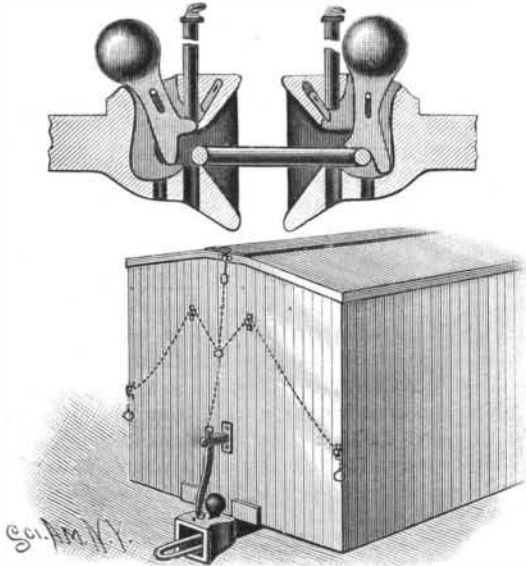


**AN IMPROVED CAR COUPLING.**

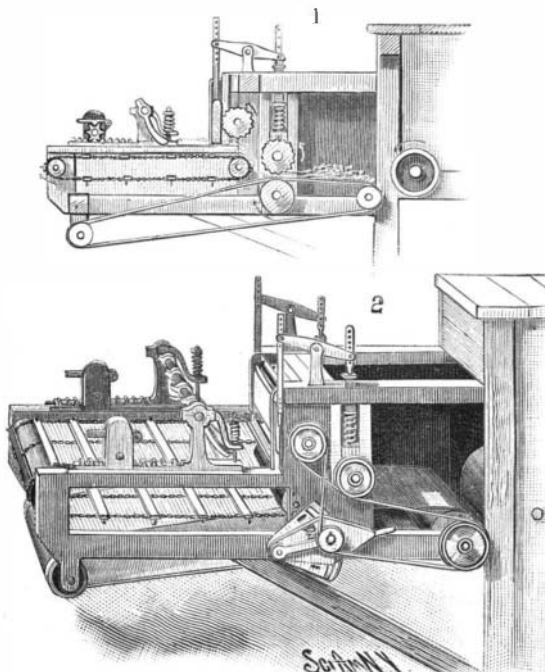
A car coupling which is simple in construction and designed to be very effective and automatic in operation is illustrated herewith, and has been patented by Mr.

**CHISHOLM'S CAR COUPLING.**

John W. Chisholm, of Liverpool, N. S., Canada. In the front of the drawhead is a recess adapted to receive the coupling link, and in a vertical central rearward and upward extension of this recess is pivoted a dog with a weighted upper end, the dog having a slot, through which passes the pivot pin, secured in the drawhead. On the lower end of the dog are two noses or offsets, as shown in the small figures, one extending horizontally and adapted to support the coupling pin, and the other extending downward and adapted to be operated on by the coupling. The head of the coupling pin is pivotally connected with the lower end of an arm having a slot in its upper end, through which passes a pin secured in a bracket on the end of the car, operating chains extending from the upper end of the arm to the sides and top of the car. In the front end of the drawhead a key is held to slide in an inclined slot, the key having a slot through which passes a pin secured in the drawhead. The lower end of the key is adapted to pass into the coupling pin aperture to hold the coupling pin temporarily in position, as shown in the small figure to the right, when the dog stands vertically, and it is desired to cut out a car in a train of cars, the conductor raising the coupling pin and letting the key slide downward. The coupling pin is drawn to its uppermost position by one of the handles at either side or the top of the car, when the dog drops into the position shown in the small figure to the left, its nose supporting the pin, the link being held in horizontal position in the opposite drawhead by the nose of the dog resting on it, and the coupling being effected by the entrance of the link, which then pushes against the bottom offset of the dog, causing the latter to assume a vertical position and allowing the link to drop.

