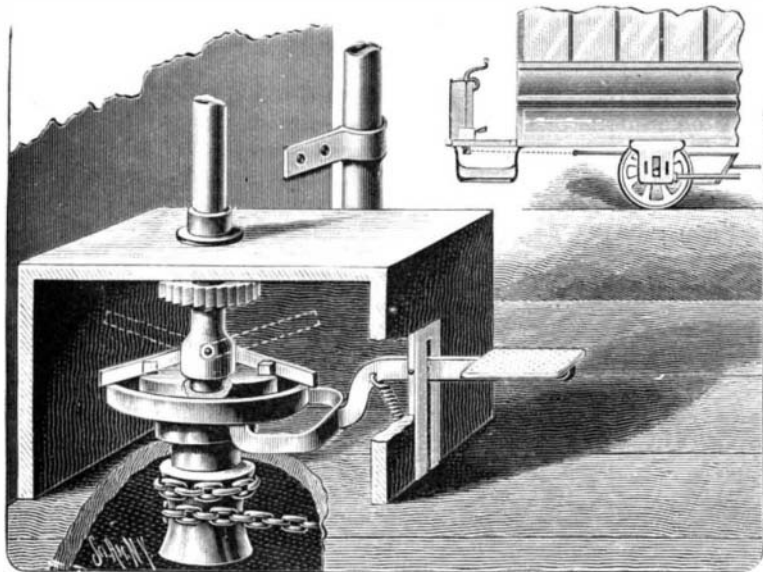


A BRAKE FOR STREET CARS.

The device shown in the engraving is designed to be operated as easily and effectively as the ordinary brake, while it obviates the forcible flying back of the brake-shaft crank-arm as the brakes are taken off, whereby persons standing on the car platform are frequently injured. The drum on which is wound the chain connected with the brake beams is journaled in the car platform, the top of the drum shaft carrying a



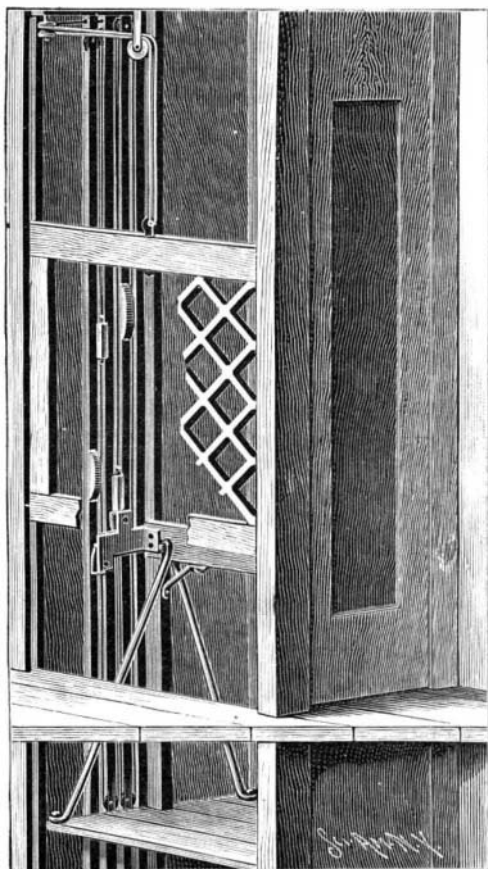
CHASE'S STREET-CAR BRAKE.

head-plate, which preferably furnishes a loose bearing for the lower end of the usual vertical brake-shaft, journaled to the dash-board and in the top of a box or casing on the platform. The chain drum is not fixedly connected to the brake-shaft, but the latter carries at its lower end two pivoted clutch-bars adapted to engage two lugs on the head-plate of the drum shaft. These clutch-bars automatically drop by gravity into engagement with the lugs, but to disengage them, as shown in dotted lines, and allow the drum shaft to unwind without rotating the brake-shaft and its crank, a trip device is provided, consisting of a ring which underlies the outer ends of the clutch-bars, and is connected to a treadle lever. A spring normally holds the ring down, except when the treadle is depressed. Within the box or casing is arranged a spring-pressed pawl which engages a ratchet wheel fixed to the brake-shaft to prevent backward turning of the clutched shaft and chain drum when the brake is applied.

For further information relative to this invention address the patentee, Mr. Joseph C. Chase, No. 88 Lyons Street, New Orleans, La.

AN IMPROVED ELEVATOR GATE.

