New Inventions.

Improved Turn-Table.

J. C. Robie, of Binghamton, N. Y., has invented an improvement in Turn-Tables for railroads, which consists in balancing the platform of the turn-table upon the revolving roller carriage which supports it, in such a manner that either end of the platform may be depressed to rest upon a bed or bearing provided for it while it is receiving or having discharged from it an engine and tender or any carriage. The turn-table is provided with eccentrics between the roller carriage and platform on opposite sides of the center, which are so arranged and can be so operated as to support the platform on a level previous to turning it, and to hold it firmly in that position, or to raise one side and depress the other upon its bearings. This is an excellent invention, and measures have been taken to secure a patent for it in the United States and Great Britain.

Improvement in Devices for Rail Cars.

D. A. Hopkins, of Elmira, N.Y., has invented several devices pertaining to Railroad Cars, on which he has applied for patents. The first of these relates to an improved ticket box for the reception of original tickets; the box being so arranged that the tickets cannot be abstracted therefrom. One of these is provided for every car seat, and the tickets are taken therefrom by agents at the end of the line. Another device relates to an improved journal box, and consists in the employment of elastic plates fitted within the oil box for the purpose of compensating for the wear of the bearing. Elastic collars are placed at the ends of the box to exclude dust. A third device consist in having an elastic plate in the inner side of the outer end piece of the box, against which the end of the journal bears.

Improvement in Railroad Tracks.

James Ingersoll, of Grafton, Ohio, has invented an improvement in Railroad Tracks, the object of which is to dispense with the use of frogs on those parts of rail tracks which are provided with switches. These frogs are uncertain in their action, and are liable to some other important objections. To effect the object mentioned, and also to secure a continuous track, a rail is employed, secured to a turning plate arranged between the switch and the rails of the tracks, this rail being so arranged that by means of elbow shifters and other devices connecting with the switch, it will, when the switch is moved in one direction, form a continuous way of the main track, and when changed, of the branch track.

Governor for Marine Engines.

James Rankin, of Detroit, Michigan, has invented an improved governor for marine engines, the nature of which consists in furnishing the steam pipe with a throttle valve connected with a float attached to the vessel near the paddle wheel or propeller, in such a way that when the greatest area of paddle board or propeller is submerged, the buoyancy of the float causes it to rise and open the valve, but that when the wheel rises from the water the float, descending by its ownweight, will operate upon the valve so as to reduce the opening. A patent has been applied for.

Fastening Shoemakers' Tools to the Handles.

A. Vittaly & Carl Kolb, of Newark, N. J., have applied for a patent on an improved mode of securing Shoemakers' Tools to their handles, by means of which one handle only is required for several tools, as they may be changed by means of a peculiar arrangement of a screw rod, metallic shoulder, and dowel pin, on the employment of which devices is based the application for a patent.

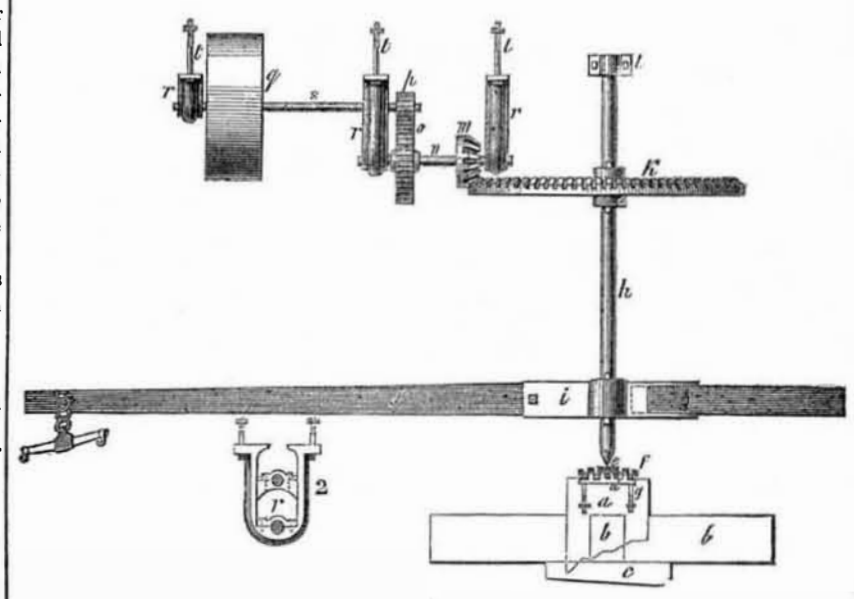
Setting Carriage Axles.

