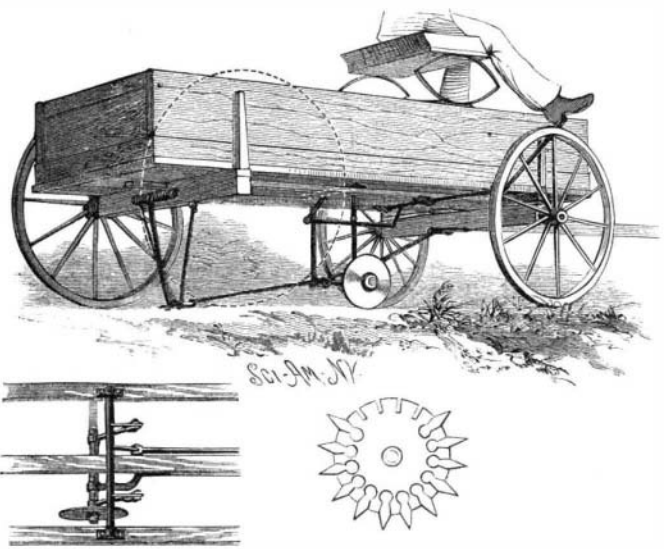


## AN IMPROVED WAGON BRAKE.

The brake shown in the illustration does not operate upon the wheel tires, and is designed to effectually stop a vehicle in the middle of the steepest hill. It has been patented by Mr. Nathan A. Wheeler, of Alpowa, Washington. Suspended beneath the wagon body is a friction disk of metal, fixed to an axle which turns in stirrups pivotally attached at their upper ends to cranks projecting from a transverse shaft, which turns in boxes supported by main longitudinal girders, one of the small figures being an inverted plan view, showing the manner in which the friction disk is suspended from the wagon body. The stirrups may be attached to the cranks at different points, thus changing the length of the connection between the friction disk and the transverse shaft. The disk and its axle are braced by a bar extending forward to a connection with the lower side of the front axle, but such connection does not interfere with the vertical movement of the disk, which is raised and lowered by a connecting rod and brake lever. The connecting rod is pivotally attached at its rear end to a projecting crank of the transverse shaft, and at its forward end to a crank of the brake lever, which at one end is bent up at the side of the wagon body to be easily reached by the foot of the driver, a spring on the brake lever normally holding the disk out of contact with the ground. Attached to the disk axle is a chain connected to a rearwardly extending brake rod, the brake shoe of which is suspended by rods pivotally attached to the rear axle, a spring normally holding this brake shoe in elevated position. As the driver moves the brake lever forward and downward, pressing his foot down upon the treadle, the friction disk strikes the ground, and the motion of its axle winds the chain to pull the rear brake rod forward, and cause its shoe to swing downwardly to the ground, where it will act as a drag. By increasing the pressure, the friction disk is forced more firmly upon the ground, when the rear brake shoe may be brought forward sufficiently to lift the rear wheels of the wagon. In one



WHEELER'S WAGON BRAKE.

of the small views is shown a toothed disk, which may be substituted for the friction disk when the roads are frozen and icy.

## SWIFT'S DOUBLE ACTION AND HAMMERLESS REVOLVERS.

The two revolvers illustrated herewith contain new features, and are made of the best materials and finely finished. In Fig. 1 the most important improvement consists of the barrel catch resting firmly on the hammer when the pistol is discharged. As the barrel can be thrown open only by pressing down on the catch, it is utterly impossible for it to be opened when ob-



Fig. 1.—SWIFT DOUBLE ACTION AUTOMATIC REVOLVER.

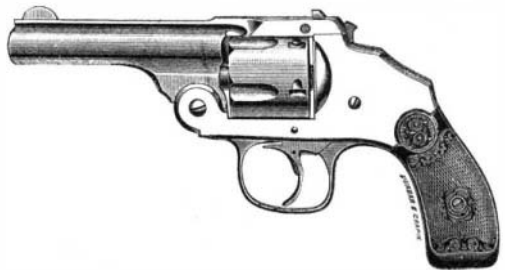


Fig. 2.—SWIFT SAFETY HAMMERLESS AUTOMATIC REVOLVER.

structed by the hammer. This absolutely prevents the danger of the barrel opening when the revolver is discharged, an improvement heretofore deemed unavailable in automatic shell-ejecting revolvers.

