No. 810,660. PATENTED JAN. 23, 1906.

J. F. MEIGS & S. A. S. HAMMAR.

GUN MOUNT.

APPLICATION FILED JAN. 7, 1903.

5 SHEETS—SHEET 1.

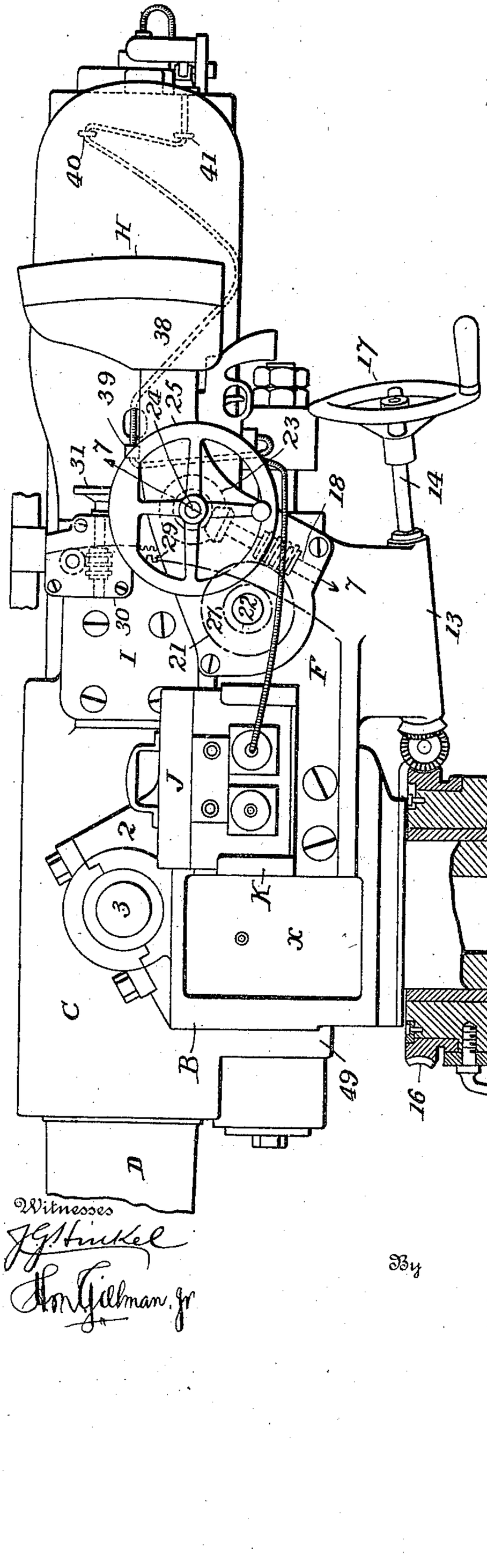

Fig. 1.

Witnesses
J. G. Stinkel
Thos. Gilman, Jr.