G. W. Fink, of Circleville, Ohio, has invented a new device for setting Carriage Axles, whereby the distance that the shoulders of different sized axles should set apart can be ascertained, and also the proper length, taper and set that should be given to the axes or journals, all of which can be ascertained in much less time than by the old method. The inventor has made application for a patent..

Feeding Printing Presses.

D. B. Hazelton, of Charleston, S. C., has made application for a patent upon an improved device for feeding paper to printing presses, the nature of which consists in having a cylinder provided internally with a series of longitudinal chambers, or recesses parellel with the axis of the cylinder. These chambers as the cylinder revolves communicate at certain points, with tubes leading from a fan or its equivalent, by which the air is alternately exhausted from and forced into the chambers. The periphery of the cylinder is perforated so that the chambers communicate with the external air, and the periphery of the cylinder as it rotates has an alternately attracting and repelling surface.

BOCAGE'S HORSE POWER.



We present herewith a stationary horse-power, intended especially for use on plantations, for driving cotton gins. The arrangement of the parts is quite ingenious. The engraving represents a front view.

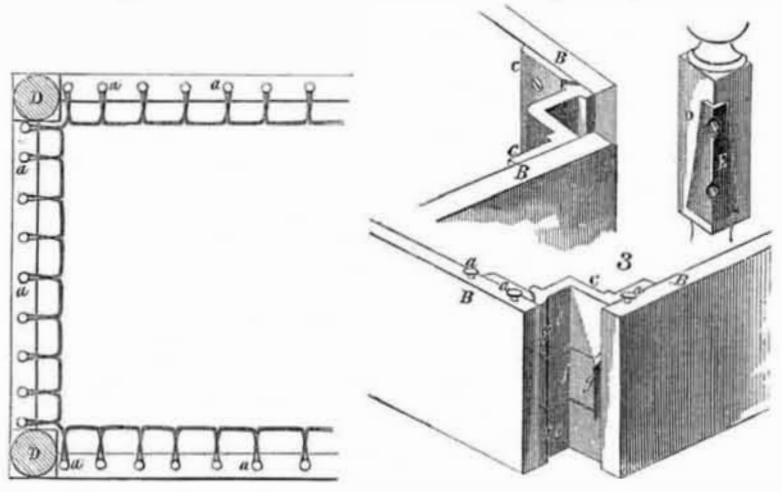
a is a piece of durable timber (eight inches square and six feet long); *b b* are cross timbers, crossed in mortices cut in *a*. *c* is the key securing the whole together, all of which is embedded in the ground for sustaining the main shaft, *h*. *d* is a cast-iron plate with four uprights, through which pass the screws, *f*; this plate is securely bolted to the timber, *a*. The screws, *f*, act on the step, *e*, the object of which is to keep the upright shaft, *h*, in a perpendicular position. *h* is the main shaft, pivoted upon the step, *e*. *l* is a metalic box securing the upper end of *h*. *i* is a cast-iron flange, secured upon the shaft with a key; the dotted lines show the socket into which the end of the lever is placed, *j* is one of the levers by which the machine is moved. On the left of the flange is shown the side which receives the pressure of the lever. *k* is a strong spur gear wheel having 125 teeth, an inch and a halfpitch, keyed on the main shaft. *n* is a short shaft upon which are secured the pinion, *m*, having 17 teeth, and the counter wheel, *o*, spur gear with 45 teeth, 1¼ inch pitch. *s* is a shaft, the length of which is suited to the position of the stand, upon which are secured the pinion, *p*, having 14 teeth, and the belt pulley, *q*, which is cast heavy that it may have the effect of a fly-wheel. The two last shafts are supported in the three hangers or stirrups, *r*, which are secured to the gearing beams by the bolts, *t*. Figure 2 shows the hanger with the two journal boxes.

The advantages claimed for this horse-power are greater simplicity of construction and durability than those in common use. It has been quite extensively introduced upon the plantations. The arrangement for adjusting the step so as to keep the main shaft vertical, effectually obviates any undue strain from an inclination of the shaft. We can recommend it to the attention of planters and all others desirous of purchasing a cheap and convenient horse-power.

For any further information address J. W. Bocage, Cypress Mills, near Pine Bluff, Ark.

IMPROVEMENT IN BEDSTEADS.

Figure 1. Figure 2.



