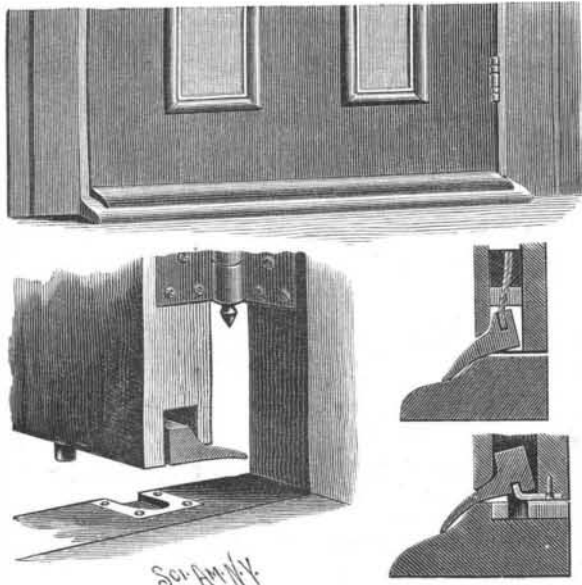


**AN IMPROVED WEATHER STRIP.**

A weather strip adapted to be easily closed against a threshold, but tightly held there when the door is shut, and which will readily clear the threshold when the door is opened, is illustrated herewith, and has been patented by Mr. Robert C. Redman, of Salem, Oregon. The weather strip is formed with a vertical portion projecting into a recess in the lower edge of the door, and rests on lugs secured by screws in recesses in the bottom of the door. To hold the weather strip up when the door is open, a spring is secured to a block fastened in the upper part of the recess in the lower edge of the door, and projecting into a slot in the vertical portion of the strip. Upon the lower side of the weather strip, near the hinged side of the door, is

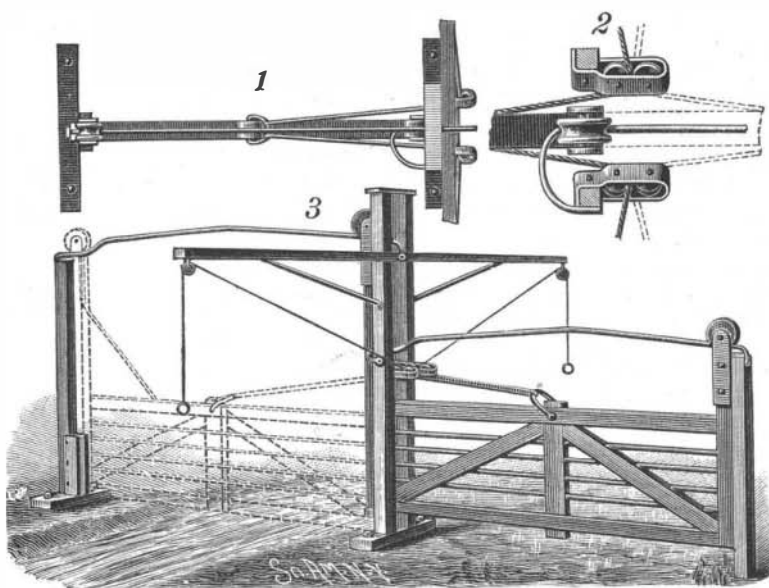


REDMAN'S WEATHER STRIP.

a pin which engages a slotted plate on the threshold, when the door is closed, thereby drawing the weather strip down close over the threshold, as shown in detail in the small views, the slot of the plate being so cut out that the act of closing the door causes the pin, in bearing against the end wall of the slot, to tilt the weather strip so that its outer edge comes in contact with the threshold. The spring, which is brought under tension in closing the door, reacts as the door is opened, bringing the weather strip back so that it will readily clear the threshold.

**AN IMPROVED FARM GATE.**

A gate which may be readily opened and closed by a person in a vehicle or on horseback, by simply pulling cords at the roadside, has been patented by Mr. Martin L. Baker, of Wilton Junction, Iowa, and is illustrated herewith, Figs. 1 and 2 showing plan views of the gate and main gate post, and Fig. 3 representing the gate closed in dotted lines and open in full lines. The main post consists of two uprights framed into a sill timber, separated sufficiently to allow the gate to run between them, and connected at their tops by a head piece. The end uprights of the gate, one of which is higher than the other, are fitted with rollers adapted to travel upon metal tracks, one track extending over the roadway to a post on its other side, and being higher than another track which extends out to a post at right angles to the roadway in the opposite direction. A bar is fastened to the main post, ranging lengthwise of the



