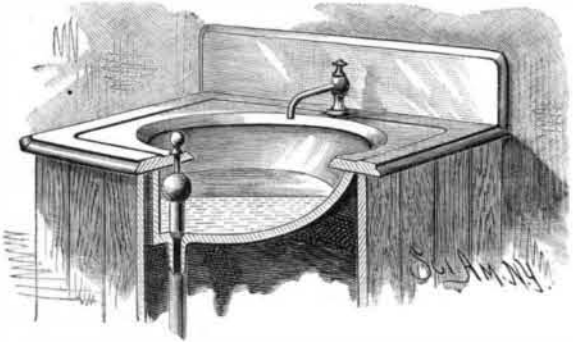


PLUG FOR STATIONARY WASH BASINS, ETC.

The outlet of the basin is at the lowest point, and is preferably in the front portion of the bottom. The plug is a buoyant one, and automatically rises to uncover the outlet when the water in the basin reaches a certain height. The lower end of the plug is conical, and is ground to closely fit the opening without binding. The plug, after rising by its buoyancy, to pass off an excessive quantity of water, closes by its own weight



REID'S PLUG FOR STATIONARY WASH BASINS, ETC.

as the water lowers in the basin. To empty the bowl for use, the plug is raised by hand, by grasping the knob. This plug is an automatic seal, preventing the admission of noxious gases into and through the basin, and an effective waste and automatic overflow device combined. It is little liable to get out of order, and can easily be kept clean.

This invention has been patented by Mr. James W. Reid, of Evansville, Ind.

IMPROVED FLOORING CLAMP.

The lever is made of iron or steel, and at the end is formed with a point projecting laterally slightly beyond the end of the lever. On the side of the lever is a curved arm having a point directed toward the body

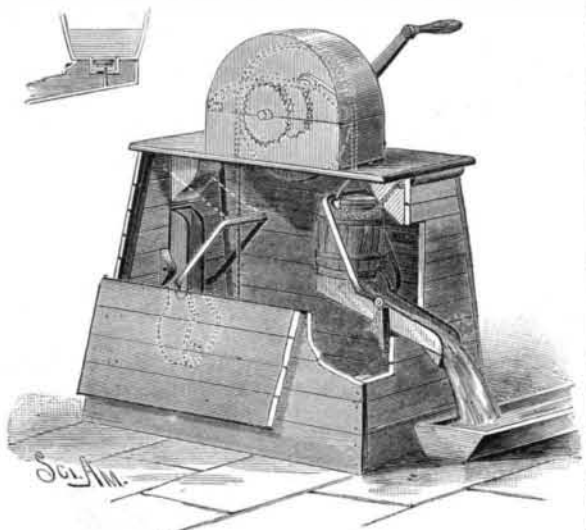


McRAE'S IMPROVED FLOORING CLAMP.

of the lever. The space between the points is sufficient to admit of placing the lever on a joist with the points on the opposite sides, as shown in the cut. By pushing the arm of the lever forward against the edge of the flooring or ceiling, or against a block placed on the edge of the strip of flooring, the latter can be forced into position and held while being nailed. This clamp, the invention of Mr. John B. McRae, of Mount Holly, Ark., can be quickly applied and removed, and can be made small and light, so as to be readily portable.

IMPROVED WATER ELEVATOR.

In this device two buckets are preferably employed, one on each end of a rope passing over a pulley, on a shaft journaled in the top of a casing of ordinary construction.



DAVIS' IMPROVED WATER ELEVATOR.

This shaft is operated by a crank, and is provided with two ratchet disks having teeth facing in opposite directions. Pawls united by a link, so that while one is in operation the other will be disengaged, engage with the disks. The spout is pivoted to the framing, and to its inner part are pivoted the ends of a

bail, whose arms are spread laterally toward their upper ends. This spreading provides a sufficient space for the upper end of the bucket, so that the latter will properly engage the cross bar of the bail. The upper end of the bail is connected with the casing by a chain, as shown. When taut, this chain holds the bail in position to be engaged by the bucket. A bracket, secured to the upper part of the framing, serves as a stop for the upper end of the bail, and as a means for steadying the bucket as the water is being discharged.