The engravings herewith presented are illustrations of an improvement in bedsteads, invented by W. E. Merrill, and F. Tupper, of Nashua N. H., on which a patent was obtained the thirteenth of December last. Fig. 1. is a portion of a plan or top view of the bedstead, showing the manner in which the canvass is attached to the rail. Fig. 2. is a section showing the device by which the rails are secured to the posts. Fig. 3. is intended further to illustrate the same device. Similar letters of reference indicate corresponding parts.

A represents a canvass bottom having a series of loops around its edges. B. B. B. represent the rails, having upon their upper surfaces a series of buttons, a a, which pass through loops on the canvass when it is secured to the rails. To the underside of the canvass, A, are attached a series of springs secured to the horizontal slats. These slats rest upon cleats which are secured to the head and foot rails of the bedstead. The slats are not attached to the cleats, but may rest upon them or in recesses cut in their upper edge.

To the ends of the rails, B, are attached corner irons, C, each one being bent in zigzag form, so as to make a recess for the reception of the post; this is seen in figs. 2 and 3. The iron on the end of the one rail, has two prongs or angular projections, *e e*, and the iron on the end of the adjoining rail is provided with one prong or projection, which fits between the prongs, *e e*. Each of them is provided with a small cleat, *g*, at the extreme end of the rail, and the post D, has a beveled clamp or dog E, which fits in the recess formed by the irons, *c*, and binds against the cleats, *g*, and thus the post and the rails are firmly secured together. By merely raising the rails, they may be detached from the posts. The claim is for the above described method of securing the rails and posts, together by means of the corner irons, and clamps. For any further information address the patentees.

Recent Foreign Inventions.

Steam Carriage Brake—J. Blair, of Manchester, Eng., patentee.—The inventor states the following as a mode in which his invention may be operated:—Under the foot-plate of a locomotive engine, and attached thereto by stays shall be affixed an ordinary steam cylinder with piston. Upon that end of the piston rod which projects through the cylinder cover shall be placed a broad flange or surface, similar in make to those now in use in railway carriages, called "buffers." The cylinder shall be placed in the center of the foot-plate, the piston rod projecting in the direction of the engine-tender. The engine-tender, and each and every carriage respectively, shall carry its own shafting and breaks; namely, the tender shall have underneath and lying along its center a shaft terminating at both ends of the tender with a broad flange or buffer. These buffers or flanges will project and lie at equal distances from the regular buffers now in use on railway tenders and carriages, and will have the appearance of a third buffer to each end of the tender. Attached to this shaft shall be strong arms or bars of wrought-iron, upon the ends of which will be the break-blocks, which will be placed on the carriages, only so far from the wheels of the tender as to allow the wheels to revolve without interruption. Each carriage shall also carry a similar shaft, terminating at each end of the carriage with flanges or buffers' and having also the appearance of a carriage with *three* buffers instead of two. Attached to the shaft under the carriage (in the same manner as already described to the tender-shaft) shall also be strong wrought-iron bars, with break-blocks on the end of each, and also lying close to the carriage wheels, but without interfering with their revolution. The shaft already mentioned shall work in sockets or steps, and shall move backwards and forwards, placing on and taking off, when necessary, the breaks to and from the wheels.

White Lead—George Carter, of Kent, and George Marriott, of Hull, Eng., patentees. The inventors take a quantity of fine ground oxyd of lead—litharge—and to every 100 lbs. thereof add about twenty-five pounds of the muriate of soda, which is mixed and triturated until the muriate of lead is formed. These materials are then well washed and 5 lbs. of the sulphuric acid of commerce is added to them in a glass vessel. This produces a white sulphate of lead in a few days. The vessel containing these ingredients should be kept in a moderately warm place, and when the sulphate is fully formed, it is washed well with cold water and dried. After this it is ground, and is fit for use as a paint.

Purifying Coal Gas and Disinfecting Sewerage Matters.—T. J. Dimsdale, of Dublin, Ireland, patentee.—Peat earth is used alone or is mixed with common earth, or the ashes of coals, and coal gas is passed over it; or the matters from sewers passed through it. This is stated to be a most excellent disinfectant of sewerage matters, and for purifying gas.

Another Method of Purifying Coal Gas—W. Chisholm, of London, patentee.—This invention consists in the purification of coal gases, by peats containing substances with which they are found associated in nature, and in obtaining the salts of ammonia from the peats which have been so used. These two patents are very similar in their nature, and almost amount to a confliction of claims.

[Collated from our foreign cotemporaries, the "Mechanics' Magazine," "Newton's Journal," "Artisan," and "Mining Journal," London; "Genie Industriel," "L'Invention," and "La Lumiere," Paris, and the "Glasgow Mechanics' Journal.]