Inventors
John F. Meigs
Stigard A. S. Hammar
By
Foster Freeman
Attorneys

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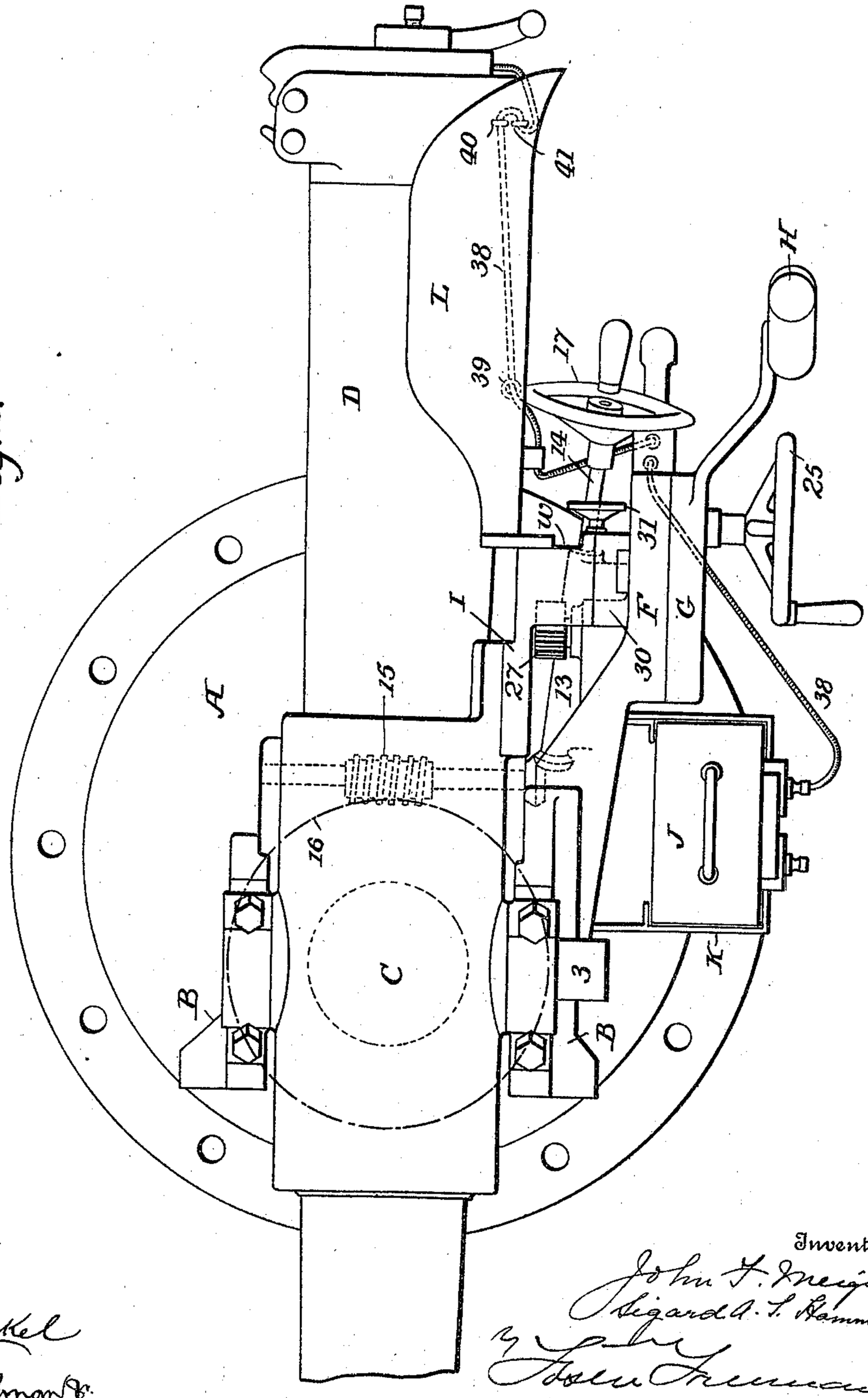
5 SHEETS—SHEET 2.

Fig. 2.



Witnesses

J. J. Hinkel

Thos. Gillman Jr.

Inventors

John F. Meigs

Sigard A. S. Hammar

by Fisher Freeman

Attorneys

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5 SHEETS—SHEET 3.

Fig. 4.

