

felt strip into a mortise, a conductor for delivering steam upon the said felt strip, reciprocating mechanism for cutting from said strip the portion in said mortise and pressing said portion against the walls of said mortise, and a centering pin for centering said mortise, substantially as shown and described. 19th. In a machine for bushing mortises, the combination of duplex intermittent mechanism for feeding felt into a mortise, and a conductor for delivering steam upon the said felt, substantially as shown and described. 20th. In a machine for bushing mortises, the combination of duplex intermittent mechanism for feeding the ends of felt strips into a mortise, and reciprocating mechanism for cutting from said strip the portions thereof, in said mortise, substantially as shown and described. 21st. In a machine for bushing mortises, the combination of duplex mechanism for feeding the ends of felt strips into a mortise, and a reciprocating plug for entering said mortise, between said strips to press the latter against the walls of said mortise, substantially as shown and described. 22nd. In a machine for bushing mortises, the combination with means for feeding felt into a mortise, of an inclined bed for supporting the article containing the mortise and an inclined nozzle having a steam outlet at its higher end and a water outlet at its lower end, substantially as shown and described. 23rd. In a machine for bushing mortises, the combination with means for feeding felt into a mortise, of an inclined bed for supporting the article containing the mortise and an inclined nozzle having a steam outlet at its higher end and a water outlet at its lower end, and means for centering said mortise, substantially as shown and described. 24th. In a machine for bushing mortises, the combination of the inclined bed A, arched arm A¹ rising from said bed, the felt feeding mechanism supported by said arm, and the inclined double ended steam nozzle arranged with its higher end directed toward the position of the mortise to be bushed, substantially as shown and described. 25th. In a machine for bushing mortises, the combination of the inclined bed A, arched arm A¹ rising from said bed, the felt feeding mechanism supported by said arm, and the inclined double ended steam nozzle arranged with its higher end directed toward the position of the mortise to be bushed, and means for centering said mortises, substantially as shown and described. 26th. In a machine for bushing mortises, the combination of the inclined bed A, arched arm A¹ rising from said bed, the felt feeding mechanism supported by said arm, and the inclined double ended steam nozzle arranged with its higher end directed toward the position of the mortise to be bushed, and a centering pin for entering the lower end of said mortise, substantially as shown and described. 27th. In a machine for bushing mortises, the combination of the inclined bed A, arched arm A¹ rising from said bed, the felt feeding mechanism supported by said arm, and the inclined double ended steam nozzle arranged with its higher end directed toward the position of the mortise to be bushed, and a reciprocating centering pin, substantially as shown and described. 28th. In a machine for bushing mortises, the combination, with a suitable support for the article containing the mortise, of feeding mechanism containing guides and feed wheels for intermittently moving the strips of felt along said guides into the mortises, substantially as shown and described. 29th. In a machine for bushing mortises, the combination of means for supporting the article containing the mortises, a driving shaft and intermittent felt feeding mechanism suitably connected with said driving shaft, substantially as shown and described. 30th. In a machine for bushing mortises, the combination of means for supporting the article containing the mortises, a driving shaft and intermittent felt feeding mechanism suitably connected with said driving shaft, and a plunger arranged to follow said felt and also suitably connected with said driving shaft, substantially as shown and described. 31st. In a machine for bushing mortises, means for supporting the article containing the mortises, a driving shaft, intermittent felt feeding mechanism suitably connected with said driving shaft, and a reciprocating centering pin also suitably connected with said driving shaft, substantially as shown and described. 32nd. In a machine for bushing mortises, means for supporting the article containing the mortises, a driving shaft, intermittent felt feeding mechanism suitably connected with said driving shaft, and a reciprocating centering pin also suitably connected with said driving shaft, and a plunger arranged to follow said felt and also suitably connected with said driving shaft, substantially as shown and described. 33rd. In a machine for bushing mortises, the combination, of means for supporting the article containing the mortises, a driving shaft, intermittent felt feeding mechanism suitably connected with said driving shaft, a valved steam delivery mechanism having its valve suitably connected with said driving shaft, substantially as shown and described. 34th. In a machine for bushing mortises, means for supporting the article to be mortised, a driving shaft, intermittent felt feeding mechanism, valved steam delivery mechanism having its valve suitably connected with said driving shaft, and a plunger arranged to follow said felt and being also suitably connected with said driving shaft, substantially as shown and described. 35th. In a machine for bushing mortises, the combination, of the bed A, arched arm A¹ rising from said bed, driving shaft A², supported by said bed and having cams, intermittent felt feeding mechanism supported by said cam A¹, and suitable parts leading from said feeding mechanism to said cams, substantially as shown and described. 36th. In a machine for bushing mortises, the combination, of the bed A, arched arm A¹ rising from said bed, driving shaft A², supported by said bed and having cams, intermittent felt feeding mechanism supported by said arm A¹, and

