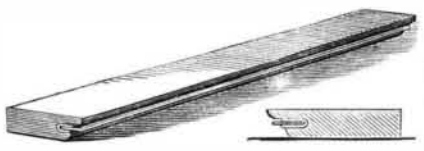
RECENT INVENTIONS.

Reclining Chair.

A chair hammock, which is easily and readily adjusted for a sitting, reclining, or recumbent posture of the body, has been patented by Mr. Alden Graham, of Boston Highlands, Mass., and is shown in the accompanying engraving. The base of the chair is of ordinary construction, and has upper side rails that are secured at their upper ends to the front portions of the frame, and are attached to the frame at the rear portion so as to slant down and back, and have notches on their upper edge. The sides of the base have secured to their rear inner surfaces fixed cams, against which the side pieces of the chair back rest. The side pieces, C, of the back are united by rounds, and have the side pieces of the base of the chair pivoted to them on opposite sides. To the side pieces, C, and to the front pieces arms are pivoted and the front pieces turn on the upper front round of the base. The back of the chair is made of canvas, attached at its opposite ends to the upper round of the side piece, C, and the lower round of the side piece, G. The round of the side piece C, has a ratchet and pawl by which the tension of the cover may be regulated. Braces are pivoted to the pieces, G, that engage with the notches in the upper rail of the base, when the chair is in an upright position, and retain it in this position. When the occupant of the chair desires to change his position he raises the braces out of the notches and throws himself backward, and the side pieces, C, resting on the cams balance the chair and body so that they may be adjusted to different positions, the cams forming a constant and firm support.

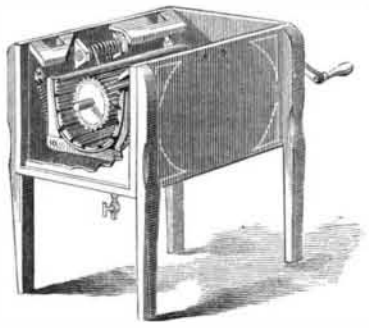
Improved Ruler.

Mr. George L. Knox, Secretary of Colwell Lead Company, 63 Centre street, New York, has recently patented a ruler by which the ink that may pass from the pen to the ruler is absorbed and effectually prevented from running down upon the paper to be ruled. This is an ordinary ruler having in one of its edges a deep groove extending its entire length, and in this groove is placed a folded plate of sheet metal. In the recess of the folded metal plate a strip of blotting paper or other absorbing material is placed, the outer edge of which reaches to near the outer edge of the ruler, as shown in the annexed engraving. The metal of the folded plate has some elasticity, so that when removed from the groove the sides will open slightly to receive the absorbing strip and when placed in the groove it acts as a spring against the walls for holding itself securely in place. The metal plate may be removed at pleasure for renewing the absorbing strip and for adjusting its edge at a proper distance from the edge of the ruler.



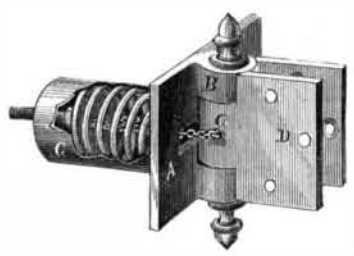
Washing Machine.

Mr. George C. Miller, of Alliance, O., has recently patented improvements in washing machines, by which the clothes may be thoroughly washed without injury. The wash box is of the ordinary construction. Two horizontal bars, to the ends of which are hinged the ends of uprights, are suspended from the sides of the wash box by spiral springs, as shown in the engraving. On the upper side of the horizontal bars is secured a rub board, the upper side of which is concave and corrugated, and to each pair of the upright bars is also secured a rub-board corrugated on its inner side. Coiled springs are properly secured between the rub-board and the sides of the box, that press the boards toward the center of the box. Within the space between the rub-boards is placed a corrugated cylinder, which is journaled in bearings attached to the box, and to one of the journals is attached the crank by which the machine is operated. The clothes to be washed are placed in the space between the cylinder and the rub-boards, and the cylinder is revolved. The springs attached to the horizontal bars, and placed behind the rub-boards, allow the boards to adjust themselves to the thickness of the clothes passing through the machine.



