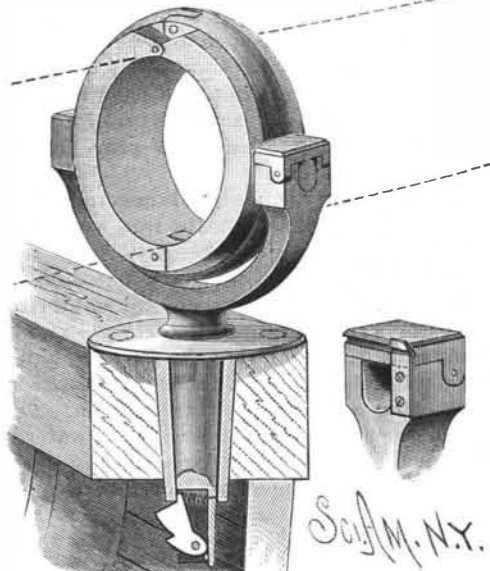


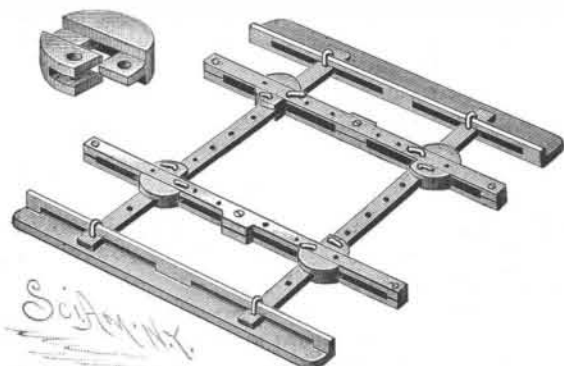
**IMPROVED OAR LOCK.**

In this oar lock simplicity and strength are combined with lightness, and there is perfect freedom in the handling of the oar, which will not unship in the roughest weather. Clamped around the oar is a hinged ring, the edges of which have outwardly projecting flanges. This ring is fitted to turn within another hinged ring having trunnions, by which it is mounted in the frame in the boat bracket. These two rings constitute a fixture upon the oar, and are made as light as possible, consistent with the wear and strain brought



**TOMPKINS' IMPROVED OAR LOCK.**

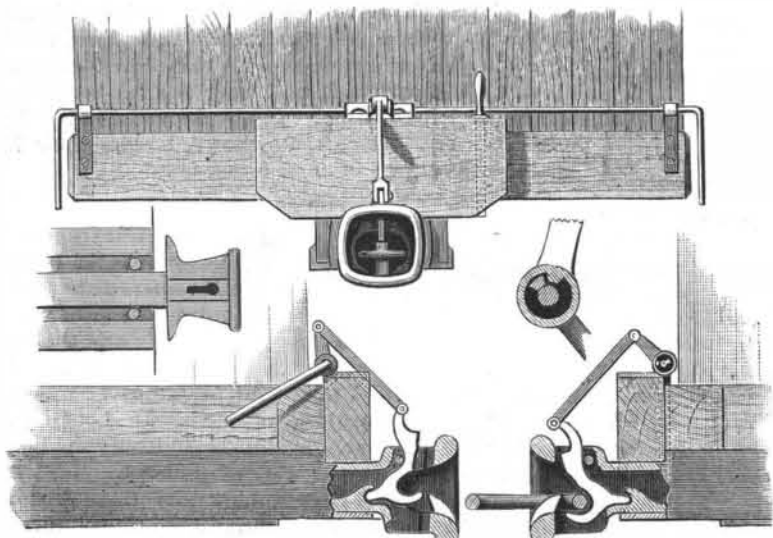
to bear upon them in rowing. The boat bracket is secured to the gunwale, and has a downwardly projecting tubular arm, in which the shank of a U-frame is held by a spring pin at its lower end. The bracket is not necessarily a portion of the oar lock, as the shank of the frame can be attached to various styles of boats in a multiplicity of ways. In the upper extremities of the frame are journals to receive the trunnions of the outer ring, one journal being positively inclosed at the top and provided with an inner vertical recess to facilitate the insertion of the trunnion, and the other being open and provided with a hinge cap, as shown in the



**MEGORDEN'S IMPROVED PRINTER'S CHASE.**

small view. A properly arranged spring holds the cap in its closed horizontal position. When it is desirable to receive the oar, the cap is thrown back against the pressure of the spring, or the spring is bent inward to release the cap. The oar can be readily and safely adjusted in the frame or removed therefrom. This oar lock relieves the strain of the oar upon the hand at the entrance of the oar, and to a great extent upon the stroke. It prevents the oar from slipping inboard and outboard, and permits the ready and very easy accomplishment of the movement necessary for feathering.

