

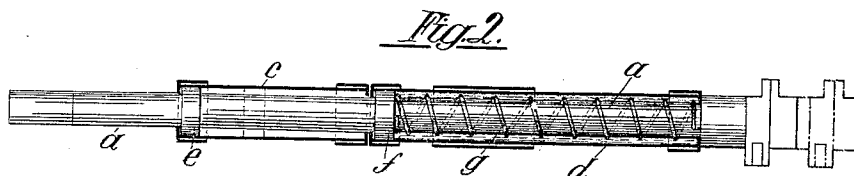
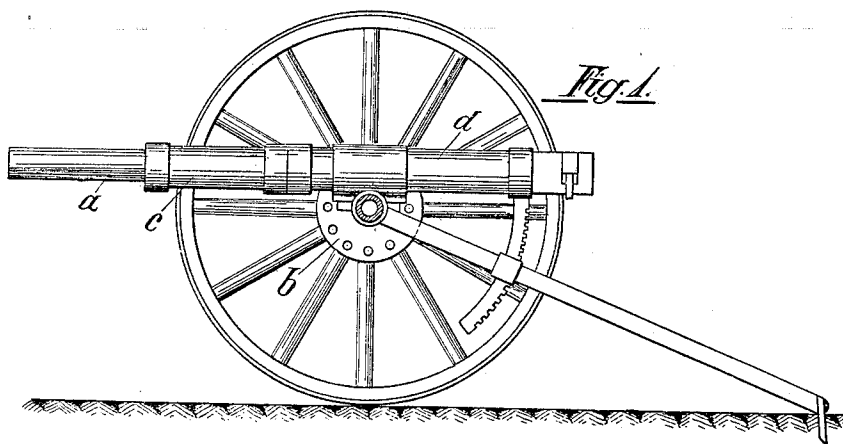
No. 829,939.

PATENTED SEPT. 4, 1906.

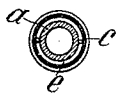
B. BEHR.

MEANS FOR ABSORBING RECOIL IN CANNONS, GUNS, AND THE LIKE.

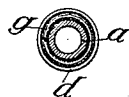
APPLICATION FILED OCT. 21, 1905.



*Fig. 3.*



*Fig. 4.*



Witnesses  
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# UNITED STATES PATENT OFFICE.

BURKARD BEHR, OF HAMBURG, GERMANY.

## MEANS FOR ABSORBING RECOIL IN CANNON, GUNS, AND THE LIKE.

No. 829,939.

Specification of Letters Patent.

Patented Sept. 4, 1906.

Application filed October 21, 1905. Serial No. 283,762.

*To all whom it may concern:*

Be it known that I, BURKARD BEHR, a citizen of the German Empire, residing at Hamburg, in the State of Hamburg, Germany, have invented certain new and useful Improvements in Means for Absorbing Recoil in Cannons, Guns, and the Like, of which the following is a description, reference being had to the accompanying drawings, and to the letters of reference marked thereon.

This invention relates to devices of that class employed for absorbing the recoil of ordnance, and has for its principal object to provide a novel construction of mechanism of this type wherein a pair of cylinders, one filled with air and the other with liquid, are employed in connection with a pair of pistons mounted on the barrel of the gun.

The present invention is illustrated in the accompanying drawings, in which—

Figure 1 is a side view of a cannon fitted with the braking device described in the present invention, one wheel and the parts which are immaterial to the invention being assumed to be removed. Fig. 2 is a longitudinal section of the braking device. Figs. 3 and 4 are sections of the two cylinders.

The cylinders *c* and *d*, which are immovably secured to the mount, are arranged around the barrel *a* of the gun *b*, each cylinder concentric to said barrel, in which cylin-

ders the barrel *a* is longitudinally movable. In order to obtain the braking action, a suitable piston *e* is mounted on barrel *a* inside the cylinder *c* and in like manner a similar piston *f* in the cylinder *d*. The cylinder *e* exerts a pneumatic action on the recoil and contains air, while the cylinder *d* is filled with water and acts as a hydraulic brake. The pistons *e* and *f* are suitably provided with perforations through which a portion of the braking fluid passes behind the respective pistons. A spring *g* is provided in one of the cylinders for returning the barrel, so that after each shot the barrel comes again into its original position.

I claim—

A hydropneumatic recoil mechanism for ordnance, comprising a pair of spaced pistons secured to the barrel of the gun, a pneumatic and a hydraulic cylinder in which said pistons are disposed, both of said cylinders being secured to the mount, and a return-spring arranged within one of the cylinders and bearing against one of said pistons.

In testimony whereof I affix my signature in presence of two witnesses.

BURKARD BEHR.

Witnesses:

ERNEST H. L. MUMMENHOFF,  
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