The inner end of the trough is provided with a projection, by which to open the valve in the bottom of the bucket, or the valve may have a depending stem, by which to engage the trough and be tripped. The outer end of the trough is weighted, so as to insure that the inner end will be thrown up with sufficient force to open the valve. The rising bucket engages with the bail when the inner end of the trough rises up under the bucket, lifts the valve, and allows the water to run out. When the bucket descends, the weight of the bail is sufficient to bring the trough to a vertical position, and the device is ready to be again operated.

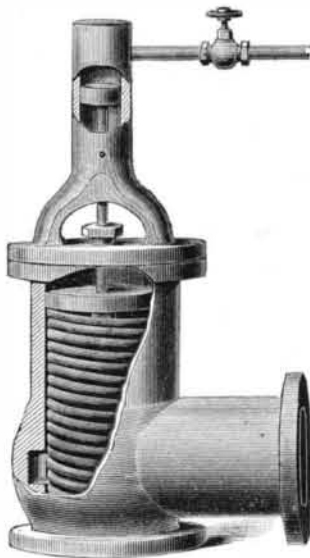
This invention has been patented by Mr. J. C. Davis, of Athens, Ga.

Removing Oil, etc., by Infusorial Earth.

Scouring or removing oil from substances such as wool and woolen cloth, by means of infusorial earth, is claimed as an improvement by Groth. This kind of earth is one that absorbs a great quantity of liquid, and is what is used to absorb nitro-glycerine and make it into dynamite. The patentee states that it is this extraordinary power of taking up liquids which enables it to withdraw oil from textiles containing it. The process is to warm the textile with the infusorial earth in some apparatus where the temperature may exceed by 10 or 20 degrees the melting point of the oil or grease. As soon as it is liquefied, the infusorial earth takes it up from the textile. After this the materials are passed through warm water, which washes off the infusorial earth, leaving the fiber clean. If, instead of infusorial earth, we read fuller's earth, the principle of the process will be found very ancient.

GOVERNOR VALVE.

The object of the invention herewith illustrated is to provide for steam engine governors and steam pressure regulators a simple and reliable balance valve for controlling the flow of steam. In one side of the cylindrical casing is a branch pipe communicating with an annular recess within the casing. Within the casing is a loosely fitted piston, resting upon a spiral spring supported upon a fillet formed in the lower end of the



WALTERS' GOVERNOR VALVE.

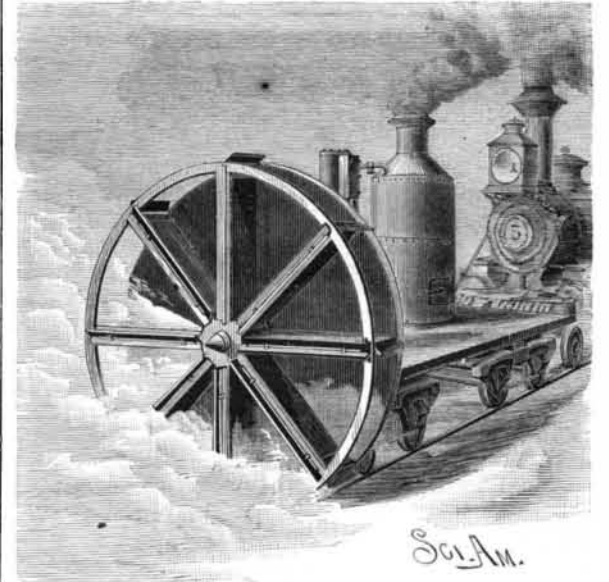
casing. The piston rod passes through a gland in the cap and enters a small steam cylinder, where it is attached to a piston fitting steam tight. In the upper end of this cylinder is inserted a steam supply pipe for furnishing steam from the pipe which is supplied with steam through the valve casing. In the lower end of this cylinder is a small aperture for maintaining atmospheric pressure under the piston. Steam may enter the casing through the bottom opening or through the branch pipe, and in its passage must necessarily pass between the different convolutions of the spring. When the upper piston is forced downward by increased pressure, the spring is contracted and the area of the passage through the valve is diminished until the pressure in the supply pipe has reached the prescribed limit. Should this pressure become too greatly reduced, the spring will expand, and by increasing the area of the passage, allow more steam to flow through. When this device is used in connection with an automatic engine governor, the spring is operated directly by the valve-operating spindle of the governor.

