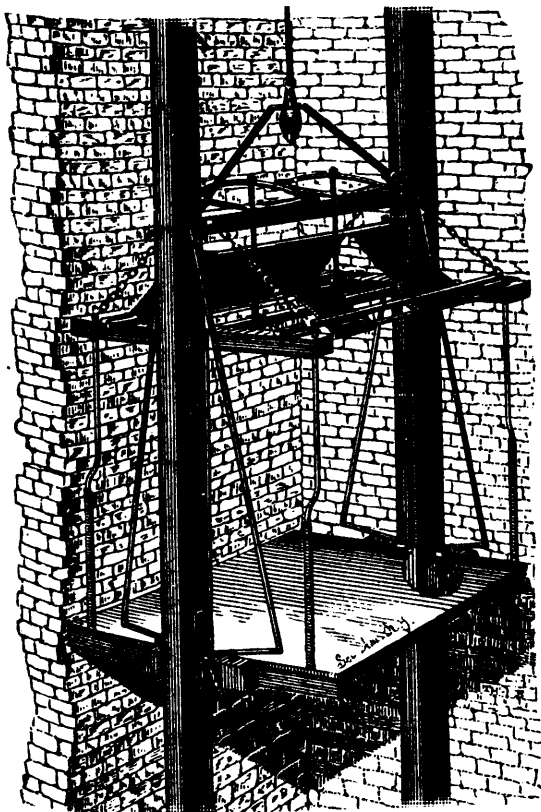


end of the hoisting cable is a V-shaped inverted hanger, upon the end of which are pivoted the ends of a bar carrying a beam. Between the ends of the beam and the bar are held clips which embrace the guide beams, and which are formed with outwardly projecting lugs. Chains are attached to clips upon the ends of this beam and to the upper ends of the corner rods. Passing through apertures in this beam are rods secured to the beam uniting the tops of the two standards; upon the upper ends of the rods are held elliptic springs. On each end of the floor a lever is pivoted, at each side of the standard, to the outer ends of which are pivoted rods whose upper ends are joined to the clips. To the inner ends of the levers are pivoted rods which



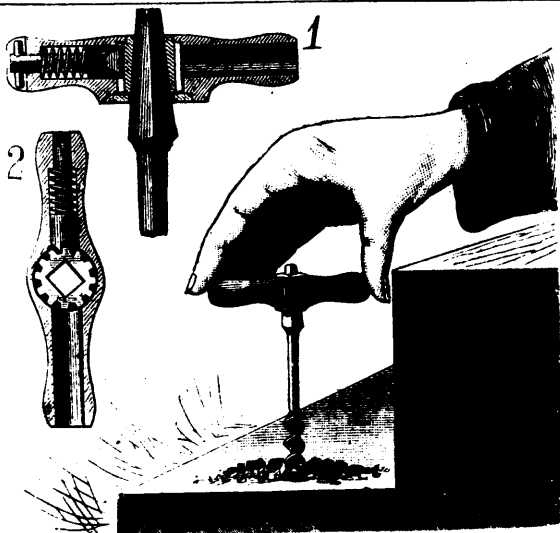
GILES' SAFETY CATCH FOR ELEVATORS.

pass through holes in wedge shaped blocks having transverse teeth formed in the faces towards the sides of the guide beams. Blocks are secured to the ends of the floor in such a manner that their beveled edges face the beveled edges of the lever blocks.

It will be seen that the cage is suspended from the spring rods, the springs being compressed. The beam carrying the springs keeps the outer end of the levers raised, and the blocks are held a short distance from the guide beams. When the cable breaks, the springs exert a downward pressure thereby forcing the beam downward, and through the rods and levers pressing the blocks against the sides of the guide beams, firmly locking the car in place.

RATCHET TOOL HANDLE.—(Ex.)

Fig. 1 is a sectional side elevation, and Fig. 2 a sectional plan view of a ratchet tool handle recently patented by Mr. Christian Hermann, of Bristol, R.I. The handle is a straight bar of suitable length formed with a recess in which is seated a ratchet sleeve having an angular aperture for passing upon the tool shank. The handle is bored lengthwise through both ends, and in one end is a sliding pawl that engages the ratchet sleeve. A spiral spring acts to move the pawl, the movement being limited by a cross pin through the outer end of the dog, than enters a groove in the handle to prevent the pawl from turning accidentally. The ratchet is held in the recess by a ring plate fitted to the under side of the handle in a manner to allow removal. The hole in the opposite end of the handle



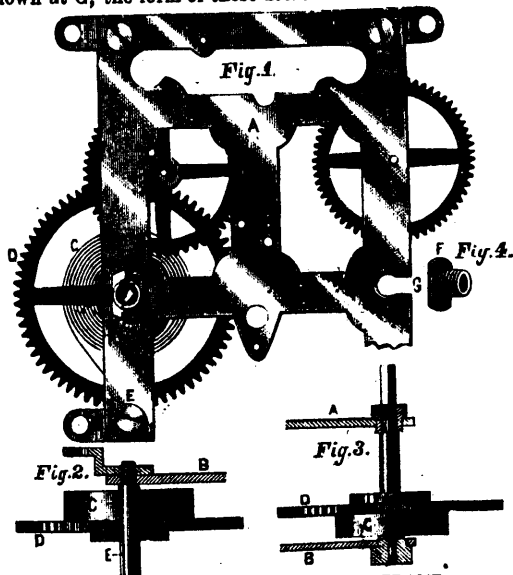
HERMANN'S RATCHET TOOL HANDLE.

permits the insertion of the dog, and can be used to receive a bar and to give greater leverage.

This handle can be readily applied to bits, screw drivers, and other tools, and by drawing back the pawl and giving it a half turn the ratchet mechanism is changed from right to left, so that the handle can be used to withdraw a boring tool or back out a screw.

AN IMPROVED CLOCK FRAME.—(Sc. Am.)

The invention herewith illustrated provides for the ready removal of the main spring or springs and main wheels of a clock without disturbing the rest of the movement, or taking it apart in case of breakage, or for necessary repair, and so they may be quickly and easily replaced. The front plate of the frame A, Fig. 1, is made with a peculiar slotted construction for a screw boss or front bearing for the arbor of the main wheel, as shown at G, the form of these detachable screw bosses being



WYKHUYSEN'S IMPROVED CLOCK FRAME.

as represented by F, Fig. 4. One main spring, C, and wheel, D, are shown opposite, fixed in place in a similar bearing. E represents the pillar or bolt of the main frame, to which the main spring is attached, and this pillar has at its rear end a screw thread adapted to screw into the back plate of the movement B, as shown in Fig. 2, although the rear bosses may be permanent attachments, as in Fig. 3. This invention has been patented by Mr. Hendrik Wykhuyzen, of Holland, Mich.