This invention has been patented by Mr. Alfred H. Tompkins, of 70 Hancock Street, Brooklyn, N. Y.



**LALIME'S IMPROVED CAR COUPLING.**

**IMPROVED PRINTER'S CHASE.**

The top and bottom pieces of the chase, for attachment to a job press, as usual, are provided with raised longitudinal strips formed with slots in which the ends of the side pieces are movably held by staples or clips. The end strips, between which and the side pieces the form is locked, are longitudinally slotted to receive the side pieces through them. Both side and end strips are formed with rows of holes to provide for their respective adjustments nearer to or farther from each other. The corner holders, the form of which is clearly shown in the upper left hand view, serve in connection with the pins passing through them and through the strips to lock the strips to their places when adjusted. These holders also serve to couple and guide and keep parallel with each other the side and end strips. The holders have slots through them to receive the side strips, and upper and lower transverse grooves to receive the slotted end strips, and have holes formed in them to receive the pins. One portion of each holder is cut away, so as not to protrude within the space in which the form is held. It is evident that when the pins are withdrawn, the side and end strips can be adjusted as required; in this way the chase, which is made of steel or iron, can be adjusted to lock up any size or shape of form, from a single line to a square or larger form.

This invention has been patented by Mr. Holiver Megorden, of Farmington, New Mexico.

**IMPROVED CAR COUPLING.**

The drawhead in this car coupler is formed with outwardly extending side ears, as shown in the left hand inverted plan view, the drawbar being connected with the car body and with its spring in the usual manner. The drawhead is also formed with a hooked prong extending upward and toward the rear from the bottom of the link recess, the outer face of the prong being convex, while its inner face is concave. Back of the link recess is a vertical recess, extending entirely through the drawhead, a forwardly extending horn being arranged at the rear of the recess. Within the recess is mounted a swinging hook shaped as clearly shown in the lower view, and which is connected, by a link, with a lever arm carried by a sleeve loosely mounted upon a crossbar supported by brackets secured to the end of the car. The bar is formed with a bit, and the sleeve has an inside flange or feather, as shown in the small view. Upon each end of the crossbar is a lever arm or handle.

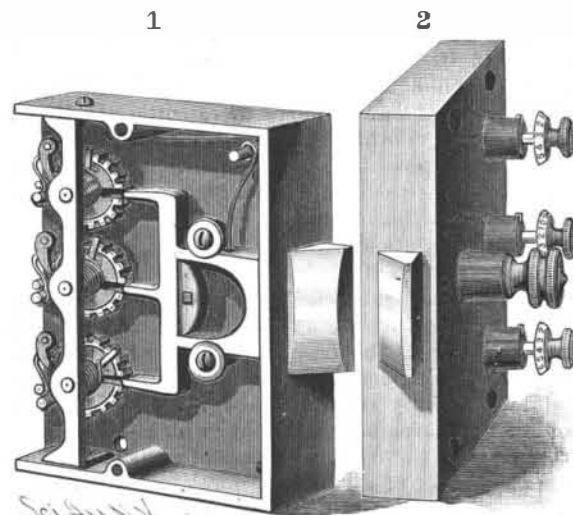
The operation of this coupler is as follows: A coupling link inserted in the drawhead recess rides up over the convex face of the hook or prong, behind which it drops above the lower point of the swinging hook, the parts then being about in the position shown in the lower right hand view. As the link enters the opposite drawhead, its forward end strikes against the hook and forces it to the position shown, and drops down behind the prong. The cars can be uncoupled by turning the lever arms to raise the hook, which will carry the link above the point of the prong and permit its withdrawal. The position of the link can be regulated by so turning the lever arms as to carry the hook downward, and thereby raise the projecting end of the link; by turning the arms in the reverse direction, the outer end of the link can be depressed. To lock the parts against automatic coupling, the hooks are held in an elevated position. The accidental removal of the hook is prevented by a pin passed through the drawhead behind the hook. Should the hook or any part of the operating mechanism break, the coupling may be brought about by means of an ordinary coupling pin, which is carried in a proper recess formed in the head block. As the cars provided with this coupler come together, any undue strain upon the drawbar spring is obviated by the peculiar form of the drawhead, the ears or shoulders of which abut against the buffer block, and thus relieve the spring from any undue strain.

