E. J. MEAD.

GUN RECOIL BRAKE.

APPLICATION FILED DEC. 6, 1907.

900,943. Patented Oct. 13, 1908.

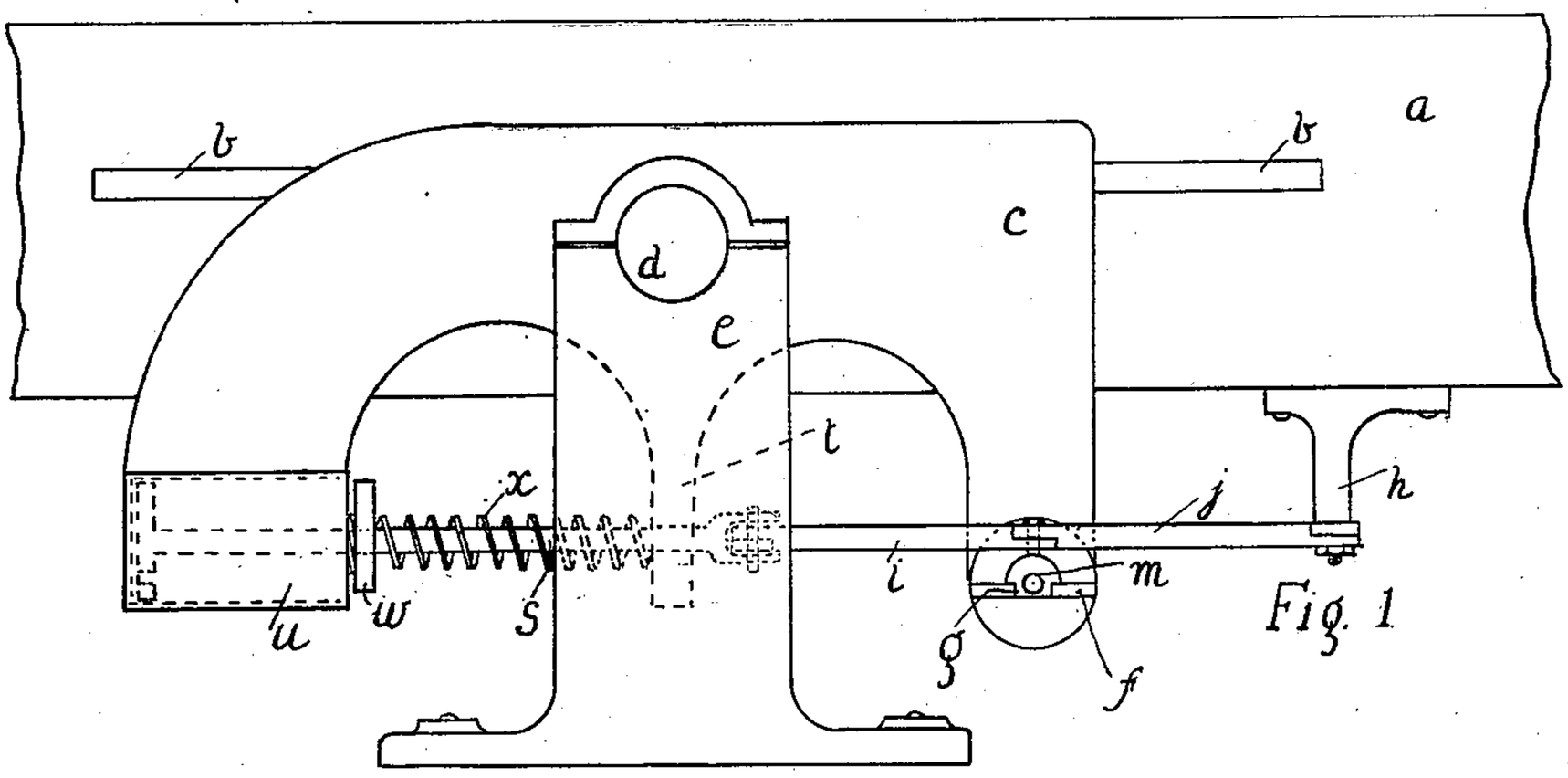

Fig. 1

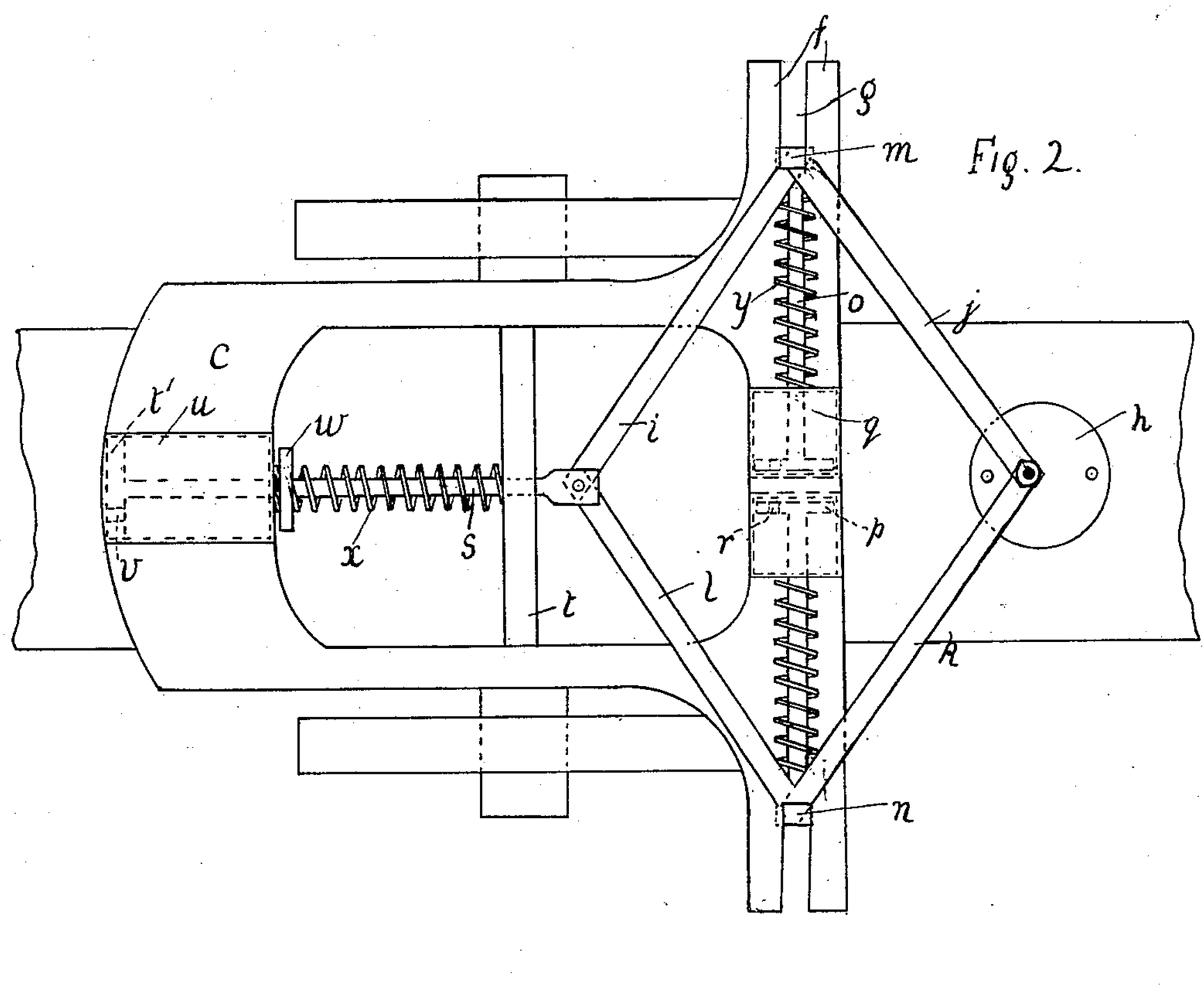

Fig. 2.