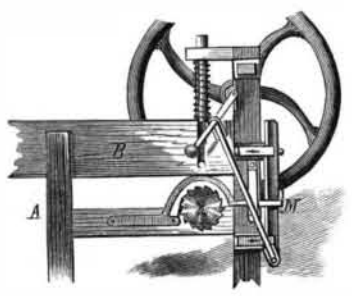
Spring Hinge.

The spring hinge for automatically closing gates or doors from either direction, shown in the accompanying engraving, has recently been patented by Mr. Ezra Ale, of Altoona, Pa. A hinge plate, A, having two jaws, B, projecting from its flat surface, is secured to the frame of the door, and between the jaws, B, is inserted a loop, C, attached to the edge of a socket hinge plate, D, that receives and is secured to the edge of the door or gate, and by passing a pintle through the jaws and loop a hinge is formed. A tubular casing, G, projects from the back of the plate, A, and at the inner end of the casing the plate has a transverse aperture. A cross piece in the casing, G, rests on one end of a spiral spring, the opposite end of the spring resting against the plate, A. A screw rod passes through the cross piece, and to its inner end two chains are attached, their opposite ends passing through the aperture of the plate, A, and are attached to the opposite sides of the hinge loop, C. When the door is swung in either direction the spring is compressed, and if the door is released the spring closes it, and if the hinge is applied on a door swinging in one direction only but one chain will be required.



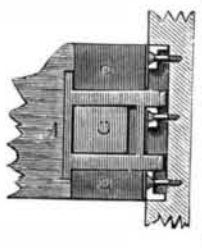
Straw Cutter.

A new and improved straw cutter, patented by Mr. John W. Baughman, of Wooster, O., is shown in the accompanying engraving. A is the frame of the machine, and B is the feed box. The front posts of the frame rise above the top of the feed box, and to their upper parts are attached bearings in which a shaft revolves. To one end of the shaft is attached a large balance wheel, and the other end is a crank, by which the machine is turned. Upon the middle of the arm of the crank is formed a second crank, and to the spoke of the balance wheel, at the same distance from the axis of the shaft is attached a crank pin. The crank and the crank pin are connected to the lower corners of the knife frame by two connecting rods, and the knife frame is kept in place by slides and gibs placed on the forward end of the frame, which slides up and down carrying a knife attached to it in an inclined position. To the side bars of the knife frame are attached lugs, which, as the frame moves upward, strike against and raise the projecting ends of the levers, M, the levers being pivoted to pawls that engage with ratchet wheels attached to the ends of the upper and lower feed rollers. The levers, M, are kept in place, and are made to operate in vertical planes by keepers attached to the opposite sides of the machine through which the levers pass. To the forward side of the frame, A, is attached a steel plate in such a position that the straw, while being cut, will rest upon the upper edge of the plate, which thus serves as a stationary knife.



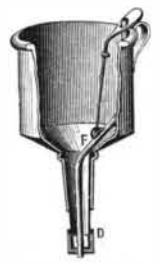
An Improved Bedstead Hook.

Mr. Jackson J. Kenneday, of Cleveland, Bradley county, Tenn., has patented a new and improved bed hook for holding the side rails firmly to bedstead posts, which is shown in the annexed cut. A metal frame, A, provided at one end with one or more projecting hooks, and at the opposite end with a flange, is placed against the inner surface of the bedstead rail at the end, in such a manner that the flange will project from its inner surface. The metal frame is held to the rail by a block fastened by screws to the inner surface of the rail, and having transverse grooves on its inner surface for securing the bars of the frame, A. The block extends from the flange to near the inner ends of the hooks, and at the outer end has a recess uniting the two grooves which receive the bars. The bed post has a vertical recess for receiving a socket plate in which are slots for receiving the hooks of the plate, A. If the hooks are passed into the slots, the bed rails will be held to the posts. The device is strong, simple, and durable, and very effective.



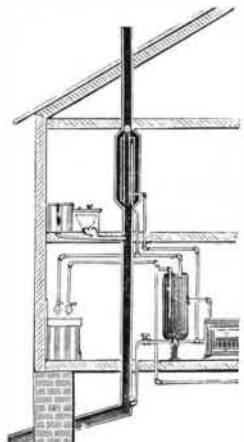
Improvement in Funnels.

