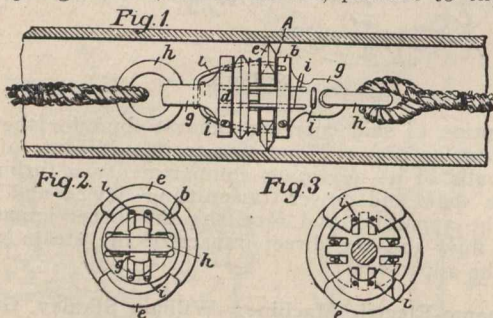


British Houses of Parliament.

## GREAT BRITAIN.

**Tube-Cleaners.**—G. Restucci, Rome, Italy.—11,160, 1906.

—This invention relates to tube-cleaners, and has for its object to provide an improved cleaning device which will remove the incrustations without damaging the tube. A further advantage of the present invention is that the device can be utilised for cleaning curved as well as straight tubes. Hitherto it has been proposed to provide devices for cleaning tubes in steam-generators and the like having bevel-edged scraping sectors, but such devices have been so constructed as to prevent their being used with any but straight tubes. According to this invention, the device comprises a series of four, six, or more bevel-edge scraping sectors *e* arranged in pairs, and each pair independently mounted upon resilient spring wires *t*, which extend, parallel to the length

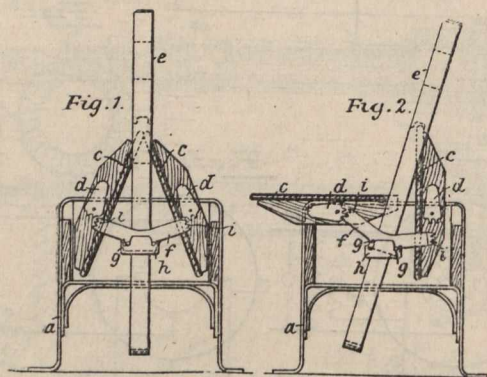


11,160.

of the device, to the end members *b*, *d*, of which they are fastened. The sectors are supported and guided entirely by the spring wires above referred to, and each independent sector yields when it meets some resistance greater than that formed by the incrustations in the tube. The device has both its ends provided with discs *b*, *d*, which have extensions in the direction of its longitudinal axis, and eyelets *g* and rings *h* to receive the ends of the ropes or wires by which the cleaner is pulled in either direction through the tubes whose inner wall it is desired to clean. The sectors are diametrically opposed to each other, and being mounted in the resilient manner described, will yield when they encounter a bend in the tube, or any obstacle which should not be removed.

**Tram-Car Seats.**—T. T. Mercer, Blackburn.—20,019, 1905.

—This invention has for its object so to construct outdoor seats that in wet weather a dry seat may be obtained. According to this invention, and as applied to a reversible tram-

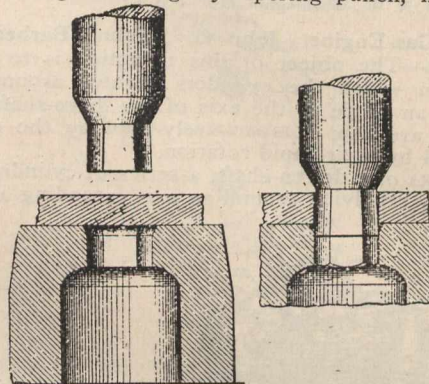


20,019.

car seat, there are two separate seats *c*, *c*, back to back, each free to tilt or rock on pivots in the seat-frame *a*, and to turn up against a back-rest *e* common to both, or to turn down and rest on the seat-frame. The back-rest, instead of being pivoted at its lower end, is pivoted at each side, and at points slightly below the level of the seats. At its lower end it is weighted, and normally assumes a vertical position. There are two pivots *g* for each side, and the pivots take their sup-

port in fixed and slotted plates *h* on the seat-frame, the pivots lying a slight distance apart, so that on moving the top of the back-rest to and fro it rocks first on one and then on the other set of pivots. The pivots are carried by V-shaped plates *f* formed with teeth *i*. Upon each seat is a quadrant *d*. Upon the back-rest *e* being moved in one direction, its motion serves to rotate one of the seats on its pivots and lower it on to the seat-frame, whilst on moving the back-rest in the opposite direction its motion serves to rotate and lower the other seat. As one seat is lowered the other remains elevated, the quadrant of the raised seat for the time being coming out of gear with the teeth in the plate. Upon letting go the back-rest, or the user rising, the balance of the back-rest serves to swing it back to the vertical, and thus cause it to raise automatically and return the seat to its former position. To protect the seats from rain when raised, the back-rest is recessed or formed with an opening, and when turned up the seats lie with their top edges within such recess or opening, any water running off the back-rest falling on to the rear faces of the seats.

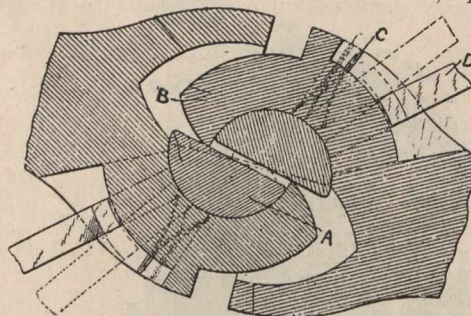
**Tools to be Used in the Manufacture of Screw Nuts.**—Mucklow.—21,201.—The improvements consist in the manufacture of nut blanks from cold steel by the use of a pair of tools, consisting of a slightly-tapering punch, having at its



21,201.

acting end the size and shape of the nuts to be made, and a die, the mouth of which is somewhat larger than the nuts to be made, the larger mouth passing by bevelled sides into the parallel sided or acting portion of the die hole.

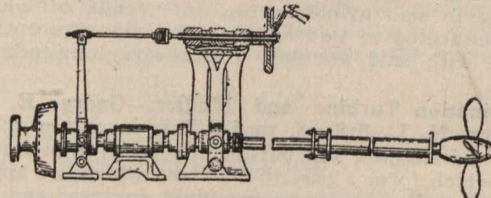
**Couplings for Vehicles that Run on Rails.**—Wade (Roth).—16,245.—The improvements consist in the combination with a rocking clutch member *a* in one half coupling of an entering coupling face *b* in the other half coupling, adapted when the halves are pressed together to first turn the rocking member and then interlock therewith, spring *c* be-



16,245.

ing provided in a recess in the coupling to normally hold the rocking member in operative position, whilst levers *d*, connected to the rocking members, serve to disengage the said members from the entering coupling faces.

**Reversing Reversible Propellers Driven by Internal Combustion Engines.**—"Gaines" Reversible Propeller Co. and Rankin.—23,638.—According to the present arrangement a reversible propeller is so connected to the engine that the propeller blades cannot be adjusted until the engine is disconnected from the propeller; to this end the reversing



23,638.

mechanism consists of a worm gearing and a hand wheel provided with a pivoted operating handle on the worm shaft, suitable means being used to connect the operating handle with the clutch.