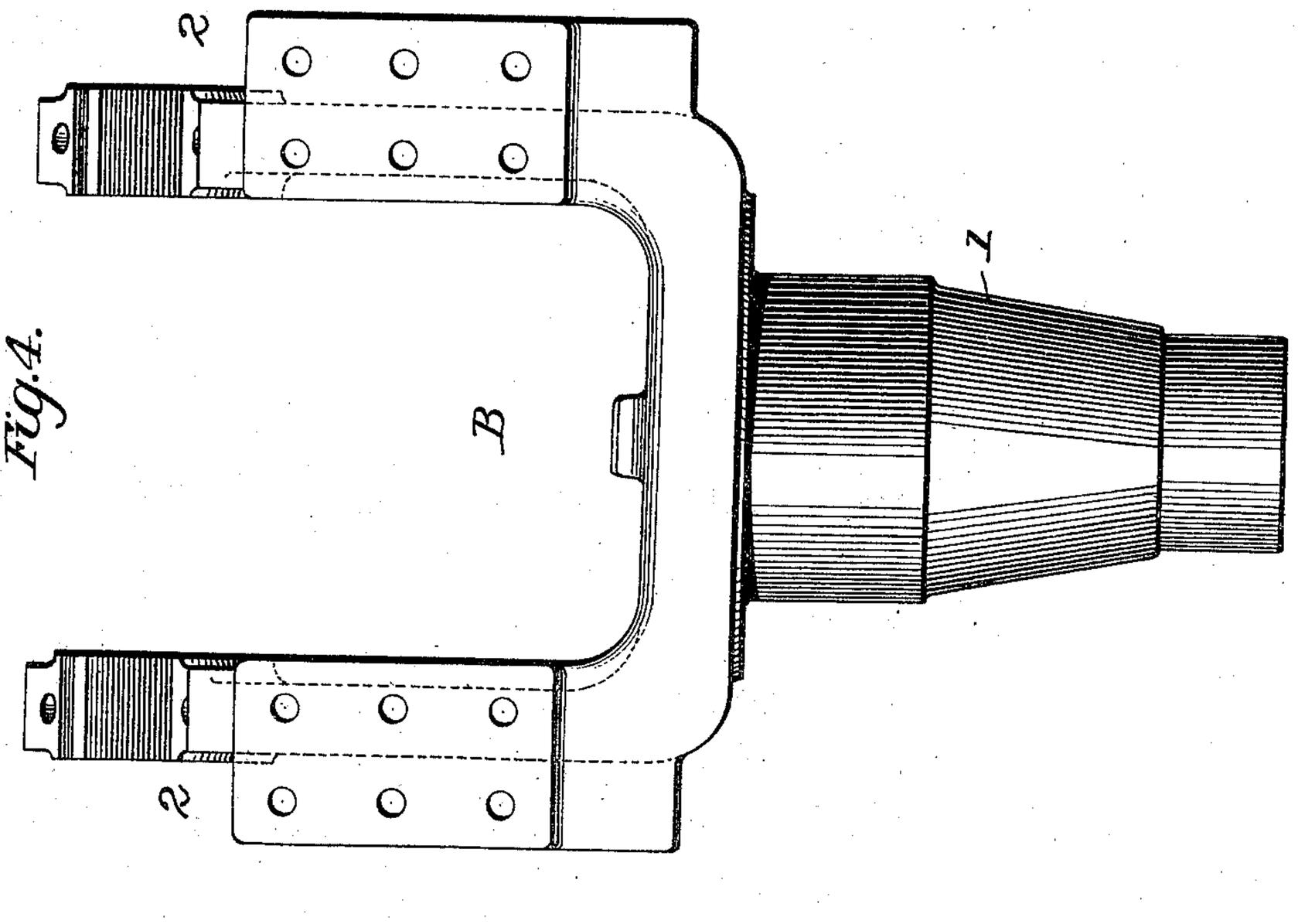
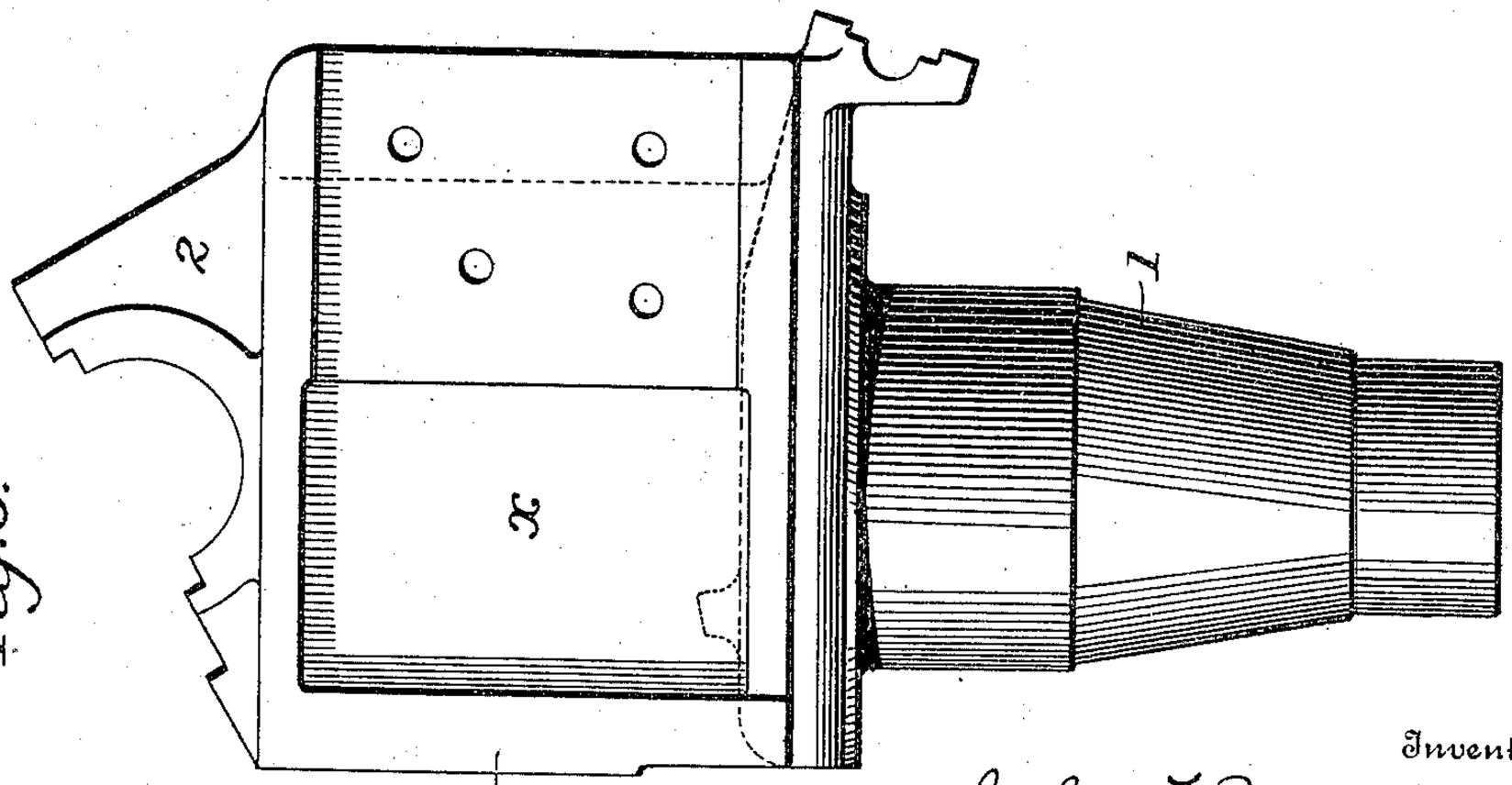