BAKER'S FARM GATE.

roadway, to which gate-opening cords are attached, their pendent ends hanging in convenient reach of any one approaching the gate from either direction. The cords pass between pairs of guide pulleys journaled in strap bearings fixed to the uprights of the main gate post, and their inner ends are attached to a stirrup or bail pivotally connected to the upper central portion

of the gate. By pulling on one of these cords, when the gate is in either closed or open position, the gate rollers are caused to ride up to and over the highest parts of the tracks, and will then run down the incline upon the opposite side until the upright on the end of the gate stops against the post. Depressions at the ends of the tracks, in which the rollers rest, prevent the opening of the gate, when closed, by stock rubbing against it, and only a short, sharp pull on the cords is necessary to readily open or close the gate.

**AN IMPROVED MECHANICAL MOVEMENT.**

An invention affording improved means of converting reciprocating or oscillating motion into rotary motion is illustrated herewith, and has been patented by Mr. Benjamin F. Andrews, of Myers, Mo. The apparatus comprises a shaft suitably supported so that it may be revolved, a slotted pitman, in the slots of which are racks, and an oscillating lever connected with the pitman. On the shaft are loosely journaled toothed wheels fitting close together at their inner faces, and rabbeted on their inner sides next their periphery, the two rabbets forming a way for rails or guide plates on the slotted pitman, the arrangement being such that one rack meshes one wheel to revolve it in one direction, while the other rack will revolve the other wheel in the opposite direction, the wheels being so clutched to the shaft that they will slip on it when turned in one direction and grip it when turned the other way, one wheel turning the shaft as the pitman is moved forward and the other as it is retracted. In connection with these wheels are also provided teeth within sockets on their outer sides for engagement by pawls, of which there are a number in recessed pawl carriers or supports, so arranged that by adjusting these pawls the apparatus may be operated to turn the shaft in one direction or quickly reverse it to the other. A sectional view showing the arrangement of the pawls and pawl trippers is given in Figs. 2 and 3, the trippers being either turned directly by hand or by means of a lever pivoted to the top of the frame. The lever reciprocating the pitman is supported to move at its axial center in a frame having rack teeth in opposite walls, the lever having a toothed segment meshing one rack and a toothed roller meshing the other rack. The lever has several openings or sockets, and a guide frame with notches registering with the sockets, serving as guides in stopping the connecting block, which is movable within the guide frame. By adjusting the connecting block, and with it the pitman, along the lever, to and from the center of motion, the length of stroke of the pitman may be varied. To relieve any shock or jar in the operation of the lever, and ease the action of the machine, its supporting frame is provided with spring-plate cushions at its opposite ends.

**Clean Your Grain.**

Weevil, cockle, smut, husks, and fuzz and all other matter that does not make flour should be kept out of the flour as perfectly as possible. Clean, clean, clean, thoroughly, tirelessly, and systematically. The more you clean the grain, the more fine flour of the best quality you can make. Every particle of foreign substance that finds its way into the flour destroys something of its desirableness, weakening it, discoloring it, and making it less like what it should be. Clean always and everywhere. Let cleaning of the grain be a hobby with you. It will pay.—*Milling World.*

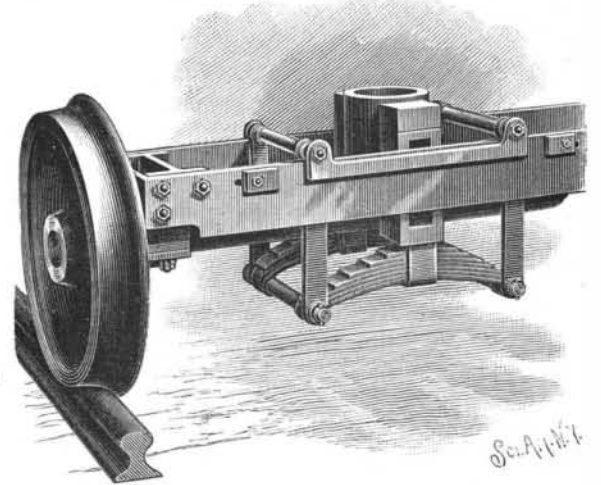
**AN IMPROVED FLUE CLEANER.**

A flue cleaner having adjustable cleaning blades, readily adapting it for use in flues of different diameters, has been patented by Mr. James Newmon, of Haw Ridge, Alabama, and is illustrated herewith, Fig. 3 showing a sectional view, and Figs. 1 and 2 representing side and end views. The cleaner head has a flat-faced flange in which are a number of slots, the head having a central bore threaded at each end, the thread at the outer end being arranged for engagement with a set screw or bolt, whose shank passes through a clamping plate. Between the clamping plate and the flange of the head are placed segmental cleaning blades having peripheral serrated edges, each of the blades having a cross piece which rides in slots of the flange of the head, and in other slots in the clamping plate, whereby each blade may be readily moved toward or from the screw shank. The handle is threaded at one end for engagement with the thread in the bore of the unflanged end of the head, and upon the handle is mounted a gauge for preventing the head from being forced in too far.

