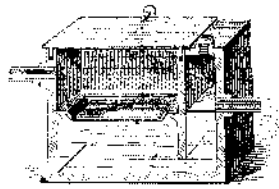


RECENT INVENTIONS.

Improved Grease Trap.

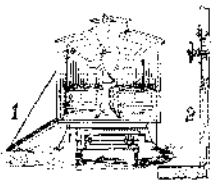
The object of this invention is to prevent greasy substances from passing into waste pipes from sinks and basins, so as to prevent obstructions of the waste pipe, and also to save such greasy and fatty matters, which otherwise would be wasted. The body of the trap is made in the form of a box, having an inlet at one end and an outlet at the other. The box is divided at one side by a vertical partition, forming a small compartment which is closed at the top, and communicates with the main part of the box by a slit or space at the bottom of the partition. The main part of the



box is provided with a removable cover, having an under rim which enters a groove around the upper edge of the box. This groove contains water, so as to form an air tight seal around the edge of the cover, and in addition thereto rubber packing is placed in the bottom of the groove, so that the rim can be forced down tightly by means of wedges, inserted through staples at the sides of the box. The cover of the smaller compartment is provided with a screw plug, which gives access for cleaning, and a hole is provided for allowing the inlet of air for the purpose of ventilating the trap, and also to prevent siphoning. In the larger compartment of the trap is a pan placed in any desired manner at a level with the exit pipe. This pan or plate extends from side to side of the box in either direction, but is made narrower than the box at its other sides, so as to give space for the water to pass at the sides of the pan. In operation the water passing in the inlet pipe first falls upon the pan, leaves therein matter of the same or nearly the same specific gravity, and then escapes at the sides of the pan, leaving the grease on the surface of the water. This invention has been patented by Mr. Silas Wilcox, of Portland, Oregon.

Improvement in Railway Cars.

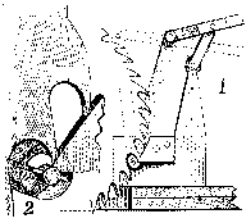
The object of this invention is to provide a means for escape from a railway car other than the usual end doors. In the event of a collision between trains, the telescoping of the cars and the abutting timbers at the ends of the cars usually obstruct the exit by the end doors; and in the case of fire the occupants frequently perish for want of some other ready means of egress. This improvement consists in combining with one or more side doors peculiar means for holding them normally closed and fastened, and for facilitating escape by the doors if the cars should be standing on a bridge or on a declivity.



The door is hinged at the bottom and arranged to drop outwardly, the door acting as a gang plank. This invention presents the advantage of great simplicity, so that any person without previous instruction can operate it, and still the fastening is such as to provide ample security against accidental opening, and also prevents all looseness and chattering. Fig. 1 is an end view of the car with the door open, and Fig. 2 is a sectional view of the door. This invention has been patented by Mr. Joseph Parkinson, of Danville, Va.

New Saw Tooth Swage.

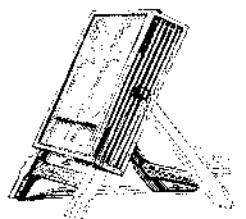
This improvement consists of swaging dies contrived to swage the points of saw teeth from the inside outward, to widen and sharpen them. By this method the material of the saw plate will not be wasted as fast as otherwise. The teeth have better pitch, and the tendency of the device is to gauge the points of the teeth of a circular saw to a true circle. The die is moved by a system of levers toward the anvil, acting on the inner surface of the tooth, forcing it outward toward the periphery of the saw. The die is provided with a T-head and is held in a suitable recess in the roll, as shown in Fig. 2. This invention has been patented by Mr. Nathan L. Gano, of King's Ferry, Fla.



so as to show a different pair at each half revolution of the exhibitor. This simple device not only affords a very ready means of showing the pictures, but it protects them from handling and from dust and dirt,

Novel Picture Exhibitor.

