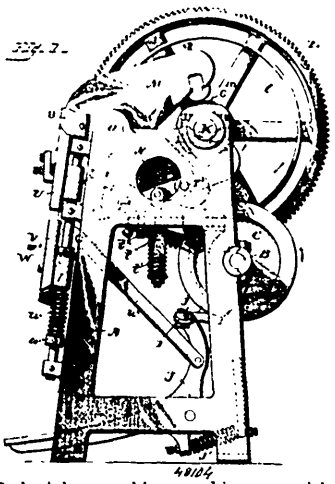
devices and provided with punching, rivet-holding and riveting instrumentalities, and mechanism for automatically actuating the said mechanisms, and moving the parts to successively bring the punching, rivet holding and riveting instrumentalities in operative relation to the overlapping ends of the hoop-iron, substantially as



described. 2nd. A hoop-making machine comprising a former to shape the hoop-iron about, gripping devices to hold the overlapping ends of the hoop-iron, movable die-plates provided with punching, rivet-holding and riveting mechanism, jaws to press the die plates together, and mechanism for independently and automatically actuating the jaws and moving the said die-plates to successively bring the punching, rivet-holding and riveting mechanism into proper relation with the overlapping ends of the hoop-iron, substantially as described. 3rd. A hoop-making machine comprising a former, to shape the hoop iron about, gripping devices to hold the overlapping ends of the hoop iron, jaws, movable die-plates carried by the said jaws and provided with the punching, rivet-holding, and riveting devices, mechanism for automatically opening and closing the said jaws, and independent mechanism for automatically moving the said die plates relative to the jaws to successively bring the punching, rivet-holding and riveting devices into proper relation with the over lapping ends of the hoop iron, substantially as set forth. 4th. A hoop making machine comprising a former, to shape the hoop iron about, gripping devices to hold the over-lapping ends of the hoop iron, jaws having ribs on their opposing sides, die plates provided with rearwardly projecting rods which are mounted in the said ribs, and mechanism for opening and closing the jaws and moving the said rods longitudinally in the said ribs, substantially as and for the purpose described. 5th. In a hoop making machine comprising a former, to shape the hoop iron about, gripping devices to hold the over lapping ends of the hoop irons, jaws having ribs on their opposing sides, die plates provided with rearwardly projecting rods which are mounted in the said ribs, springs mounted on the said rods and confined between stops thereon and the said ribs of the jaws, and the mechanism for opening and closing the jaws and independently moving the said rods forward against the tention of the said springs, substantially as described. 6th. In a hoop making machine, the combination with jaws, one of the jaws having an opening for the passage of the rivet forming wire, and a wire feeding mechanism carried by the said apertured jaw, of die plates located between the said jaws and pressed together thereby, and mechanism for moving the said die plates between the said jaws, whereby a portion of the wire is cut-off sufficient to form a rivet, substantially as set forth. 7th. In a hoop making machine, the combination with jaws, one of the jaws having an opening for the passage of the rivet forming wire, and a wire feeding mechanism carried by the said apertured jaw, and consisting of two grooved rollers geared to revolve together, and mechanism for actuating the said rollers, of die plates located between the said jaws and pressed together thereby, and mechanism for moving the said die plates between the said jaws, whereby a portion of the wire is cut-off sufficient to form a rivet, substantially as set forth. 8th. In a hoop making machine, a combination with jaws having an opening for the passage of the rivet forming wire, and a wire feeding mechanism carried by the said apertured jaw, and consisting of grooved rollers of the plate T, loosely mounted on the journal of one of the rollers, the disc S, the pawl S^1, pivoted to the plate T, and having spring s^1, and biting edge s, and means for actuating the said pawl to operate the said rollers, substantially as described. 9th. In a hoop making machine, the combination with jaws, one of the jaws having an opening for the passage of the rivet forming wire, and a wire feeding mechanism carried by the said apertured jaw, and consisting of grooved rollers of the plate T, loosely mounted on the journal of one of the rollers, the disc S, the pawl S^1, pivoted to the plate T, and having spring s^1, and butting edges, the lever T^2, mounted between its ends on a spring actuated rod t, and connected at one end with the pawl S^1, and adapted to have its other end actuated by a cam, and an adjustable stop t^2, substantially as and for the purpose described. 10th. In a hoop making machine, a combination of gripping devices to clamp the over-lapping ends of the hoop iron, two formers and mechanism for separating the said formers to stretch the hoop, substantially as described. 11th. In a hoop making machine, the combination with the jaws S, and the formers, of mechanism for moving the formers to clamp the hoop between the jaws and the upper former, and separate the said formers, substantially as described. 