**A BAND CUTTER AND FEEDER FOR THRASHING MACHINES.**

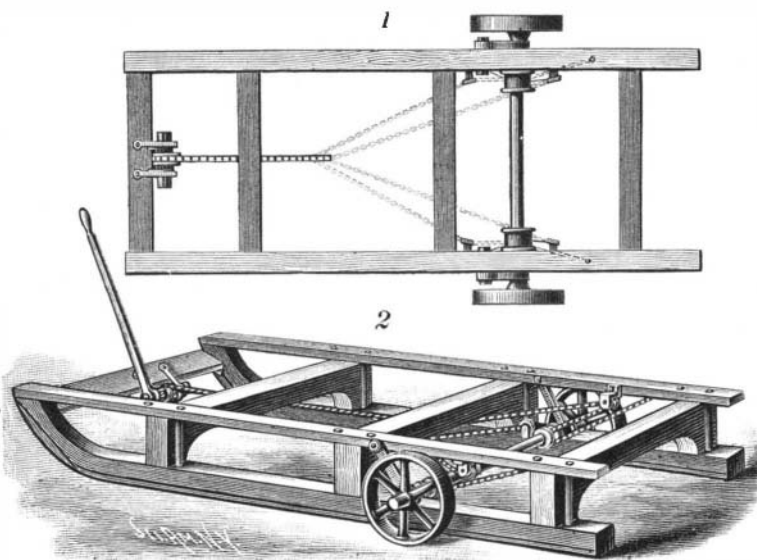
An improved device for cutting the bands of sheaves and feeding the loose grain to the thrashing cylinder of a thrashing machine is illustrated herewith, and has been patented by Mr. Karl G. Bareis, of Livingston, Grant County, Wis. The thrashing machine cylinder has at one end a gear wheel meshing into a gear wheel

**BAREIS' BAND CUTTER AND FEEDER.**

attached to a shaft mounted in a frame carrying the feeding and cutting mechanism. Centrally on this shaft is a roller, over which, and over other loose rollers mounted in the frame, passes an endless belt, leading the loose grain to the thrashing cylinder. Above this belt, over one of the loose rollers, is a grooved feed roller, mounted in vertically sliding, adjustable, and spring-regulated bearings, the bearings being adjustably connected by a link and lever with a feed bar in front of another grooved feed roller, and below which is a roller over which passes an endless slat belt reaching to the front end of the frame, and there passing around another roller. The rotation of the thrashing machine imparts motion to the endless belt, the grooved feed rollers, and the slat belt, the two belts forming carriers for the grain to the machine, the grooved feed roller having the spring bearings rising and falling according to the amount of grain carried forward, while the link and lever connections of these bearings with the feed bar operate to prevent too much grain from passing to the machine. To a rock shaft extending across the frame above the slat belt knives are adjustably secured, being held in yielding position in relation to the slat belt, so that they will adjust themselves according to the amount of grain thereon. The side bearings of the rock shaft slide between guides on the side beams of the frame, so that the shaft can be readily moved toward and from the front end of the frame, and locked in position thereon, to suit bundles of different lengths. A belt-tightening device is provided to automatically take up any slack caused by the rising of the grooved feed roller and its pulley.

**AN IMPROVED SLED.**

A sled particularly adapted for transporting logs in places where bare patches of ground are frequent in otherwise snow-covered roads, or in crossing bridges,

**WENZEL'S SLED.**

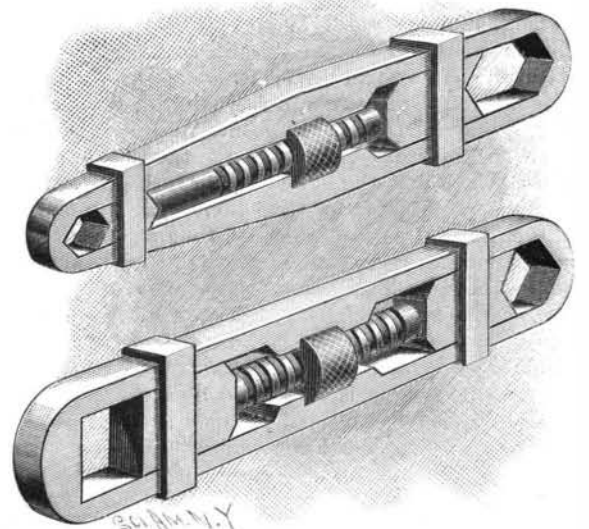
is illustrated herewith, and has been patented by Mr. Karl Wenzel, of No. 91 First Avenue, New York City. To the outer sides of the opposite side rails of the sled frame, nearer the rear than the front end, are pivoted the upper ends of arms having bearings at their lower ends, in which is mounted a transverse axle having wheels on its outer ends, whereby, when the arms are swung down, the rims of the wheels will be below the sled runners, and the front end of the sled being raised by the draught strain, virtually its entire weight will be carried on the wheels. To adjust the wheel-carrying arms, ropes or chains are attached to the runners about in a vertical line with the top pivots of the arms, and carried rearwardly around double pulleys mounted on the axle, then around pulleys attached to the runners in front of the end fastenings, the forward ends of the two ropes being then attached to one end of a strong chain. This chain is carried forward around a sprocket wheel on the front end of the sled, then rearward, and its free end connected with two other ropes or chains which run rearwardly over pulleys attached to the opposite top rails behind the axle, thence forwardly around the double pulleys on the axle, and rearwardly again to a point of attachment farther back on the top rails. The sprocket wheel on the front end of the sled has reverse ratchet wheels and pawls, with a single removable ratchet lever having a handle by which the operator, while on the sled, may readily turn the sprocket wheel in either direction, to adjust and lock the wheels in position with their peripheries below the runners, or swing them rearward and upward to allow the runners to rest on the ground.