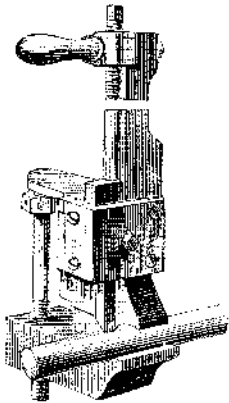
We give an engraving of an improved picture exhibitor, recently patented by Mr. Morris Schleissner, of 314 Canal Street, New York city. In this device the picture holding cards are arranged in a rotatable case provided with shifting partitions for supporting the upper tiers of cards, and to cause the transference of the cards from one tier to the other. This is effected by simply turning the exhibitor over endwise, the pictures automatically shifting their position



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Bar and Pipe Cutter.

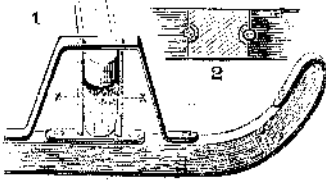
The engraving shows a simple and effective tool for cutting metal bars or pipes, the cutter being made so that, as it is revolved around the bar or pipe on which it is placed, it will feed the cutting tool forward automatically, so that it will take the required chip at each revolution. The jaws are clamped loosely on the pipe, the latter being held fast in a vise. The cutting tool is moved forward by a screw provided at its outer end with a worm wheel which is engaged by a worm carried by the handle, so that when the handle is grasped and not allowed to turn in the hand, the cutting tool is moved forward continuously as the cutter is turned. This invention has been patented by Mr. Charles W. Lane. Further information may be obtained by addressing Mr. F. P. Lane, 255 Hennepin Avenue, Minneapolis, Minn.



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Improved Sleigh.

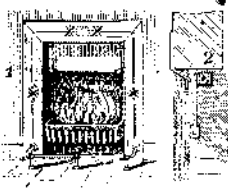
This invention relates to an improved beam and knee connection with the runner for securing greater flexibility on uneven roads. The knees and beam are framed together in the usual manner, but instead of framing the knees into the runner, they are arranged to rest upon the surface of the runner at the end, making the end a little convex, as shown; and to secure the beam to the runner metal knee bolts and stay bars are employed, the bolts and the bars being rigidly attached together, the bolts also being attached to the plate bolted to the runner, and the stay bars



bolted to the runner at opposite ends of the plate. The beams and the knees are grooved for the vertical bolts, the grooves being lined with metal. These linings are fitted snugly to the bolts along the middle, but they are slack at the ends and along therefrom toward the middle, sufficiently to allow the beams and the runners to rock the one upon the other, thus providing for the flexibility of the joints by a substantial arrangement not liable to wear out or break. This invention has been patented by Mr. Clemens Mette, of Hancock, Mich.

Transparent Blower for Fireplace.

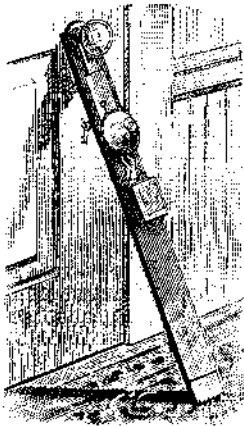
This blower is made of glass or some transparent material placed in a suitable frame. The blower rests against the rear surface of the side posts of the mantel, and is held across the upper part of the fireplace opening, while its lower edge is sustained in hook clips fastened to the wall or the uprights of the mantel, and its upper edge in a stud or clip, fastened in the fireplace wall. By these means the blower is always held to the fireplace loosely, so that it can readily contract and expand without danger of fracture. Fig. 1 is a front view of the fireplace. Fig. 2 is a sectional view. With a blower of this kind the fire is visible, and the room will always be lighted by the fire, whether the blower is in use or not. This invention has been patented by Mr. John W. Edmonds, of 894 Sixth Avenue, New York city.



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Burglar Alarm and Door Securer.

This is a simple and convenient device for fastening doors securely, and for giving an alarm should an attempt be made to open the doors. This combined door stop and burglar alarm consists of a bar recessed at its upper end to receive the shank of a door knob, and provided with a groove to receive a sliding bar having a push rod connected with its lower end, to disengage a hook connected by an elbow lever with a spring and a bell hammer, and allow the spring to swing the hammer against the bell and sound an alarm, whenever the door is opened. This ingenious and effective apparatus has been patented by Messrs. H. M. Moore and C. E. Moore, of 56 East 110th Street, New York city.

