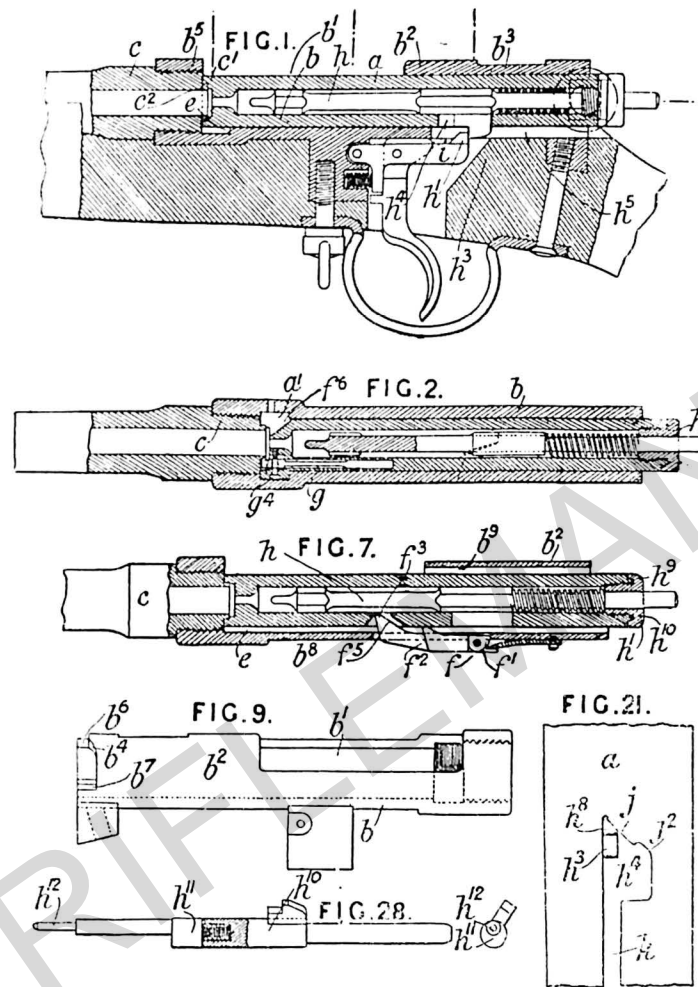


Breech actions, sliding breech-block; cocking-appliances generally applicable. —Relates to bolt-action rifles, the features of the invention being (1) to provide a bolt action which can readily be modified during manufacture for use with ammunition of any length or calibre, (2) to facilitate loading the cartridges direct into the barrel chamber by hand, (3) to adapt bolt-action rifles so that an aperture sight can be fitted in the most effective position without liability of the fouling of the sight by the bolt or bolt handles. The bolt *a*, Fig. 1, is preferably of the forward resistance-lug type, and is mounted in a body *b* which is provided with a loading-aperture *b*<sup>1</sup> of such dimensions that a hood-like portion *b*<sup>2</sup> is left to form a guide for the bolt. The part *b*<sup>3</sup> receives the sight, and the rear-most edge of the hood is shaped at *b*<sup>4</sup>, Fig. 9, to form the first extraction cam, and also to form shoulders *b*<sup>6</sup>, *b*<sup>7</sup> which limit the rotary locking and unlocking movements of the bolt. The front end *b*<sup>5</sup> of the loading aperture is substantially flush with the breech face *c*<sup>1</sup> of the barrel to facilitate loading by hand. A circumferential groove *e* receives the bolt lugs *a*<sup>1</sup>, Fig. 2; the face of the bolt is recessed to receive an annular projection *c*<sup>2</sup> on the barrel breech-face and also to receive the flange of the cartridge in order to make a gas-tight joint. To guide the bolt in its rectilinear motion, and also to facilitate its movement when desired, an open-ended groove *b*<sup>8</sup>, Fig. 7, along the bottom of the body extends into the recess *e*, and a similar groove *b*<sup>9</sup> is cut in the upper rear part *b*<sup>3</sup> of the body, the lugs *a*<sup>1</sup> being in alinement with these grooves only in the unlocked position. The bolt is secured within the body by means of a known type of combined bolt latch *f*, which also serves as a gas check to prevent rearward escape of gases. The present device consists of a spring limb pivoted at *f*<sup>1</sup> and having the



parts *f*<sup>2</sup>, *f*<sup>3</sup> serving respectively as the bolt-stop and ejector. An incline *f*<sup>6</sup>, Fig. 2, on the bolt engages a corresponding incline *f*<sup>5</sup> on the ejector to depress the ejector when the bolt is to be moved into the locking position. The claw end of the extractor *g* is fitted within one of the lugs *a*<sup>1</sup>, and is slotted to receive a screw *g*<sup>4</sup>. For centre-fire cartridges, the striker *h* is arranged axially within the bolt, and the rear end is supported in a screw cap *h*<sup>1</sup>. A projection *h*<sup>3</sup> on the striker extends through an aperture *h*<sup>4</sup> and serves as an abutment

upon which the cocking-cam acts when the bolt is rotated, as a feather moving in a slot *h*<sup>5</sup> for slidably connecting the striker to the body and preventing rotation of the striker, and also as a bent lug with which the sear *i* of the firing-mechanism engages. The cocking-cam is constituted by joining the front end of the aperture *h*<sup>4</sup> in the bolt walls as an incline *j*, Fig. 21, so that, as the bolt is rotated from right to left for unlocking, the striker is placed at half cock and secured to the bolt by means of the engagement of the nose *h*<sup>8</sup> of the projection *h*<sup>3</sup> with the notch *j*<sup>2</sup> in the bolt, and the striker spring is partly compressed. If the bolt is not fully locked at the time of disengaging the sear *i* from the projection *h*<sup>3</sup>, the locking is completed, before the striker actually fires the cartridge, by the nose *h*<sup>8</sup> acting upon the incline *j* in returning to the position shown in Fig. 21. The cocking-cam on the bolt and the first extraction cam on the end of the part *b*<sup>2</sup> of the body are preferably so arranged that the cocking-cam acts in advance of the extraction cam, and the former cam is of considerably quicker pitch than the latter. The slotted end of the bolt is strengthened by means of the cap *h*<sup>1</sup>, Fig. 7, being provided with an annular groove *h*<sup>9</sup> to receive the part *h*<sup>10</sup> of the bolt, which is shaped to correspond. The slot *h* is also prevented from closing. For rim-fire bullet cartridges, the striker body *h*<sup>10</sup>, Fig. 28, is provided with a head *h*<sup>11</sup> having an eccentric pin *h*<sup>12</sup> at its extremity, a corresponding eccentric hole being provided in the bolt head. The invention is also applicable to magazine fire-arms. Specification No. 9437, A.D. 1906, is referred to.