The construction shown in the accompanying illustration is designed to provide for the dropping of an elevator gate by gravity, while the descent of the gate



GOLDER'S DEVICE TO OPERATE ELEVATOR GATES.

will be so controlled that nothing will be broken if the gate meets an obstruction. It forms the subject of a patent issued to Mr. William H. Golder, Nos. 18 and 20 Front Street, Portland, Oregon. In a vertically extend-

ing strip on one side of the elevator well are arranged three parallel vertical dovetailed slots, and pivoted in the upper portion of the strip between the slots are three pulleys, one a little above the other. Aligning with two of these pulleys are two pulleys pivoted in the lower portion of the strip, the pulleys at the top and bottom being adapted for the passage of the gate cables. In each of the two outer slots of the strip is dovetailed a catch projecting from the face of the strip and adapted to move vertically therein to engage the gate-operating latches, the catches being connected with the gate-operating cable. The latter is attached centrally to the upper portion of the gate, and is composed of two strands or members which pass upwardly over pulleys pivoted near the upper part of the story, thence turning at right angles and passing over pulleys pivoted near the upper corner of the elevator well, from which one of the members passes over the pulley pivoted at the top of the first dovetailed slot, and the other member passes over the pulley pivoted at the top of the third dovetailed slot. The member passing over the first pulley is continued down the slot and attached to the catch, while the other member extends down the third slot, over a pulley at the bottom, and up to the other catch to which it is attached. A second cord or cable is attached to the upper end of the first catch, and extends up-

ward over the central pulley and down to engagement with the second catch, while a third cable extends downward from the bottom of this catch, around a pulley, and up to engagement with the bottom of the first catch, making a continuous cable system from the elevator gate around the pulleys. Projections having inclined ends are fixed to the vertical strips between each floor of a building, and a plate is fixed to the top of the elevator car to project across the strip, the plate having pivoted latches and oppositely projecting spring catches overlapping the grooves to engage the catches and projections, the operation being such that when the gate drops one of the latches is supported on a catch, thus allowing the gate to drop with the same speed as that at which the elevator car moves, and preventing it from falling too fast.

A CORK-DRAWING DEVICE.

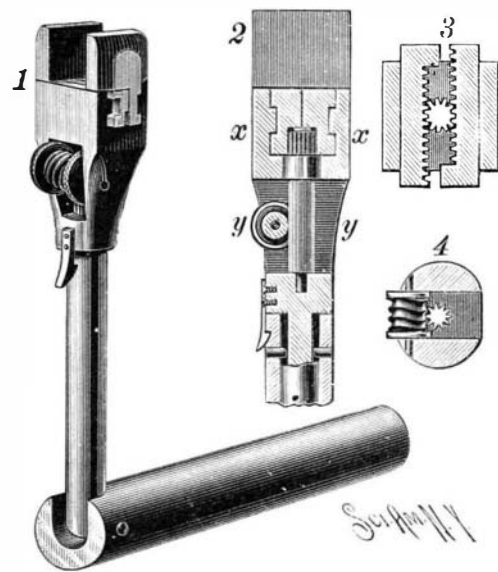
The device shown in the cut is designed to facilitate the drawing of corks from the inside of a bottle without breaking the cork. It has been patented by Mr. Bernard Tormey. The body of the implement consists of a flat strip of spring metal, the upper end of which is looped over a handle, while, at a slight distance from its lower end, are outwardly and upwardly extending claws, another set of similar claws being arranged at a point higher up on the strip. In operation the body of the device is inserted in the vessel, when the cork is engaged by the claws and drawn out through the neck, as shown in the illustration. The handle has one tapering outer end, suitable for use in forcing the cork down into the bottle in case of full bottles or where the cork has lodged in the neck, after which the cork is withdrawn as described.

Further particulars relative to this invention may be obtained of Mr. M. E. Donally, No. 166 Third Avenue, New York City.

A MARKER FOR WOOD-WORKERS.

