J. H. FIELD.

Operating Ordnance.

No. 56,395. Patented July 17. 1866.

Fig 1

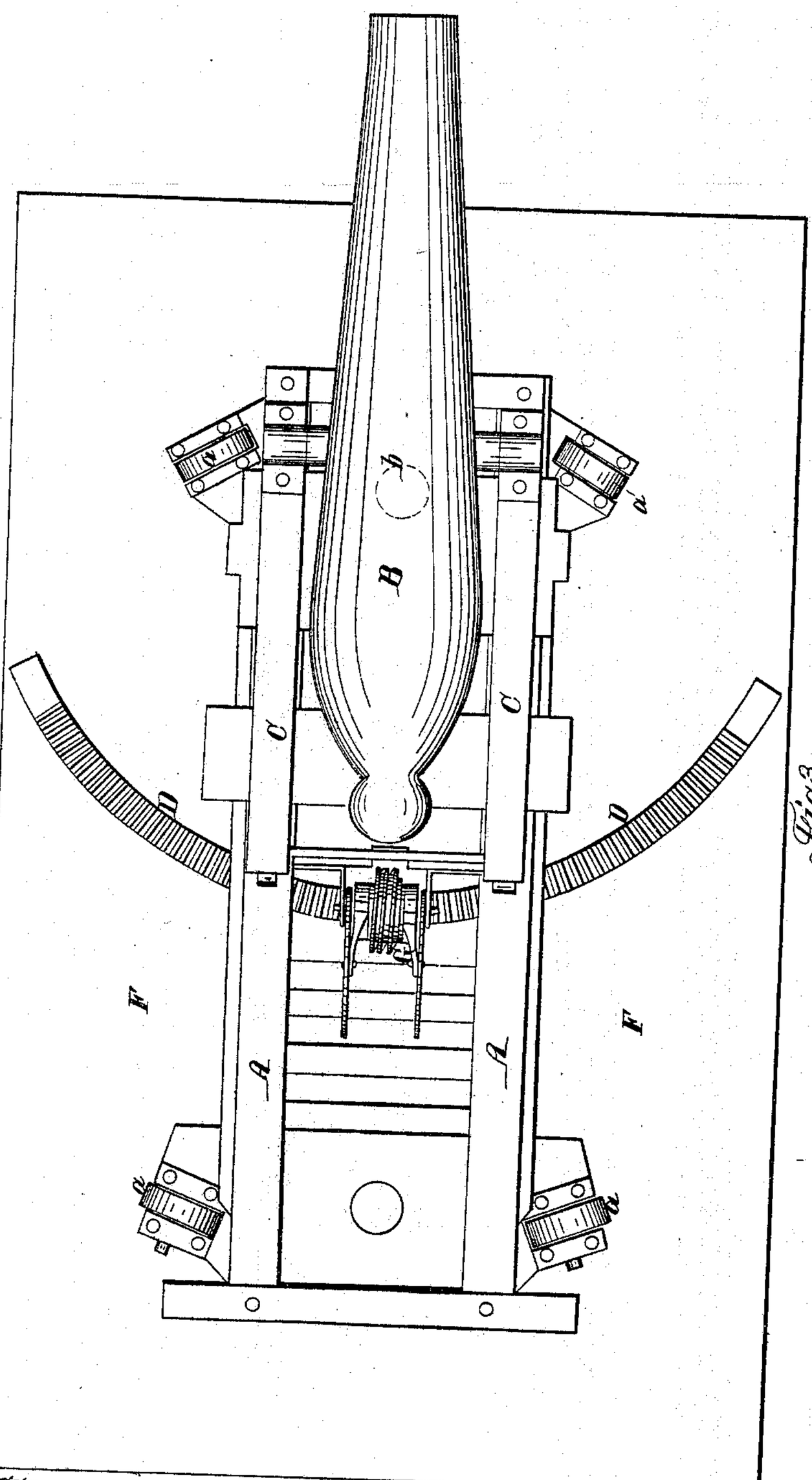


Fig 5

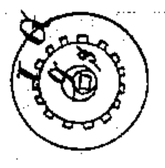


Fig 4

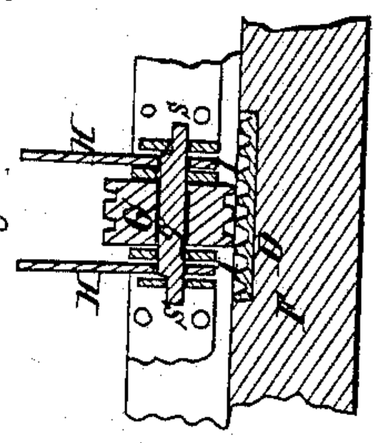


Fig 3

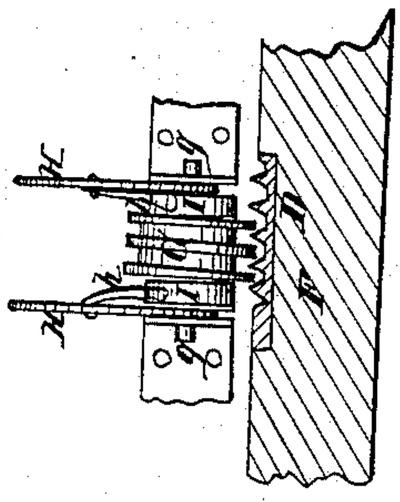
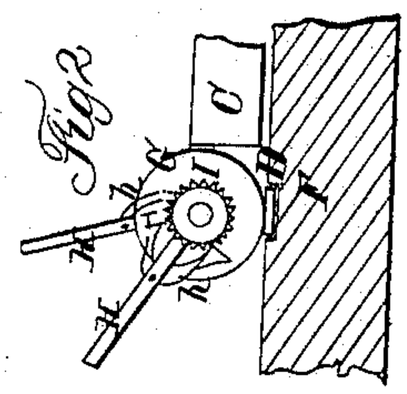


Fig 2



Witnesses:-
S Browne
E J Brown

Inventor
Inventor.
John H Field
By his Atty
J S Brown

NITED STATES PATENT OFFICE.

JOHN H. FIELD, OF SAUGERTIES, NEW YORK.

IMPROVEMENT IN OPERATING ORDNANCE.

Specification forming part of Letters Patent No. **56,395,** dated July 17, 1866.

To all whom it may concern:

Be it known that I, JOHN H. FIELD, of Saugerties, in the county of Ulster and State of New York, have invented an Improvement in Working Ordnance; and I do hereby declare that the following is a full and exact description thereof, reference being had to the accompanying drawings, making part of this specification.

Figure 1 is a top view of the mountings of a piece of ordnance with my improvement applied. Figs. 2, 3, 4, and 5 are different views of the device which constitutes my improvement as applied in Fig. 1.

Like letters designate corresponding parts in all of the figures.

Let A represent the track-frame, on which the carriage C of the gun B is run forward and backward, and E the platform, on which the track-frame is turned at any angle desired on a pivot *b* near the front end, as shown by dotted lines in Fig. 1. The track-frame runs on the friction-wheels *a a*, as usual.

In training and aiming the gun the ordinary means of ropes is laborious and requires a strong force, and it is difficult to get accurate aim, as the gunner cannot control it alone.