A funnel that is so constructed that the flow of the liquid from it can be interrupted at any time, preventing loss and waste in filling bottles and casks, has been patented by Mr. Oscar T. Petzold, of Sebnitz, Saxony, Germany. A suitable shaped vessel for a funnel is provided with a slightly tapering neck which is surrounded with a sleeve of rubber that extends almost to the bottom of the neck, as shown in the engraving, the rubber sleeve causing the neck to fit well in a bottle neck. A cap, D, having large side apertures, fits closely on the lower uncovered end of the neck, and is attached to a tube, F, that passes through the bottom of the cap through the neck and extends up to the upper edge of the vessel. The cap, D, is provided with a packing strip resting against the lower end of the funnel neck when the cap is raised. The upper part of the tube, F, passes through a slot in a lever pivoted to the upper edge of the vessel, directly above its handle, so that the lever can be operated by the thumb of the hand holding the funnel. If the parts are in the position shown, the liquid can flow from the vessel through its neck and the apertures of the cap. If the outer end of the lever at the top of the vessel is depressed, the tube, F, will be raised and the packing strip pressed against the lower end of the neck, closing it, stopping the flow of the liquid. During the operation of filling the air passes off through the tube, F.



Ventilating Soil Pipes.

The invention shown in the accompanying cut is for carrying off the foul gases from soil pipes of dwellings. As these gases are a fruitful source of disease, and death in many instances, an invention providing for their sure removal cannot but prove valuable. This invention has been patented by Mr. John D. Harrington, of Auburn, N. Y. The soil pipe has an enlargement containing a cylindrical vessel closed at its top and bottom, and a tube open at its ends extends longitudinally through the vessel. A hot water pipe from the heater of the range passes through the bottom of the vessel to near its top, and an outlet pipe runs from the bottom of the vessel to the water back of the range. In operation the hot water passes from the heater through the hot water pipe into the vessel, heating it and the tube, which in turn heat the air in the soil pipe, causing a draught which carries off all the foul gases through the pipe and out at the roof. As the water cools it sinks to the bottom of the vessel and is carried back to the heater, and in this manner a continual circulation is maintained in the vessel, and consequently continual draught through the soil pipe is secured.



Indians as Workmen.

The popular theory that the Indian cannot be made to work is not altogether unfounded. It by no means follows, however, that he cannot be induced to work, and work well, when removed from his native surroundings and supplied with the proper incentives. The Indians in the industrial schools at Hampton, Va., and at Carlisle, Pa., have shown a readiness to acquire trades and a capacity to learn to handle tools skillfully that must stagger the prejudices of those who have adopted the frontier creed that the only useful Indian is a dead Indian.

At the recent public exercises at Carlisle, a Plains Indian was the proud, though seemingly stolid, exhibitor of a wagon built entirely by himself, a piece of work that older mechanics might not have been ashamed of. The Springfield *Republican* says that there are now on exhibition in Boston samples of shoes and harnesses made at Hampton Institute, which both in finish and serviceableness are able, in the opinion of competent inspectors, to compete successfully with the products of regular workmen. The shoes are part of a contract for two thousand pairs which the Government gave to the Superintendent of the Institute, General Armstrong, last spring. The Government has also ordered seventy-five sets of double-plow harnesses.

General Armstrong is confident that within five years, as the hundred Indians at Hampton, the three hundred at Carlisle, and others under instruction elsewhere, become masters of the craft, all the shoes and harnesses needed no the plains can be made by Indian young men at home.

Cotton Seed in Spasmodic Croup.

George L. Gray, M.D. (*Miss. Val. Med. Monthly*), claims that cotton seed is an efficient remedy in spasmodic croup. A handful of seeds is bruised and afterward boiled for a few minutes in a quart of water. The decoction is allowed to stand for a short time, when it is strained, sweetened, and cooled. The patient should now be given all it will drink of the medicine, or if necessary, it may be poured down the child's throat. Relief is generally prompt, and sometimes without vomiting. If, however, the remedy be persistently given it will produce free emesis.