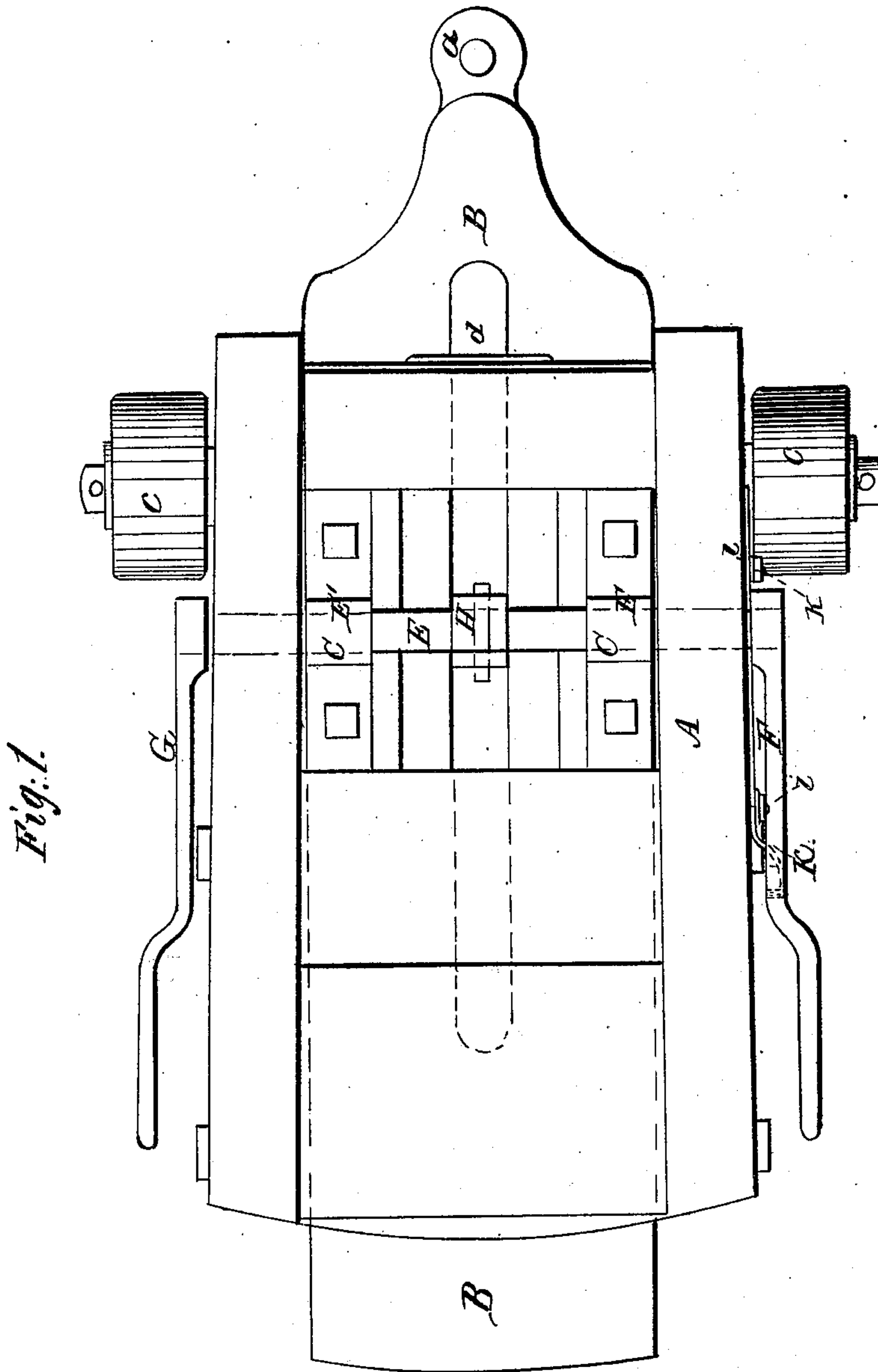


G. J. VAN BRUNT.

Gun-Carriage

No. 20,597.

Patented June 15, 1858.