12th. In a hoop making machine, the combination of the jaws S, guide rods, formers mounted on the said guide rods, springs to support the said formers on the guide rods, and mechanism to separate the formers and press them against the jaws S, against the tention of the said springs, substantially as described. 13th. In a hoop making machine, the combination, with gripping devices to clamp the over-lapping ends of the hoop iron, the formers, and mechanism for separating the formers to stretch the hoop, of an adjusting mechanism to adjust the relative distance apart of the said formers, substantially as and for the purpose described. 14th. In a hoop making machine, the combination, with gripping devices to clamp the over-lapping ends of the hoop iron, the formers, and the treadle, of toggle levers connecting the formers to effect a separation thereof to stretch the hoop and a rod connecting the said toggle levers with the treadle, substantially as set forth. 15th. In a hoop making machine, the combination, with the former for shaping the hoop, jaws for gripping the ends of the hoop, shaft K provided with cams for actuating the said jaws, gear wheel L, secured on shaft K, and provided with rim l, having depressions l^1, and the shaft B, having pinion D, in mesh with gear wheel L, of a continuously driven pulley C, mounted on shaft B, a pawl E constructed to interlock and normally hold out of engagement with the said pulley, and a trip for releasing the said pawl to permit it to engage with the said pulley to start the machinery, and having one end constructed to travel on the said rim l, substantially as and for the purpose specified. 16th. In a hoop making machine, the combination, with the former for shaping the hoop, jaws for gripping the ends of the hoop, shaft K provided with cams for actuating the said jaws, gear wheel L, secured on the shaft K, and provided with rim l, having depressions l^1, and the shaft B, having pinion D, in mesh with gear wheel L, of a continuously driven pulley C, mounted on shaft B, a pawl E constructed to interlock and normally held out of engagement with the said pulleys, and a trip for releasing the said pawl having a cam edge f^2 to engage with said pawl, and having a lateral extension f^3 inclined on its outer edge to be engaged by the treadle, and having a horizontal arm f, to engage with the said rim l, substantially as described and for the purpose specified. 17th. In a hoop making machine, the combination, with the former for shaping the hoop, jaws for gripping the ends of the hoop, shaft K provided with cams for actuating the said jaws, gear wheel L, secured on shaft K, and provided with rim l, having depression l^1, and the shaft B, having pinion D, in mesh with gear wheel L, of a continuously driven pulley C, mounted on the shaft B, a pawl E constructed to interlock and normally held out of engagement with the said pulley, a sleeve d keyed on said shaft B, and having a lateral extention, a pawl E pivoted to the said lateral extention and adapted to interlock with the pulley C, and a trip for releasing the said pawl having a cam edge f^2 to engage with the said pawl, and having a lateral extension f^3, inclined on its outer edge to be engaged by the treadle, and having a horizontal arm f, to engage with the said rim l, substantially as and for the purpose described. 18th. In a hoop making machine the combination with the former for shaping the hoop, jaws for gripping the ends of the hoop, shaft K, provided with cams for actuating the said jaws, gear wheel L, secured on shaft K, and provided with rim l, having depressions l^1, and the shaft B, having pinion D, in mesh with gear wheel L, of a continuously driven pulley C, mounted on shaft B, a pawl E, constructed to interlock and normally held out of engagement with the said pulley, a trip for releasing the said pawl having a cam edge f^2, to engage with the pawl, and having a lateral extension f^3, inclined on its outer edge and a treadle having a pivoted arm j, to engage with the inclined edge of the said lateral extension f^3, substantially as described and for the purpose specified. 19th. In a hoop making machine the combination of the jaws S, guide rods, formers mounted on the said guide rods, a cross head 7, springs mounted on the said guide rods, collars w^1 and w^2, and actuating mechanism for separating the formers and pressing the upper former against the said jaws S, substantially as described. 20th. In an organized machine for making hoops, the combination with the rivet wire feeding mechanism, of the lever T^2, pivoted between its ends and carrying a pawl at one end to actuate the said feeding mechanism, and adapted to be operated on at the other end by a cam, an adjustable stop t^2, and a spring for returning the said lever to a normal position after being actuated, substantially as described.

No. 18,105. Burglar Alarm. (*Avertisseur de voleur.*)

Robert S. Hodgins, Lucan, Ontario, Canada, 2nd February, 1895; 6 years.

Claim.- 1st. A body A, in which the openings B, C, and recess G are formed, said openings B being fitted to receive and hold a cartridge, and means for securing said body to any suitable support,