**The Compass Finger Ring.**

The old style of finger rings with a setting containing a small compass is now being brought into use by electrical engineers. Held near a line wire, the movement of the compass shows at once whether a current is passing.

**AN IMPROVED WRENCH.**

A wrench which can be conveniently used where nuts of different sizes and shapes have to be manipulated is illustrated herewith, and has been patented

**WHITE'S WRENCH.**

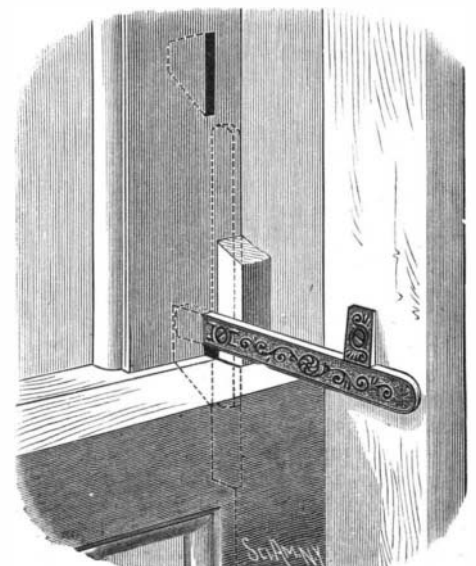
by Mr. Oscar C. White, of Wichita, Kansas. In making this wrench for ordinary shop use both sides are made parallel, one end being adapted for square and the other for hexagonal nuts. What may be styled a bicycle pattern is designed to have one end of the wrench smaller than the other, and both ends adapted for hexagonal nuts. Either end of the wrench serves as a handle for the jaw operating at the opposite end, the jaw desired for use being easily adjusted by means of the central thumb nut acting on the screw rod.

**Painless Poultry Killing.**

Mr. F. Baden Benger, the president of the British Pharmaceutical Conference, adopts and recommends the following plan for the "happy dispatch" of poultry. A large wide-mouthed stoppered bottle is kept charged with an ounce of chloroform. When a chicken has received sentence of death, it is held firmly under the left arm and its head slipped into the mouth of the bottle. A few deep inspirations follow, and the bird without a struggle becomes unconscious. Then, holding it by the legs, its neck is dislocated by a quick stretch. The plan is so simple that it might be generally adopted.

**AN IMPROVED SASH LOCK.**

A simple sash lock, easy of operation, and which cannot be released from the outside of the window, even by a force greater than the sashes could withstand, is illustrated herewith, and has been patented by Mr. George W. Keeler, of Trenton, N. J. The upper sash is formed with one or more vertical recesses or mortises in the inner face of its side rail, parallel with the face of the parting strip between the two sashways, on which a vertically swinging bar is pivoted, the short arm of the bar being adapted to enter one of the recesses, when, to lock the sash, the long arm is swung downwardly across the top rail of the lower sash, and engaged by a stop secured to the window frame. The pivoted bar, when not in use, lies vertically against the face of the parting strip, as shown in dotted lines. The meeting rail of the lower sash is cut away to allow of its movement past the locking bar, and the upper sash may be lowered to a greater or less extent, and locked in the open position by locking the bar with its short arm in one or another of the vertical recesses in the side rail of the upper sash.

**KEELER'S SASH LOCK.**