The illustration shows a machine especially designed for laying off and marking the stiles of shutters and doors and similar work, preparatory to cutting the mortises by a mortising machine, to save labor and insure accuracy in the joiner work. It has been patented by Mr. Robert G. Love, of No. 814 East Clay St., Richmond, Va. Upon the front edge of a strong framework, adapted to support dressed lumber, is fixed a stationary horizontal rail having horizontal slots in which slide markers. These markers, one of which is shown in the small figure, have toothed edges, and are fastened by a screw to a dovetail lug in a block clamped to the rail by a screw bolt passing through one of the slots, whereby the markers, of which there are a number in the rail, may be adjusted horizontally as desired. To limit the depth of cut of the marker teeth, an adjustable stop-screw is placed in each block beside the marker blade. A second movable rail similarly slotted, and provided with mark-

ers which point inward, is arranged in front of and parallel to the stationary rail, the movable rail being fastened by means of screws and tail guides to a reciprocating frame which slides upon horizontal guide rods supported at their outer ends by offsetting curved brackets. To the bottom of the frame are jointed the outer ends of curved connecting bars which at their inner ends are jointed to cranks on a rock-shaft, the latter being connected by other cranks with a vertical

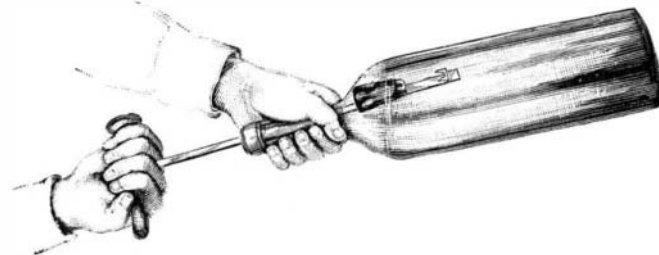


O'NEILL & REINHART'S WRENCH.

pitman jointed to a treadle. When the treadle is depressed, the reciprocating frame, carrying the front rail with its markers, is forced inward, marking upon both sides at once the piece of lumber that has been placed beneath the rails. A vertical leaf spring is arranged to force the reciprocating frame backward when the foot is removed from the treadle.

AN IMPROVED WRENCH.

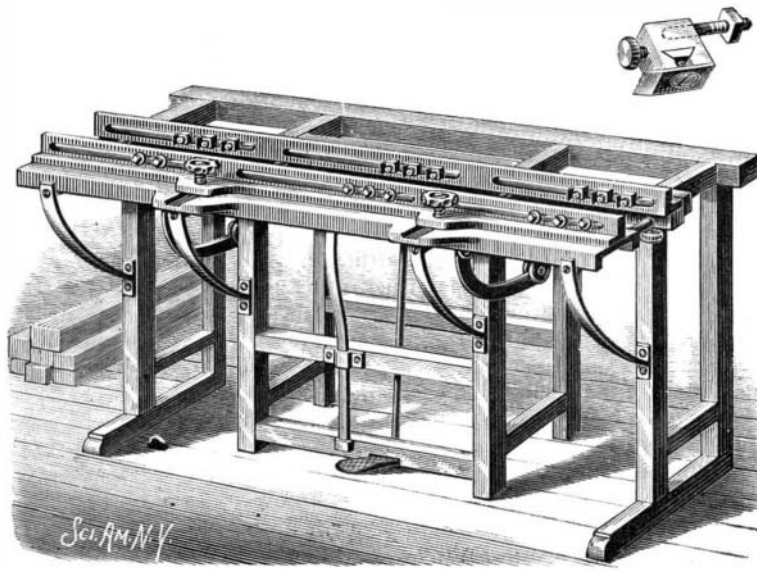
The wrench shown in the illustration, of which Fig. 1 is a view in perspective and Fig. 2 a longitudinal section, is especially adapted for use in places where working room is limited and where ordinary wrenches cannot be employed. The jaws of the wrench extend outwardly from arms adapted to slide longitudinally in suitable guideways in the head. On the opposite faces of the arms are formed racks meshing into a gear wheel, as shown in Fig. 3, which is a sectional plan view on the line, *xx*, of Fig. 2. This gear wheel is on a central shaft turning in suitable bearings, and on



TORMEY'S CORK-DRAWING DEVICE.

the portion of this shaft shown at *yy* in Fig. 2 are vertically arranged worm teeth, adapted to be engaged by a longitudinal worm wheel, as shown in the sectional view, Fig. 4. The worm wheel has milled heads, by turning which the central shaft is rotated, with the gear wheel meshing in the racks, whereby the jaws are made to approach or recede from each other.

The handle is preferably made in two parts, one part rigidly secured to the head and having side grooves engaged by pins near one end of a cylindrical part adapted to be closed over the other part and held



LOVE'S MACHINE FOR LAYING OFF WOOD-WORK.