



### NICKUM'S IMPROVED RAILWAY SWITCH.

We call attention to a new railroad switch which is so constructed that it can be operated by the engineer or brakeman, and is now owned by Messrs. Nickum & Hudson of Marion, Indiana.

Fig. 1 is a plan of a switch.

Fig. 2 is a side lever to operate said switch from the ground.

Fig. 3 is the centre lever pivoted in the centre of the track and operated by the lever on the engine or cars.

Fig. 4 is the lever that operates on the engine under the cover-catcher; the works are attached to the cross pieces in front of the wheels. The lever is operated by a cord or rod attached to the top of the pin and runs down under the pulley and is attached to a little lever in easy reach of the engineer.

Fig. 5 is the lever that works on the cars. This lever is very near the same as Fig. 4, except the cord and pulley.

The object of this invention is a railroad switch that is operated by the passage of the engine or cars over it.

A is a lever pivoted to a fixed tie with a cap plate E over its end, the other end secured to the movable tie B. C is a side plate or spring bar attached to lever A to make it work more smoothly and without strain. H is a spring enclosed in a casing h with the centre bearing against a pin projecting up from movable tie B, which keeps the switch rails F F closed as is now represented. X and Y represented a long lever pivoted at X to a fixed tie, having its other end fastened to the main line at S. When an engine or car or train approaches the switch, the lever on the front one thrown down will engage against plate c on the side of lever A, and push the rails over and hold them till the wheels are on the switch line rails, the rim of the wheels will run on through between lever X and Y, and the outside track which will allow a vacation enough that there will always be wheels on the switch until the whole train has passed over, then the spring H takes effect and closes the switch. All cars will go of the switch just simply by backing off or running off to the main line. In Fig. 2 is a side lever adapted for any switch. In this it is not really necessary that it should be used, only to switch from the ground if desired.

### A CURIOUS HORSESHOE.

A German manufacturer has invented a horseshoe composed of iron and hemp, which is said to be meeting with considerable favour. The shoe is of malleable iron, having a deep wide groove, into which tarred hemp is firmly wedged. The rope protrudes beyond the rim of the iron, and the whole is said to form a light and serviceable shoe. We wish some German friend would favour us with a sketch from which to make an engraving for publication.

FROM sawdust, ground-up twigs and like materials, pails, moldings for buildings, doors, sashes, blinds, etc., are now manufactured at Great Falls, Windham, Me.

### PATENT WINDOW SASH LIFTER.

The Keighley Timber and Saw Mills Company, of Keighley, Yorkshire, are the sole manufacturers of an improved window sash lifter, constructed on the principle of Riley and Taylor's patent, which supplies a ready means of opening and closing windows, and which, while costing no more than the usual weights, cords, and pulleys, will obviate many of the objections which attach to the method ordinarily used. The Patent Sash Lifter, of which we show sectional drawings, it is claimed, possesses the requisites of cheapness, simplicity, and durability, and it might well be added, *security*. It is worked by means of an endless cord and pulley at the side of the window, or by a removable key in connection with a very simple and effective arrangement of worm, gear and racks. It is almost impossible to get it out of order, while it is capable of being operated with the greatest ease. It is an exceedingly useful contrivance for cottages and dwelling houses, but especially adapted to heavy sashes used in large buildings, as churches, chapels, municipal, and other public buildings, or where there is any inconvenience in opening or closing high and heavy windows. For shops, stores, and warehouses, where it is desirable to have an efficient and safe means of ventilation, the device answers perfectly. It can also be advantageously applied to bay windows, as it saves the notching of the stone work or mullions where the weights in the ordinary windows hang, thus economising space, besides effecting a great saving in the joiners' work.