Fig. 3.



Witnesses

J. G. Stinkel

Asa Gillman, Jr.

Inventors

John F. Meigs

Sigurd A. S. Hammar

By Paul Synnestvedt

Attorneys

No. 810,660. PATENTED JAN. 23, 1906.

J. F. MEIGS & S. A. S. HAMMAR.

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5 SHEETS—SHEET 4.

Fig. 5.

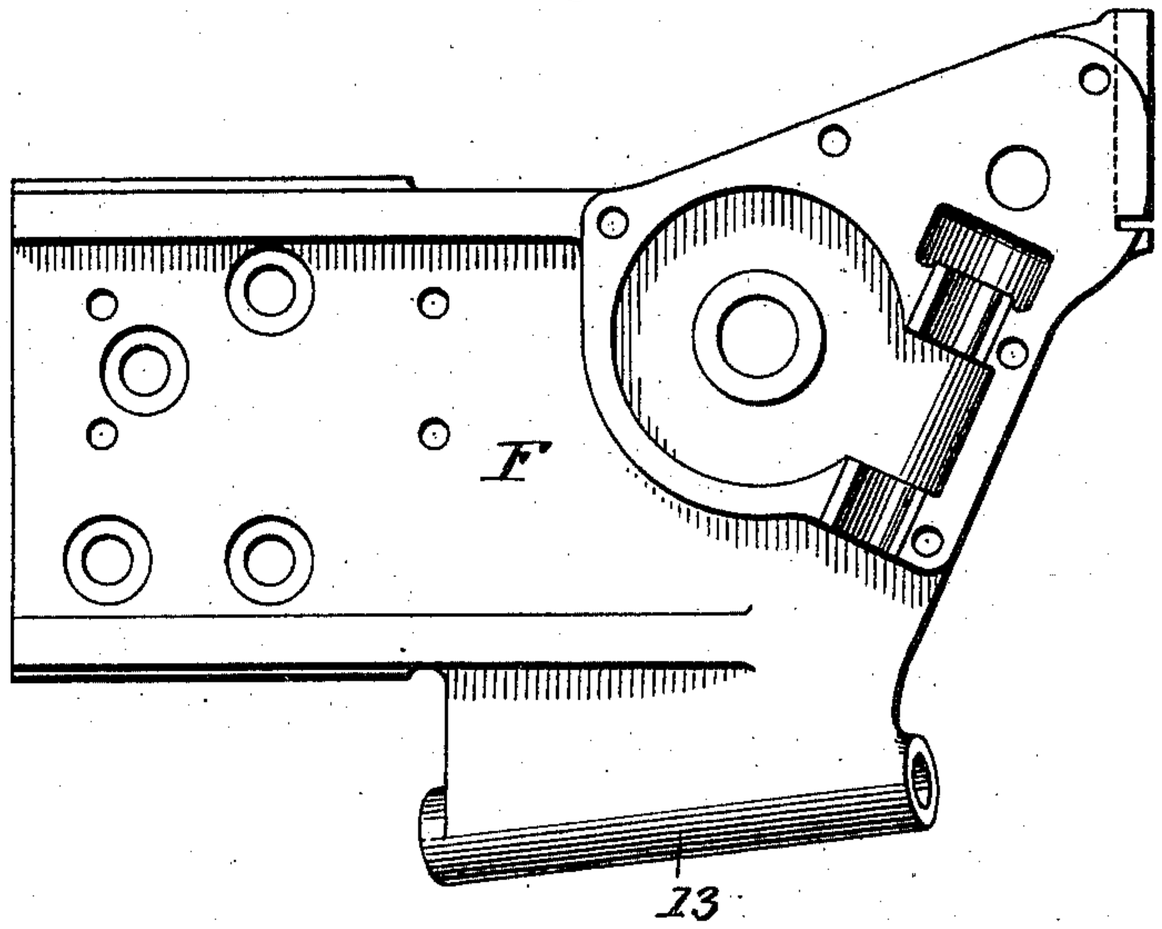


Fig. 6.

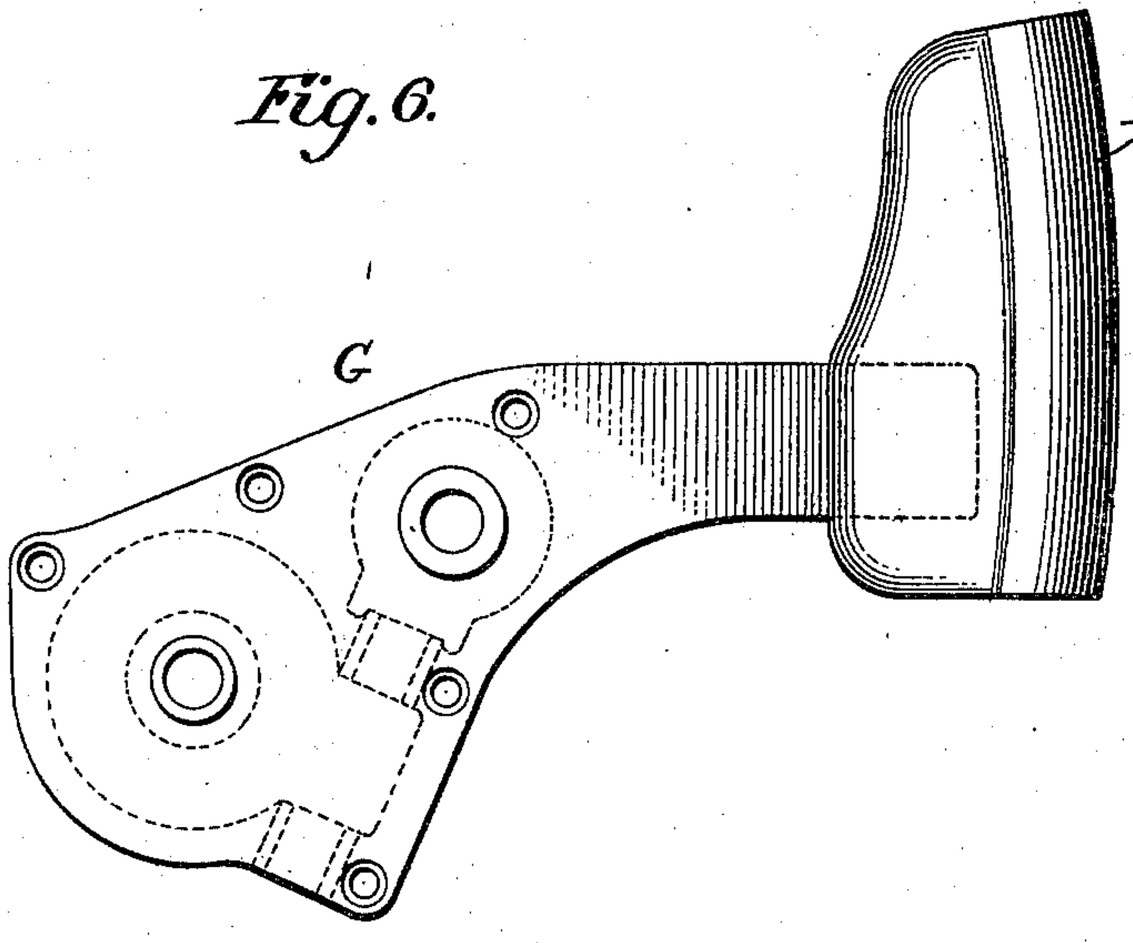
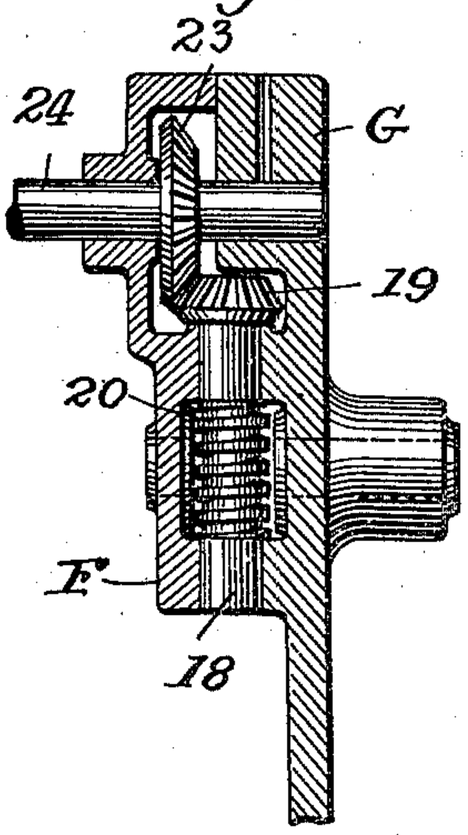