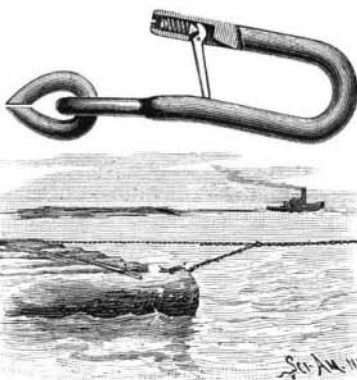
In Fig. 2 the safety attachment used in the double action revolver is also found. There is also attached a safety device to the trigger, so that the weapon cannot be discharged except when held in the hand in the usual manner. By means of this improvement the revolver can be kept loaded with safety, and will not be discharged either by being dropped or while carried in the pocket. These goods are manufactured by the John P. Lovell Arms Company, Boston, Mass., who will gladly furnish additional particulars to those interested.

## AN IMPROVED SNAP HOOK.

The snap hook shown herewith is designed more particularly for use on vessels, and especially in towing rafts of logs, for which, ordinarily, a very heavy hook is employed, which requires to be tied to keep it from falling out of the ring in the boom chain. The invention has been patented by Mr. Nels Nelson, of Aberdeen, Washington. The latch, which is somewhat crooked and angular in shape, is pivoted in the nose portion of the hook, and is fitted to work within a slot that opens from the interior, and is in communication with a longitudinal recess opening through the outer extremity of the nose. In this recess is a spiral spring, carrying at its free end a swivel stud or cone, which bears against an inner stepped end of the latch, the opposite end of the spring resting upon a centering screw plug that closes the outer end of the aperture, the spring being thus free to adjust itself in all directions.

## AN IMPROVED REIN HOLDER.

A device designed to prevent runaways when horses attached to vehicles are left unattended, and especially adapted for application to all kinds of delivery and express wagons, as well as buggies, etc., is represented in the accompanying illustration. A transverse shaft is journaled on the rear of the front axle, as shown in the sectional view, a gear wheel on the outer end of this shaft meshing with a gear wheel on the hub, such gear having a cover to keep out dust and dirt. On the inner end of this shaft is a stationary half clutch, keyed to the shaft, and a movable half clutch, these clutches being normally held apart by a spiral spring, and upon the movable half clutch is a drum, a strap connected to which passes through a hole in the bottom of the wagon body up through a tube on the inside of the dashboard, as shown in one of the views, to attachment with one of a pair of clamps which are spring-supported in the upper portion of the tube. The spring support is designed to impart a gentle pressure to the clamps, whereby they are held frictionally in any desired position. At the side of the tube on the inside of the dashboard is mounted a vertical rod having a handle at its upper end, while connected to its lower end is a cord passing over pulleys beneath the wagon body to engagement with a cam so supported as to be adapted to bear against a side flange of the movable half clutch. The connection of the cord with the rod is made through a short spiral spring, to give a yielding contact in case the teeth of the clutch should meet at their points and not lock together, the starting of the horse then effecting the locking of the clutch. To hitch the horse the reins are engaged between the clamps, which stand normally at the upper end of the tube on the inside of the dashboard, and the rod at the side is elevated, the latter motion, by means of the cam mechanism, engaging the two half clutches. The turning of the front wheel, from the starting of the horse, will now rotate the transverse shaft, drawing the clamps down the tube, whereby the bit will be drawn tightly into the horse's mouth. To release the device, a slight blow is given to the handle at the top of the vertical rod, which permits the cam to turn, when the half clutches are automatically forced apart by the spiral spring to their normal



NELSON'S SNAP HOOK.

position. The reins are provided with small flat buttons or stays to prevent their slipping through the clamps when wet.

