers, the nature of which consists in constructing the endless chain of curved links, with teeth on the outer edge, which gives motion to pinions at or over the one end; the said curved links, on their inner edge, fit on and correspond with the peripheries of the pulleys at either end, to allow the carrying rollers to move in space while travelling over the ends of the frame, where a change of direction in the motion of the chain takes place; this improvement obviates a great deal of friction in the working of the horse-power machine.