This invention has been patented by Mr. James P. Walters, of Rosedale, Ind.

TRACK CLEARER.

This machine, for clearing railway tracks of snow, consists of a wheel carrying radial plates, provided on the ends and forward edges with reversible cutters, to admit of revolving the wheel in either direction. Upon the forward end of a shaft journaled in bearings carried by a flat car, propelled by a locomotive, are mounted a disk and spider having radial arms.

The disk and arms are grooved radially to receive plates, which fill the space between the arms and disk. At the outer edge of each plate is pivoted a two-edged cutter. By means of a lever these cutters can be turned so as to bring either edge into position for use. To the front surface of each spider arm is also pivoted a two-edged cutter, either edge of which can be brought into service. The shaft is driven by gearing operated by an engine carried by the car. As the wheel is rotated, the snow taken up by the knives is received into the triangular compartments in the wheel and thrown out-



BERGENDAHL'S TRACK CLEARER.

ward by centrifugal force, the impetus being sufficient to carry it out of the vicinity of the track. Where the track is built on a mountain side, the wheel can be made to revolve so as to project the snow from the open side of the track.

This invention has been patented by Mr. L. J. Bergendahl, whose address is lock box 55, Pendleton, Oregon.

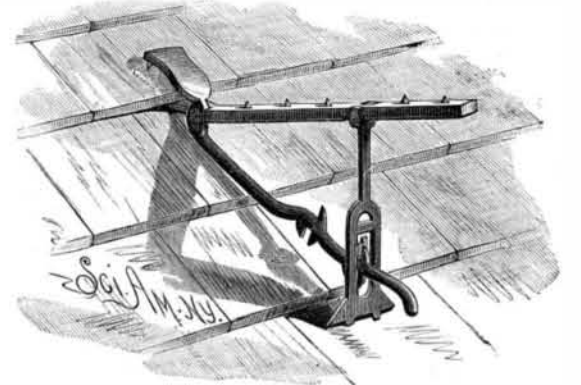
Petroleum in Denver.

While sinking an artesian well on the premises of Ex-Governor Evans, in the heart of Denver, petroleum was struck at a depth of 1,100 feet. Oil men from Pennsylvania are disposed to believe that the prospects are good for an abundant flow. The well will probably be sunk several hundred feet deeper.

SHINGLING BRACKET.

The accompanying engraving clearly shows a shingling bracket, recently patented by Mr. William H. Smerdon, of Taunton, Mass. The shorter arms of the two levers, which are pivoted together, are provided with spurs. The arm of the upper or horizontal lever is passed under a shingle, when its two spurs enter the upper and lower shingle, the spur of the other arm entering the opposite surface of the clasped shingle. An upright, forked at its upper end, is pivoted to the long arm of the horizontal lever, and is formed at its lower end with a wide chisel edge, having two or more spurs that engage with the finished roof.

Above the chisel edge the upright is widened and formed with an oblong aperture, having on one edge L-shaped lugs, with which engage lugs on the lower portion of the inclined lever. To apply this bracket, the short arms are made to clasp the shingle, when the lower portion of the inclined lever is raised, and the proper lugs are brought into engagement to hold the parts in their relative positions. The boards to form the staging are then placed on the horizontal lever, the



SMERDON'S SHINGLING BRACKET.

spurs on the upper edge of which hold them securely. The spurs on the chisel edge prevent the upright from slipping.