WITNESSES

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ERNEST JOSEPH MEAD, OF BOURNEMOUTH, ENGLAND.

GUN-RECOIL BRAKE.

No. 900,943. Specification of Letters Patent. Patented Oct. 13, 1908.

Application filed December 6, 1907. Serial No. 405,458.

To all whom it may concern:

Be it known that I, ERNEST JOSEPH MEAD, a subject of His Majesty the King of the United Kingdom of Great Britain and Ireland, residing at 29 Wellington road, Bournemouth, in the county of Hants, in that part of the United Kingdom called England, have invented new and useful Improvements in Gun-Recoil Brakes, of which the following is a specification.

This invention relates to improvements in gun recoil brakes, the object being to distribute part of the thrust of the recoil in other directions than directly rearward.

In carrying my invention into effect I proceed in or in about the following manner making reference to the accompanying drawing wherein

Figure 1. is a side view and Fig. 2. a plan from underneath.

a, is the gun having side feathers or projections *b* free to run in grooves in the saddle *c* suspended by trunnions *d* in the pedestals *e*. The saddle *c* has side projections *f* and these are slotted as at *g*. To a bracket *h* on the gun *a* are pivoted the ends of two of four links *i*, *j*, *k*, *l*, forming a lazy tongs frame. The ends of *i*, *j* are pivoted to a pin or slide *m* running in one of the slots *g*, and the ends of *k*, *l*, are pivoted to a pin or slide *n* running in the other of the slots *g*. To the pins or slides *m* and *n* are pivoted the rods *o* of two pistons *p* working in two hydraulic cylinders *q* each piston having in it a hole *r*. The adjoining ends *i* and *l* are pivoted to one end of a rod *s* passing through a bracket *t* depending from the saddle *c*, and provided with a piston *t'* within a hydraulic cylinder *u*, the piston *t'* having in it a hole *v*. On the rod *s* is a disk *w* between which and the bracket *t* is a spiral spring *x* and each of the rods *o* are encircled by springs *y*.

In use, when the gun recoils, part of the rearward thrust is divided at right angles or thereabouts, right and left of a plane passing vertically through the axis of the gun *a*, the inward movement of the links *j* and *k* causes the pins or slides *m* and *n* to run outwards, and the rods *i*, *l* to draw forward the piston *t'* thus putting the spring *x* in compression and the springs *y* in tension. After the recoil the spring *x* and the springs *y* recover their original position. A disk outside the outer end of the spring *y* and the cover of the cylinder *q* constitute abutments for their spring.

If desired the point of attachment of the lazy tongs frame to the gun may be at the rear instead of in front of the frame, and various other modifications of the application of the invention are possible without departure from its essential feature.

What I claim as my invention and desire to secure by Letters Patent is:—

In a gun recoil brake for distributing the thrust of the recoil in other directions than rearward, the combination of a saddle support having grooves on its inner faces to receive side feathers on the gun, and having trunnions outstanding at each side; pedestals to support the said trunnions; slotted projections at each side of forward end of the saddle and at right angles thereto: slides free to move in the slotted projections two hydraulic cylinders at right angles to the axis of the gun; pistons in the said cylinders provided with spring controlled piston rods pivotally attached to the above mentioned slides; two lazy-tong links pivotally attached to the slides and to a bracket depending from the gun; two other lazy-tong links pivotally connecting the slides with the free end of the spring controlled piston rod of the piston of a hydraulic cylinder at the rear of the saddle.

In testimony whereof I have signed my name to this specification in the presence of two subscribing witnesses.

ERNEST JOSEPH MEAD.

Witnesses:

WILLIAM CROSSLY,

JOHN BAKER.