My invention enables a single person to turn the gun with ease, and to do it with the utmost precision and accuracy, and at the same time it does not prevent the ordinary method of turning the gun, if desired.

I employ a curved rack, D, concentric with the pivot on which the track-frame turns. In connection with this rack, an endless screw, G, is used on the track-frame, by turning which the gun is moved slowly but steadily. It is turned by means of levers H H, provided with pawls *h h*, which take into ratchet-wheels I I, attached to the ends of the endless screw. The levers and screw together give great power, so that one gunner can alone move his gun when sighting it.

The pawls *h h* are double edged, so as to work both ways, and by shifting it to the other side of the lever, as shown by red lines in Fig. 2, the movement of the gun is reversed.

The endless screw turns on a shaft, *g*, having eccentric bearings, as shown in Figs. 4 and 5, and it is arranged so as to remain in a position to throw the eccentricity up or down by a key or wrench-lever applied to its projecting journals *s s*. When the eccentricity is downward the endless screw takes into the rack D, as shown in Fig. 3; but when it is upward the screw is ungeared from the rack, as shown in Fig. 5. In the former case the gun is moved by the screw, but in the latter case it is free to be turned around in the usual manner.

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

The combination of the circular rack D and endless screw G, mounted on an eccentric shaft, *g*, and operated by levers and the double-acting pawls *h h*, substantially as and for the purpose herein specified.

The above specification of my improvement in working ordnance signed by me this 26th day of April, 1866.

JOHN H. FIELD.

Witnesses:
J. S. BROWN,
THOS. F. FIELD.