No. 837,601. PATENTED DEC. 4, 1906.

B. BEHR.

CUSHIONED STOCK FOR FIREARMS.

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Fig. 1.

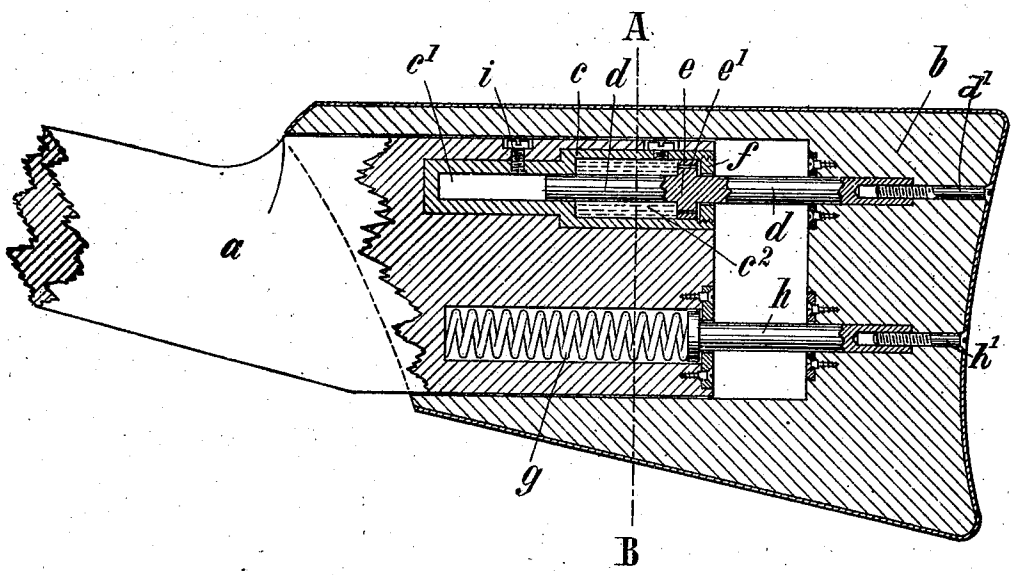
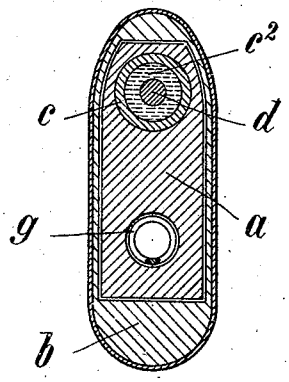


Fig. 2.



Witnesses.

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BURKARD BEHR, OF HAMBURG, GERMANY.

CUSHIONED STOCK FOR FIREARMS.

No. 837,601. Specification of Letters Patent. Patented Dec. 4, 1906.

Application filed November 27, 1905. Serial No. 289,284.

To all whom it may concern:

Be it known that I, BURKARD BEHR, a subject of the German Emperor, and a resident of Hamburg, in the German Empire, have invented certain new and useful Improvements in Cushioned Stocks for Firearms, of which the following is a specification.

The present invention relates to improvements in small-arms, and more particularly refers to a recoil-brake in such arms.

Small-arms are already known in which the butt of the gun is arranged upon the end of the stock in such a manner as to be longitudinally displaceable, springs being interposed between the two parts for absorbing the recoil.

In accordance with the present invention the springs are replaced by an air-brake, by which means a far more reliable and uniform and especially a readily-adjustable braking action is obtained. Preferably the air-brake is combined with a liquid-brake, with which construction the dimensions of the pressure-faces may be kept within very small limits. A recoil-brake of this construction is illustrated in the accompanying drawings, in which—

Figure 1 represents a longitudinal section through the butt of a rifle, and Fig. 2 is a section on the line A B.

The butt *b* is passed upon the end of the stock *a* in such a manner as to be displaceable in the longitudinal direction. A metal cylinder *c* is inserted in the end of the stock, where it is held by the screw *i*. The cylinder *c* is of smaller diameter at its front portion *c'* than at its rear part c^2. In this cylinder there engages a piston *d*, fixed in the butt *b*, the diameter of this piston substantially corresponding with the bore of the cylindrical portion *c'*, while it is provided with a flange-like projection *e*, forming a piston for the part c^2. The part *e* is provided with fine passages *e'*. The rear end of the cylindrical part c^2 is obturated by the bottom piece *f*, screwed therein. A spring *g* is also provided in the stock *a*, and in rear of this spring a sliding plunger or bolt *h* is fixed in the butt *b*. The cylindrical part c^2 is filled with a liquid, such as oil, glycerin, or the like.

When the weapon is fired, the recoil produces the backward movement of the stock *a*, which moves in the butt *b*, which is firmly held, so that the cylindrical part *c'* is forced against the stationary plunger *d*, and the air contained in *c'*, affording an elastic cushion or resistance, is compressed, while the liquid contained in c^2 is forced through the openings *e'* of the collar or flange *e* and into the space between *e* and *f*, the air and liquid brakes thereby completely absorbing the recoil. The spring *g* is at the same time compressed, and toward the completion of the recoil it again presses the stock forward into the position represented in the drawings. The rear end of the piston *d* and of the plunger *h* are fixed in the butt *b* by means of screws *d' h'* in such a manner that the position of the piston *d* in the brake-cylinder *c* and the tension of the spring *g* may be regulated in accordance with requirements by turning these screws.

Having fully described my invention, what I claim, and desire to secure by Letters Patent, is—

1. In a firearm, the combination with the stock and butt movable relatively to each other; of a liquid-containing member, and means interposed between the stock and butt to displace and to retain the liquid in said member, for the purpose specified.

2. In a firearm, the combination with the stock and butt movable relatively to each other; of a liquid and air containing cylinder, a piston in said cylinder interposed between the stock and butt adapted to compress the air, and means on the piston to displace the liquid in the cylinder.

3. In a firearm, the combination with the stock and butt movable relatively to each other and a differential cylinder for air and liquid in said stock; of a differential piston on the butt, the portion of said piston of greater diameter provided with perforations, for the purpose set forth.

4. In a firearm, the combination with the stock and butt movable relatively to each other and a differential cylinder for air and liquid in said stock; of a differential piston on the butt adjustable relatively to the cylinder and having its portion of greater diameter provided with perforations, for the purpose set forth.

5. In a firearm, the combination with the stock and butt movable relatively to each other; of a liquid and gas containing cylinder, a piston interposed between the stock and butt adapted to compress the gas and displace the liquid in the cylinder, and means to move the butt into normal position relatively to the stock after said compression and displacement.

6. In a firearm, the combination with the stock and butt movable relatively to each other; of a differential cylinder in said stock for air and a liquid, a second cylinder or bore in said stock and a coiled spring contained therein; of a differential piston on the butt working in said differential cylinder and having its portion of greater diameter provided with perforations, and a second piston fitting the second cylinder or bore in the stock and acted on by the aforesaid spring, both said pistons adjustable relatively to their cylinders, substantially as and for the purpose set forth.

BURKARD BEHR.

Witnesses:
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IDA CHRIST. HAFERMANN.