Fig. 7.



Witnesses
J. G. Stinkel
Wm. Gilman, Jr.

Inventors
John F. Meigs
Sigard A. S. Hammar
By Foster Freeman
Attorneys

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5 SHEETS—SHEET 5.

Fig. 8.

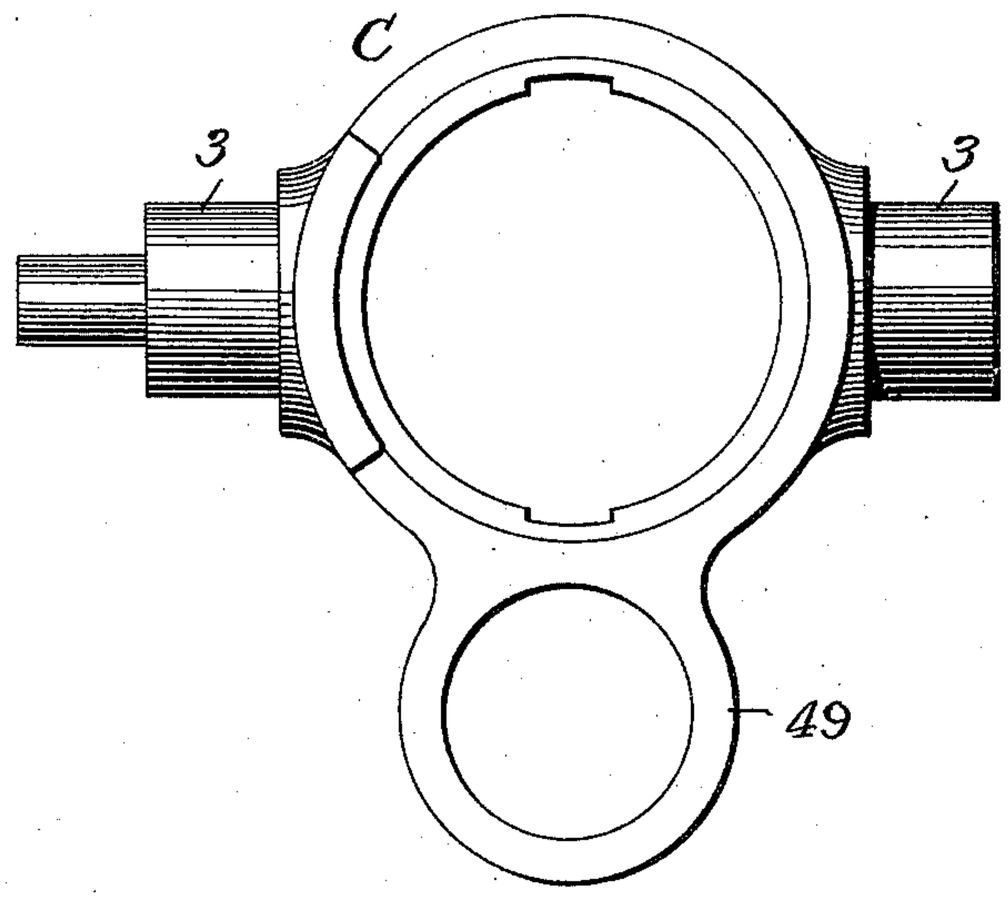
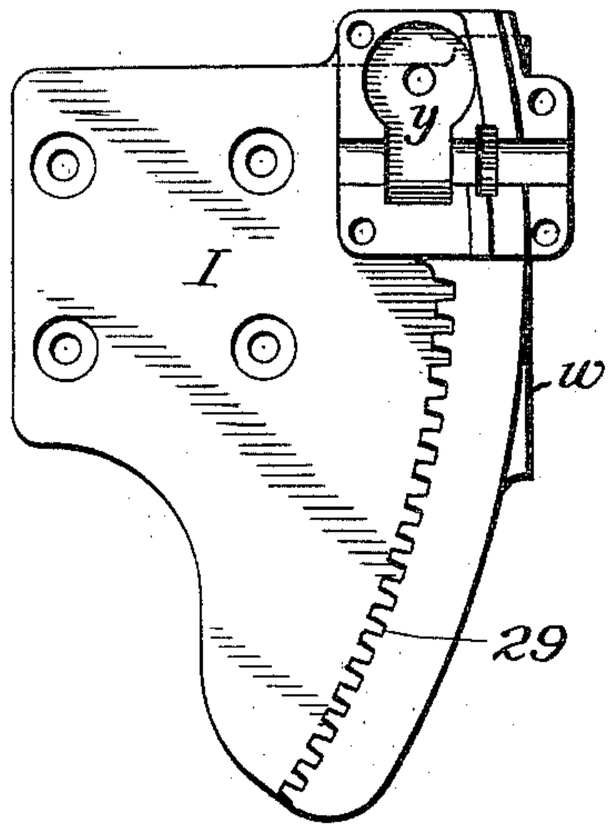