This invention has been patented by Mr. Eusebe Lalime, of Malone, N. Y.

**IMPROVED COMBINATION LOCK.**

This combination lock is the invention of Mr. George R. Boyce, of Orange, N. J. It can be quickly set to any combination desired, is easily locked and unlocked, and is very simple in construction. In the casing slides a bolt normally held projected by a spring, and retracted when released by a permanent key with spindle and head. The bolt, in this case, is formed with three prongs and is locked, when projected, by its prongs striking the peripheries of three setting wheels. When retracted, the prongs enter deep radial slots in the wheels. The peripheries of the wheels are normally presented to the prongs to lock the bolt by coiled springs which act to turn the wheels, the position of the radial slots with respect to the prongs being determined by lugs projecting from

the wheels striking against stop pins. The wheels are turned forward against the tension of the springs to present their slots to the prongs by means of spindles passing through the front of the casing and having turning heads. The forward parts of the wheels are formed with ratchet teeth engaged by pawls pivoted to the casing, which prevent the teeth from being turned back by the springs. The amount which each wheel must be turned to bring it from its original position of rest into position to release its bolt prong can be determined by the audible click of the spring pawl, or an



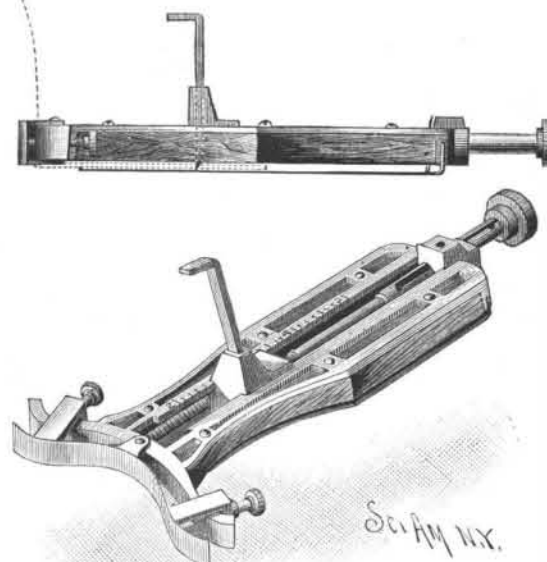
**BOYCE'S IMPROVED COMBINATION LOCK.**

ordinary index and numbered dial may be employed, if desired.

In order to again lock the bolt after being released, and return the wheels to their original locking position, the ratchets are movably arranged with respect to their pawls by mounting their spindles to slide lengthwise, whereby the wheels can be pushed forward to disengage their ratchets, when they will be immediately returned to their original position by the tension of the springs. On the spindles being released, the springs also serve to press back the wheels into engagement with their pawls. The positions of the stop pins can be varied to change the position of rest of each wheel and the degree of rotation necessary to present the releasing slot to the bolt prong. The stop lug on each wheel can also be independently adjusted. To further increase the difficulty of solving the combination, the spindle of each wheel is provided with a clutch collar held by a spring in engagement with a similar collar on the wheel. By drawing the spindle out slightly it is disconnected from the wheel, and can then be variously adjusted so as to prevent one's noting the motion of the setting wheel by the marks on the turning head or knob.

**ROUNDING JACK FOR HAT BRIMS.**

The metal frame is provided with a curved breast and formed with a central longitudinal passage



**HILD'S ROUNDING JACK FOR HAT BRIMS.**

or way for the knife stock. The frame is furnished with a wooden backing having a passage corresponding to that in the frame, but somewhat wider, so as to expose the edges of the frame, and thus form guides for the knife stock. The stock is formed with side grooves to receive the edges of the frame and with a vertical opening to receive the knife, and also with a screw-threaded opening to receive a rod, which acts as a set screw to the knife and as an adjusting rod for moving the stock in the groove to set the knife for cutting any desired width of brim. The rod slides freely in an opening in the frame, and is held in the desired position by a set screw. The upper surface of the frame is graduated to facilitate the accurate setting