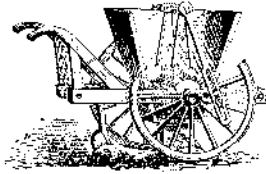


patented by Messrs. H. M. Moore and C. E. Moore, of 56 East 110th Street, New York city.

New Cotton Planter.

In this cotton seed planter the arrangement of parts of the machine is such as to particularly adapt it to the plant-

ing of unrubbed seed, and to plant the seed at varying distances apart, as desired, the parts being so disposed with relation to each other as to secure positive movements of the feed wheel and agitator. This machine, by reason of its effectiveness in planting un-



rubbed seed, makes a large saving in use over the planting of seed by machines which first require the seed to be hand rubbed, and the connections for driving the feed wheel and agitator are of a character to secure their positive action without slip, insuring uniformly distanced planting of the seed without waste. This planter is provided with a feed wheel having radial pins, and with an agitator consisting of whip sticks projecting downward from a shaft at the top of the hopper, and vibrated by a crank on the drive wheel and a slotted arm. Mr. Thomas N. Seay, of Eastover, S. C., is the patentee of this planter.

Portable Head Rest.

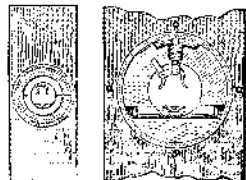
The engraving shows an improved portable head rest, recently patented by Mr. George Popplewell, of Bristol, Pa. It is designed principally for use on the chairs of railway cars, and is adjustable to different heights to suit different users. It may be folded and packed in a small compass, so that it may be readily carried by the traveler. It consists of two U-shaped pieces to fit over the back of the car seat, each piece being provided with a threaded rod for holding the pad against which the head rests, and each piece has a pivoted bar having a slot in its free end, to engage a screw projecting from the other. The pad is supported by two small rectangular frames, which slip over the threaded rods, and inclose the nuts by which the head rest is adjusted. Fig. 1 shows the head rest in use. Fig. 2 shows it detached from the car seat.



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Improved Spirit Level.

This invention comprises an index and spirit level carrier capable of circular adjustment within a suitable holder and concentrically to a graduated dial connected with the holder, and a device for locking or setting the rotating index and spirit level carrier in any desired position relatively to the dial. Duplicate instruments of this description may be applied, one to either leg or arm of an adjustable bevel, for indicating angular surfaces; or the instrument may be combined with a square, rule, or compass, or be used as a mere level, grade, and



plumb. Fig. 1 is a face view of the level, and Fig. 2 is a sectional view showing the lock. This invention has been patented by Mr. Samuel H. Lemon, of 172 East 62d Street, New York city.

Railway Weather Signals.

Along the line of the Cleveland, Akron & Columbus road in Ohio, the passenger trains are peaceful messengers, telling the farmers the condition of the temperature and of the coming storms.

The system is as follows: Signals of two colors, with three figures in each color, are attached to the sides of the baggage cars; the colors are red and blue; the figures are the sun, moon, and the star; the red colored signals tell of the temperature, while the blue colored ones tell of the state of the weather. In red the sun indicates higher temperature, moon lower, and the star stationary temperature. In blue, the sun indicates general rain or snow, moon clear or fair weather, and the star local rain or snow. For this special service predictions are received daily from the U. S. Weather Bureau at Washington. By "higher" or "lower" temperature is meant that the temperature at any hour of the day may be expected to be higher or lower than it was at the same hour the previous day; and by "stationary" temperature, that it will not vary more than three or four degrees from the record of the day before. "Local" rains are such that are likely to occur at one or more points along the line, but will not probably be "general." Trains going out in the morning are notified by the meteorological department what kind of a signal to display, and if necessary, they can be changed on the road in accordance with telegraphic instructions. This signal service is established by the joint efforts of the Ohio Meteorological Bureau and the officers of the road. From Mr. T. C. Mendenhall, the director, we learn the system is a success.—*Railroad Herald.*

BARON ROTHSCHILD'S carriage at Vienna is lighted by electric light. The apparatus is beneath the coachman's seat, and the light, which will burn one hundred hours, within ordinary carriage lamps.