Fig. 9.



Witnesses
J. G. Stinkel
Wm. Gillman, Jr.

Inventors
John F. Meigs
Sigard A. S. Hammar.
By Foster Freeman
Attorneys

UNITED STATES PATENT OFFICE.

JOHN F. MEIGS AND SIGARD A. S. HAMMAR, OF BETHLEHEM, PENNSYLVANIA, ASSIGNORS TO BETHLEHEM STEEL COMPANY, OF SOUTH BETHLEHEM, PENNSYLVANIA, A CORPORATION OF PENNSYLVANIA.

GUN-MOUNT.

No. 810,660. Specification of Letters Patent. Patented Jan. 23, 1906.

Application filed January 7, 1903. Serial No. 138,175.

To all whom it may concern:

Be it known that we, JOHN F. MEIGS, a citizen of the United States, and SIGARD A. S. HAMMAR, a subject of the King of Sweden and Norway, residing at Bethlehem, in the county of Northampton and State of Pennsylvania, have invented certain new and useful Improvements in Gun-Mounts, of which the following is a specification.

Our invention relates to gun-mounts; and it consists in making the parts, as fully set forth hereinafter, to simplify the construction and assembling and facilitate repairs, as well as to protect the parts against injury, as fully set forth hereinafter and as illustrated in the accompanying drawings, in which—

Figure 1 is an elevation in part section of a gun-monut embodying our improvements. Fig. 2 is a plan of Fig. 1. Fig. 3 is a side view of the yoke-piece. Fig. 4 is a front view of the yoke-piece. Fig. 5 is a face view of part of the yoke-bracket. Fig. 6 is a face view of the cap-piece of the yoke-bracket. Fig. 7 is a section on the line 7 7, Fig. 1. Fig. 8 is an end view of the cradle, and Fig. 9 is a face view of the elevating rack-plate.

The pedestal A, which is approximately conical, is provided with a depending sleeve *x*, terminating considerably above the base-line of the pedestal and adapted to receive the tapering pivot 1 of the yoke-piece B of the top carriage, and the yoke 2 is recessed to receive the bushings in which rock the trunnions 3 of the cradle C, in which rests the gun D. The pedestal and sleeve are recessed to receive annular bushings 4 5, to which are fitted bearings of the pivot 1, and a screw-plug 6, fitting into the lower threaded end of the sleeve, supports the lower section 7 of a ball-bearing E, the balls running between said section and the upper section 8, on which rests the lower end of the pivot. This arrangement permits the yoke-piece B to be readily adjusted to its vertical position by turning the plug 6 from below, while as the bushings are cylindrical a proper bearing is secured in any position. A set-screw 10 secures the plug in any position to which it is turned. Oil is admitted to the lower bearing through a conduit 12 in the form of an inclined tube extending through the pedestal and through the bushing 5.