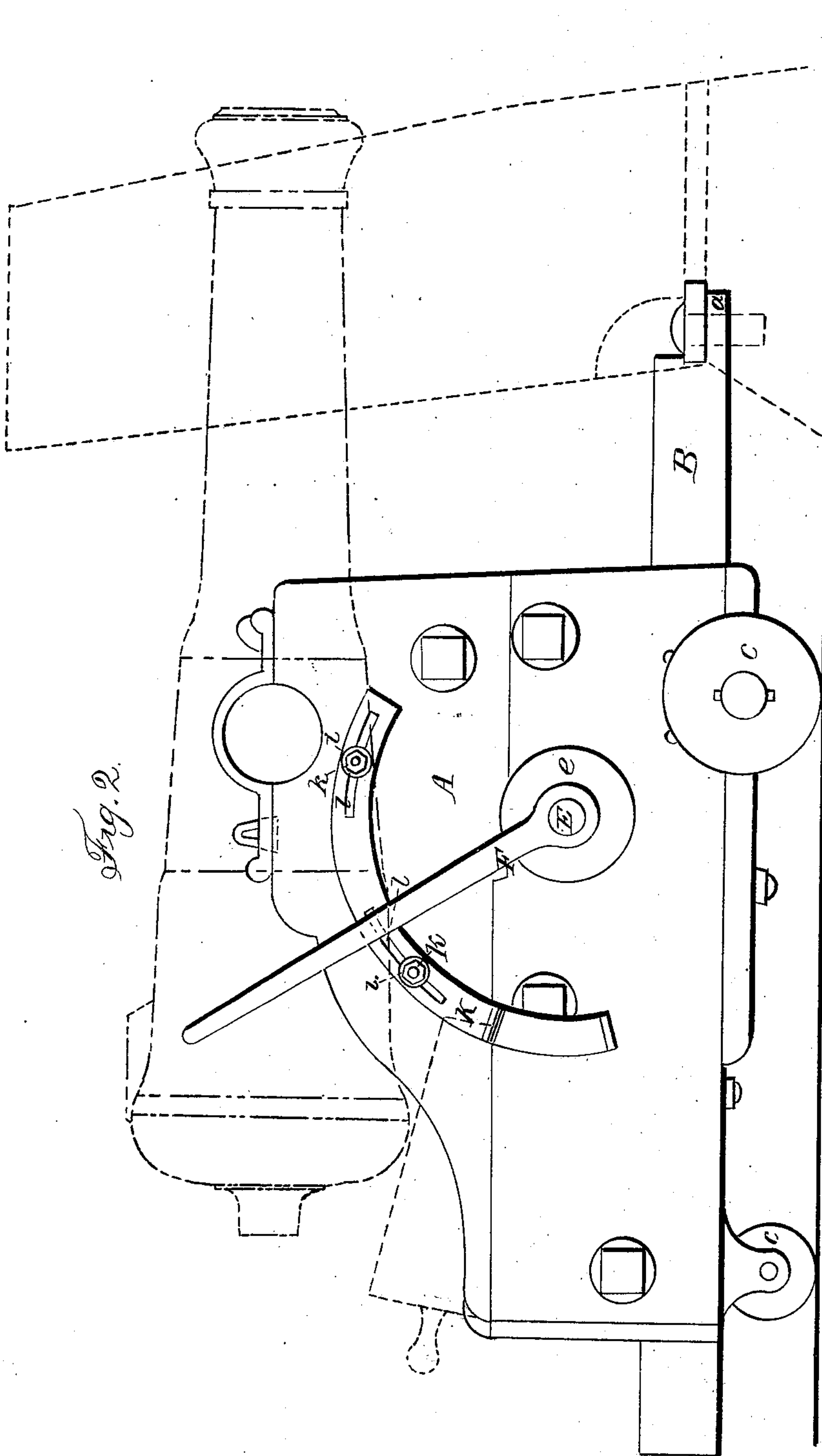


G. J. VAN BRUNT.

Gun-Carriage.

No. 20,597.

Patented June 15, 1858.