suitable parts leading from said feeding mechanism to said cams, and a plunger arranged to follow the felt and suitable parts connecting said plunger with said cams, substantially as shown and described. 37th. In a machine for bushing mortises, the combination, of the bed A, arched arm A¹ rising from said bed, driving shaft A², supported by said bed and having cams, intermittent felt feeding mechanism supported by said cam A¹, and suitable parts leading from said feeding mechanism to said cams, and a plunger arranged to follow the felt and suitable parts connecting said plunger with said cams, and valved steam delivery mechanism supported by said arm and suitable parts connecting the valve of said steam delivery mechanism with said cams, substantially as shown and described. 38th. In a machine for bushing mortises, the combination of the bed A, shaft A² supported by said bed and having cams, intermittent felt feeding mechanism supported by said bed, suitable parts connecting said felt feeding mechanism with said cams, and a reciprocating centering pin and suitable parts connecting said centering pin with said cams, substantially as shown and described. 39th. In a machine for bushing mortises, the combination of means for supporting the article containing the mortises, guide plates directed toward the position for the mortise to be operated upon, a feed wheel leading into the path formed by said guides, and means for intermittently turning said wheel, substantially as shown and described. 40th. In a machine for bushing mortises, the combination of the reciprocating guides and feed wheels and stationary dogs for intermittently turning said feed wheels, substantially as shown and described. 41st. In a machine for bushing mortises, the combination, with the arm A¹, of a reciprocating yoke D, feed mechanism supported by said yoke, and stationary dogs for intermittently operating said feed mechanism, substantially as shown and described. 42nd. In a machine for bushing mortises, the reciprocating feed mechanism having a yielding connection with the driving mechanism, and a plunger having an unyielding connection with the driving mechanism, substantially as shown and described. 43rd. In a machine for bushing mortises, the combination, with suitable driving mechanism, of a plunger C supporting knives C², and a plug C¹ located between said knives, substantially as shown and described. 44th. In a machine for bushing mortises, a plunger C embodying knives C², and an adjustable plug C¹ located between said knives, substantially as shown and described.

No. 40,818. Rocket. (Fusée.)

Patrick Cunningham, New Bedford, Massachusetts, U.S.A., 2nd November, 1892; 6 years.

Claim.—1st. The combination, with the charge carrying tube of a rocket, of a line carrying tube attached to and supported by the base of the same, said line carrying tube tapering at its forward end toward the point of connection, as set forth. 2nd. The combination, of a metal rocket case, a metal choke, a metal fuse piece having a central conical deflector formed integral with said fuse piece, and a surrounding series of diverging vents opening on the rear surface of the fuse piece. 3rd. The combination, with the explosive carrying tube provided with a perforated disc D at its rear end, of a line carrying tube attached to said disc and entirely in the rear of the same, substantially as set forth. 4th. A line carrying rocket charge, the base of the head being provided with an external screw threaded projection, in combination with a carrying tube having a tapering head engaging with said screw threaded projection, as set forth, and containing a coiled line to be paid out as the rocket passes through the air, substantially as shown and described. 5th. The combination, with the firing head, of a hollow line carrying tube, said tube being substantially the same diameter as the head, and being connected with said head at the centre of the base thereof, the extremity of the carrying tube next to the firing head tapering at an angle nearly coincident with the vents for the propelling gases in the base of said head, substantially as shown and described. 6th. In a rocket of the character herein specified, a hollow line carrying tube forming the tail of the rocket, said tube consisting of a body H, screw threaded at g, for engaging with a tapering cap G, cap G, provided with internal cross bar G¹, said cap having a screw threaded perforation therein for engaging with the projection from the base of the head carrying the firing charge, substantially as shown and described. 7th. The combination, with the body A, carrying the firing charge, of the plug D, having perforations d passing therethrough at an angle to its axis, external screw threaded projection E, and the line carrying tube engaging with said projection, substantially as shown and described. 8th. The combination, of an explosive carrying tube, a line carrying tube attached thereto, a line located within said latter tube, and a non-conducting jacket or casing between said line carrying tube and said line, for the purpose set forth. 9th. A primer for rockets, or equivalent devices, consisting of a tube for containing fulminate and powder, and means for igniting the same, said tube having an offset, button or washer for engaging with the interior of a fuse piece, substantially as shown and described. 10th. A primer for rockets, provided with means near its inner end for engaging with a fuse piece. 11th. The combination, with the fuse piece of a rocket, of a primer tube provided with an engaging washer or button near its inner extremity, and a cork, or its equivalent, for removably holding the primer in place, substantially as shown and described. 12th. The combination, with the fuse piece of a rocket, of a primer for firing the same. 13th. A combined holding box and firing chute for rockets, substantially as