Upon the yoke-piece and its attachments are carried the bearings for the elevating and traversing gear and the battery-boxes and adjuncts, and to reduce the cost of construction and facilitate repairs we connect the necessary parts detachably with the yoke-piece and with each other, as follows: A bracket F is bolted to the side of the yoke 2 at the rear of a sunken panel *x*, and a downward-extending arm 13 of this bracket has an inclined bore receiving a training-shaft 14, which operates through suitable gears—a worm 15, that engages a training-rack 16, carried by the pedestal—the shaft being provided at the rear end with a hand-wheel 17. Forming part of the bracket F is the cap-plate G, bolted to the face of the bracket and the rearwardly-extended arm of which supports the shoulder-rest H. The bracket F and cap-piece G are recessed to form an intermediate gear-casing with bearings for the shaft 18, (dotted lines, Fig. 1,) carrying the bevel-gear 19 and worm-gear 20, the latter engaging a worm-wheel 21 on a shaft 22 and the former a bevel-wheel 23 on a shaft 24, carrying the hand-wheel 25 at the outer end. The gears 19 23 20 21 are within the casing, and the shafts 22 24 extend through bearings in the bracket and cap-plate. The parts may thus be readily assembled and the elevating-gearing fully protected. On the shaft 22 is a pinion 27, which engages the teeth of an elevating-rack 29, formed upon the rack-plate I, which is bolted to the side of the cradle near the rear end. To the outer face of the plate I is bolted a cap-plate 30, and the plate I and cap-plate are recessed to form an intermediate chamber *y* for the sight-elevating gearing, (shown in dotted lines, Fig. 1,) with bearings for the operating-shaft 31. The battery-box J is supported in a bracket K, bolted to the outer face of the bracket F, and to the rear face *w* of the plate I, Fig. 9, is bolted one end of a shoulder-guard L, between which and the gun the flexible electric conductor 38 hangs, guided by eyes 39 40 41 to the firing devices at the breech of the gun. The conductor is thus supported in a loop to afford the slack required on the recoil, but so guarded and covered by the shoulder-guard that it cannot catch with anything in the manipulation of the gun.

In one piece with the cradle and below the same is the cylinder or case 49 for the recoil mechanism, springs, or pistons.

Without limiting ourselves to the precise constructions shown, we claim—

1. In a gun-mount, the combination of a pedestal having a depending sleeve, cylindrical bushings therein, an elevating-plug adapted to screw into the lower end of said sleeve, and a yoke-piece having a pivot adapted to said bushings and supported by said plug, substantially as set forth.

2. In a gun-mount, the combination of a pedestal having an internal depending sleeve, cylindrical bushings therein, an elevating-plug screwing into the lower end of said sleeve, a yoke-piece having a pivot adapted to said bushings and supported by said plug, and ball-bearings between said plug and pivot, substantially as set forth.

3. The combination with the yoke-piece, of a bracket F having an arm with bearings for a traverse-shaft, and an arm recessed to form part of a gear-case, substantially as set forth.

4. The combination with the yoke-piece, of a bracket F, and a cap-plate, the bracket and cap-plate being recessed to form a gear-casing and shaft-bearings for the elevating devices, said devices comprising a shaft extending transversely of said bracket and plate and engaging with a shaft located between said bracket and plate and extending parallel thereto, substantially as set forth.

5. The combination in a top carriage, of a yoke-piece, a bracket secured thereto, a cap-plate, and means for securing it to the bracket, the bracket and cap-plate recessed to receive the elevating-gear and to constitute bearings for the shafts thereof, substantially as set forth.

6. The combination of the yoke-piece, cradle, a plate carrying an elevating-rack connected to the cradle, and a detachable bracket carrying incased elevating-gearing connected to the yoke, substantially as set forth.

7. The combination with the yoke-piece, of a rack-plate I, having a rack 29 and recess *y*, and a cap-plate 30 recessed and covering the recess *y* to form a gear-chamber for the sight-elevating gear, substantially as set forth.

In testimony whereof we have signed our names to this specification in the presence of two subscribing witnesses.

JOHN F. MEIGS.
SIGARD A. S. HAMMAR.

Witnesses:
LEIGHTON N. D. MIXSELL,
HERMAN G. JACKOBSSON.