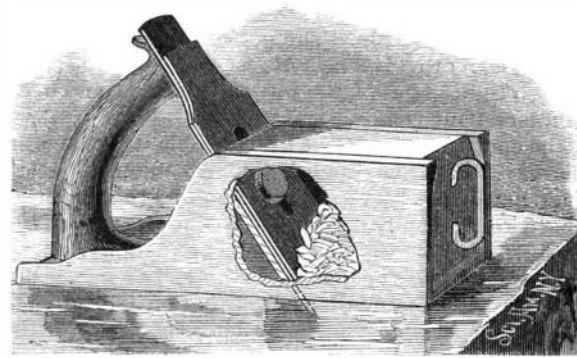
For further information relative to this invention address the patentee, Mr. William E. Ross, No. 155 Jay Street, Rochester, N. Y.

## Capsicum as a Counter-irritant.

Dr. Henry J. Buck, writing to the *Lancet*, says: "I have used this drug for more than twenty years—I may almost say daily—and many of my patients will not travel without a bottle of the 'magic lotion,' as they call it. I find the simplest and most efficacious way of applying it is to soak a large handful of the crushed pods in half a pint of hot water for an hour, then strain, and bottle for use. A teaspoonful of eau-de-cologne added will help to keep the solution, or it can be well boiled after preparing. I then have it applied to the affected parts on a piece of linen folded three or four times, or on lint, and covered with gutta percha tissue or a dry flannel. In this way the lotion may be kept on for hours without vesicating, and in many cases the skin is hardly reddened. The stinging and burning sensation produced by the capsicum lotion is, after a few minutes, welcomed by the sufferer, so magically does it often remove the rheumatic or neuralgic pain for which it is being applied. In acute torticollis a cure is often speedily obtained by covering the side affected with the application. In any form of neuralgia, rheumatism, subacute gout, pleurodynia, and such like, it will be found most useful, and may be reapplied over and over again during the day and night without any fear of vesication."

## AN IMPROVED ICE PLANE.

The accompanying illustration represents a simple and convenient implement with which blocks of ice may be shaved, as desired in making mixed iced drinks, the shaved ice passing upward into a box which may be withdrawn from the implement for convenience in placing the shaved ice in goblets or glasses, etc. The form of the plane stock does not differ essentially from an ordinary wood plane, and upright walls integral with the base plate extend up on each side thereof. These walls preferably slope inwardly on their inner

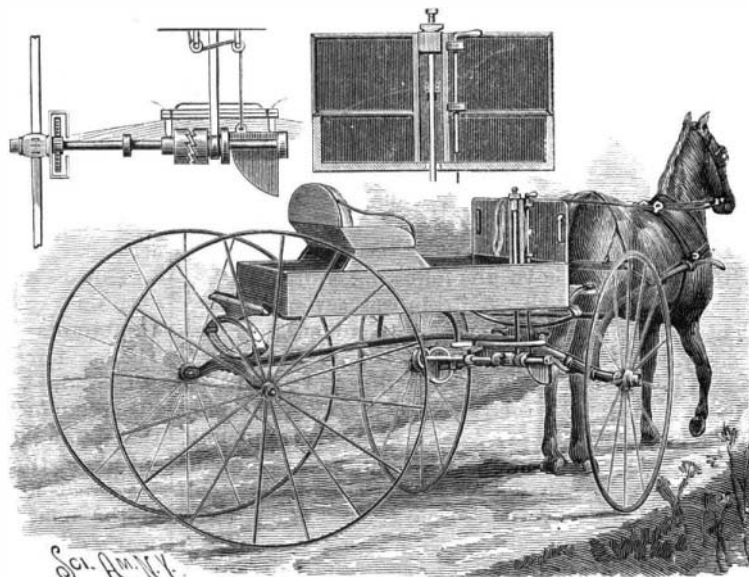


FAUGHENDER'S ICE PLANE.

sides, above a certain height, thereby constituting a retaining shoe for the convenient introduction and retention of a box with an inner open end, with inclined walls, adapted to fit neatly against the adjacent face of the throat plate of the plane. The box is preferably made of tinned or galvanized metal, to prevent rusting, and has a handle attached to its end wall to facilitate its insertion or removal from its position in the stock.

For further information relative to this invention address Messrs. Faughender & Crusoe, Piedmont, Ala.

KRUPP'S largest gun of cast steel weighs 135 tons, and the barrel is 40 ft. long. Its caliber is 13½ in. The gun has been sent from the works at Essen to Cronstadt.



ROSS' REIN HOLDER.