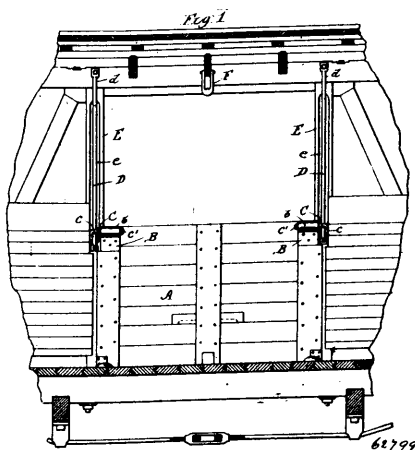


down for the major portion of the length of the upper screen, as and for the purpose specified. 9th. In a grain cleaner and separator, the combination with the lower shoe and screen suitably held in the same, of the lower supporting and vibratory bars pivoted to the bottom of the frame and the brackets pivotally connecting them to each side of the lower shoe and the bell-crank shaped hangers pivotally connected to the frame and to the shoe at the higher end thereof and the rod connected to the free end of the bell crank and extending through slots in the side of the shoes underneath the upper screen, as and for the purpose specified. 10th. In a grain cleaner and separator, the combination with the lower vibratory bars suitably pivoted and provided with slots at their upper end, of the fan shaft extending through the same and suitably driven and provided with eccentric crank pins at each end having rollers extending into slots at the upper ends of the vibratory bars, and flanges secured on each side of the rollers, as and for the purpose specified. 11th. In a grain cleaner and separator, the combination with the frame and shoes and hangers for supporting the shoes, of the lower vibratory bars provided with slots at their upper ends and deriving a rocking movement from the crank-shaft, of the upper vibratory bars having the lower bent ends extending through the slots in the lower bars and suitably pivoted on the frame and provided with slots at their upper ends and the metal straps provided with slotted ends and pins extending into the slots at the upper end of the upper vibratory bars, as and for the purpose specified.

No. 62,799. Door for Railway Cars.

(*Porte pour chars de chemin de fer.*)



The Chicago Grain Door Co., assignee of Edward A. Hill, all of Chicago, Illinois, U.S.A., 6th March, 1899; 6 years. (Filed 4th February, 1899.)

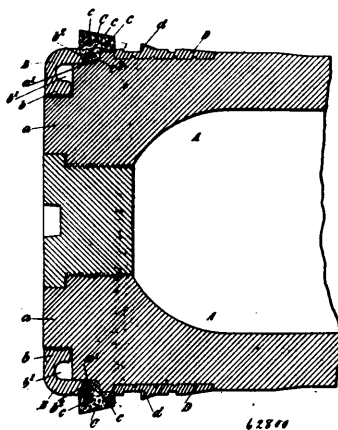
Claim.—1st. The combination with a door, and the door-posts provided with grooves, of guide rods secured in said grooves, socket-plates on the door, and pivot pins provided with eyes adapted to receive the guide rods, said pivot pins being loosely secured in the sockets of the socket plates and having a limited play laterally of the door, substantially as described. 2nd. The combination with a grain door and door posts provided with grooves therein, of guide rods secured in the said door posts, plates secured on the door and provided with sockets, and pivot pins loosely arranged in said sockets, and looped to form eyes at their outer ends and adapted to surround the guide rods and operate vertically on said rods and in the grooves in the door posts, substantially as described. 3rd. The combination with a door, of vertical guide rods secured on each side thereof, socket plates on the upper corners of the door, pivot pins thereof, arranged in said sockets so that the pins may have a limited lateral play, said pins being provided on their outer ends with eyes adapted to loosely surround the guide rods, substantially as described.

No. 62,800. Projectile. (*Projectiles.*)

Vickers Sons and Maxim, Limited, 32 Victoria street, assignee of Chevalier Hiram S. Maxim and Lieutenant Arthur Trevor Dawson, both of 28 Victoria street, London, England, 6th March, 1899; 6 years. (Filed 25th November, 1898.)

Claim.—1st. In a projectile, the combination of a gas-check consisting of wire-coils embedded in a plastic substance which is moulded under pressure to the required shape and of an annular base-piece adapted to compress said gas check on the firing of the gun, substantially as described. 2nd. In a projectile, the combination of a gas-check consisting of wire coils embedded in a plastic substance which is moulded under pressure to the required shape and covered with metal, of an annular base-piece mounted on a boss at the base of the projectile and adapted to compress said gas check on the firing of

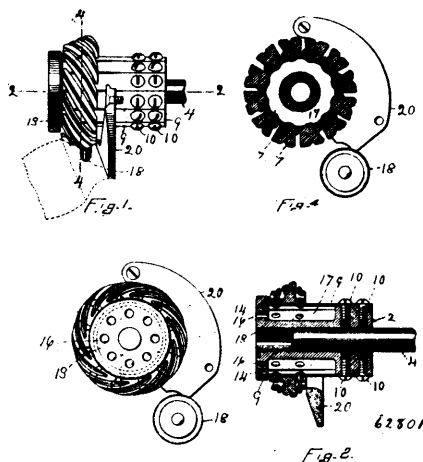
the gun, and of a driving band, substantially as described. 3rd. In a projectile, the combination of a gas check consisting of wire coils



embedded in a plastic substance composed of asbestos saturated with a mixture of wax and plumbago which is moulded under pressure to the required shape and covered with metal on its exposed surfaces, of an annular dished base-piece mounted on a boss at the base of the projectile with its peripheral portion contiguous to said gas check so as to compress the latter on the firing of the gun, and of a driving band, substantially as described. 4th. In a projectile, the combination with a gas check of an annular base piece loosely mounted on a boss at the base of the projectile and adapted to slide thereon and compress said gas check on the firing of the gun, substantially as described. 5th. In a projectile, the combination with a gas check and an annular base piece for compressing said gas check on the firing of the gun, of a driving band having at a point in front of said gas check, an annular flange, substantially as and for the purpose described. 6th. In a projectile, the combination with a gas check and an annular base piece for compressing said gas check on the firing of the gun, of a driving band having, at a point in front of said gas check, a serrated annular flange, substantially as described.

No. 62,801. Heel Finishing Machine.

(*Machine à finir les talons.*)



The Expedite Machine Co., Lynn, Massachusetts, assignee of Zotique Beaudry, of Lynn aforesaid, 6th March, 1899; 6 years. (Filed 9th February, 1899.)

Claim.—1st. A tool of the character indicated, comprising, in combination, a carrier, a plurality of work-members having each an outer oblique working face, and means carried by the carrier, holding the work-members in series one after another, with the working faces disposed outwardly, each of the said working faces being in position with its longitudinal axis oblique to the line of its working movement, and the combination adapted for yielding to permit the work-members to be moved inwardly, during operation, for shifting the plane of the working face, substantially as described. 2nd. A tool of the character indicated, comprising, in combination, a carrier, a plurality of work-members having each an outer working face, and means carried by the carrier, hold the work-members in circular series with the working faces disposed outwardly and forming collectively an approximately circular circumferential plane, each