THE man who is constantly absorbing information never poses as a "know it all," but he is usually a person who can impart very many valuable and practical ideas.

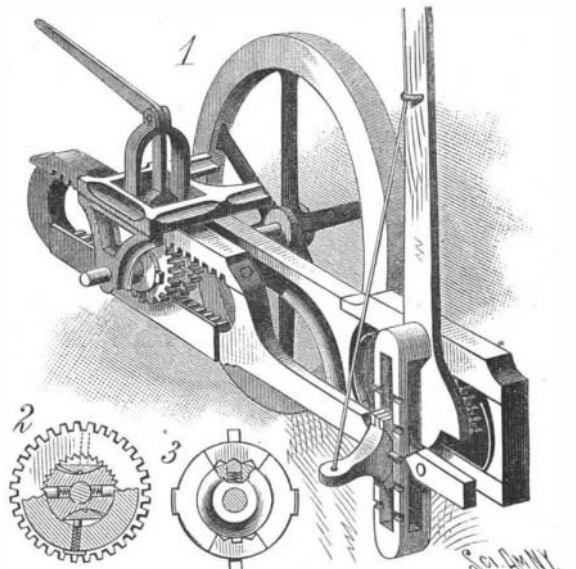
**IMPROVED TRUCK FOR LOCOMOTIVES AND STREET MOTORS.**

A truck of simple construction, which provides for the swinging of the car body in passing curves, is illus-



PACKER'S LOCOMOTIVE TRUCK.

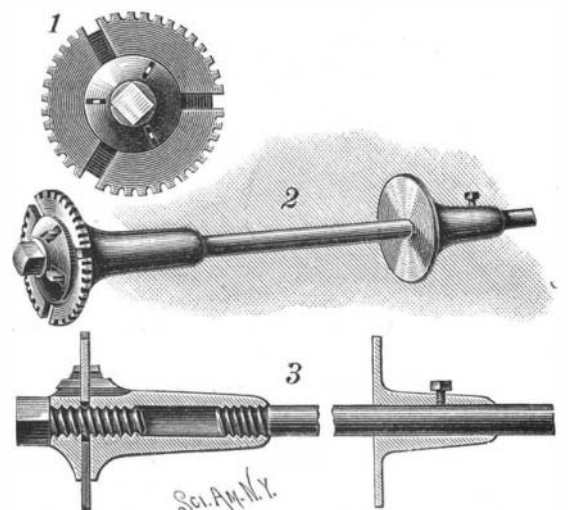
trated herewith and has been patented by Mr. Alonzo C. Packer, of No. 118 Forty-fifth Street, Pittsburg, Pa. Upon side rails of the truck body are arranged cross-bars or shafts, upon which are mounted small wheels or rollers that bear upon the upper faces of the rails, and just outside these rollers are connecting links extending from shaft to shaft. Within the rails are mounted links supported by the crossbars, these links supporting springs upon which is a center bearing plate to receive the king pin of the body center plate. To each of the side rails are connected stop blocks, the bolts by which the blocks are secured to the rails being so placed as to allow the throw of the connecting links and parts controlled thereby to be varied, and providing for the swinging of the car body upon the truck,



ANDREWS' MECHANICAL MOVEMENT

the range of motion being partially checked by the stop blocks. Trucks of this construction are now used on street car motors in Birmingham, Ala., the motors having 12 in. by 18 in. cylinders, driving wheels of 40 in. diameter, and the back truck wheels 24 in., with rigid wheel base of 5 ft. 9 in. These motors are said to pass easily around curves of 34 ft. radius, and to give entire satisfaction.

THE 2,000 horse power engine of the Warren Manufacturing Company, R. I., drives all the machinery of the works from a rope pulley 32 feet diameter and 9 feet 3 inches face, carrying 43 ropes 1 3/4 inches diameter, instead of a belt. One advantage this system possesses over belts is that several shafts can be driven at different speeds from the same driving pulley, thus saving much countershafting.



NEWMON'S FLUE CLEANER.