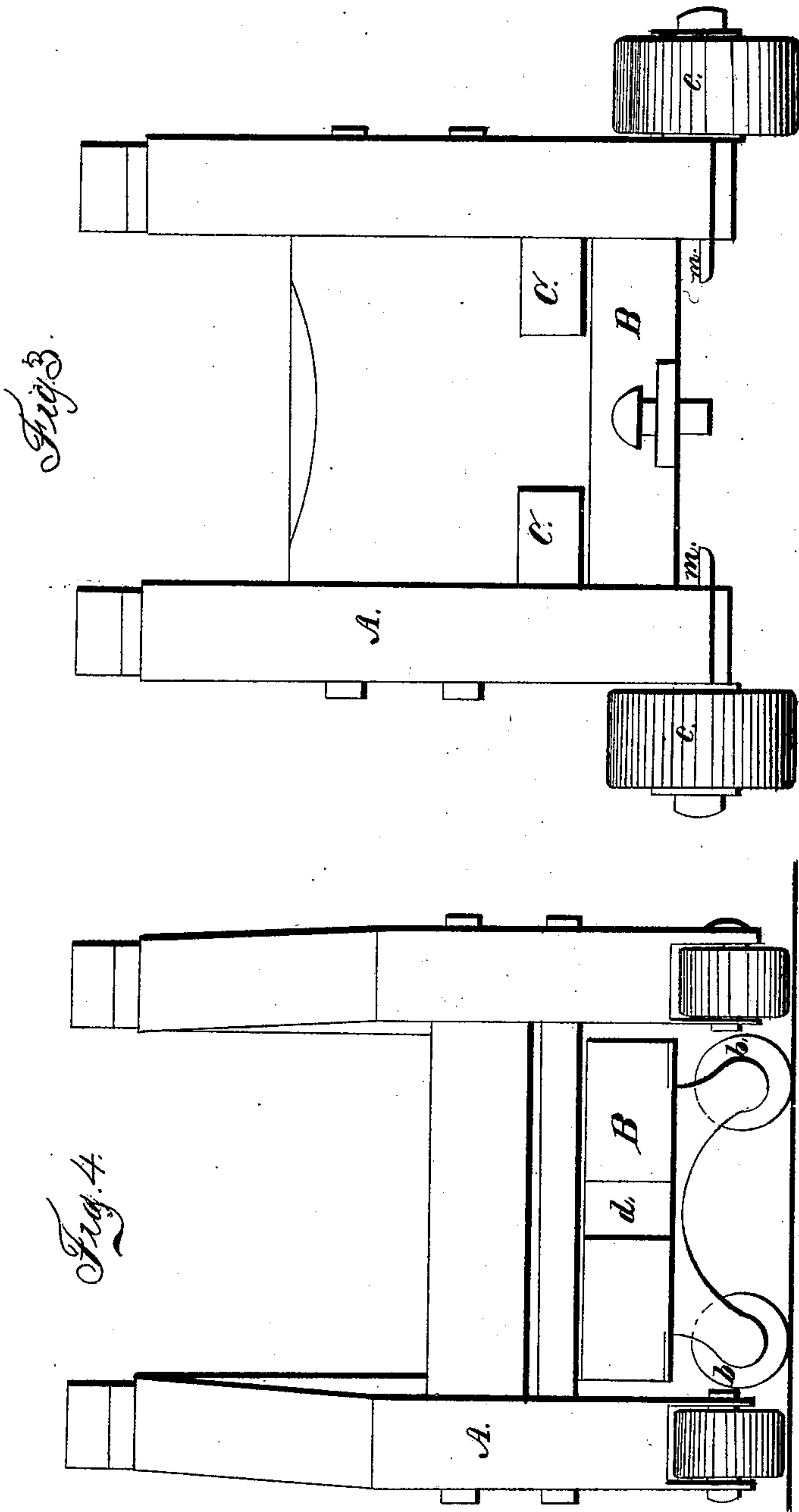


G. J. VAN BRUNT.

Gun-Carriage

Patented June 15, 1858.

No. 20,597.

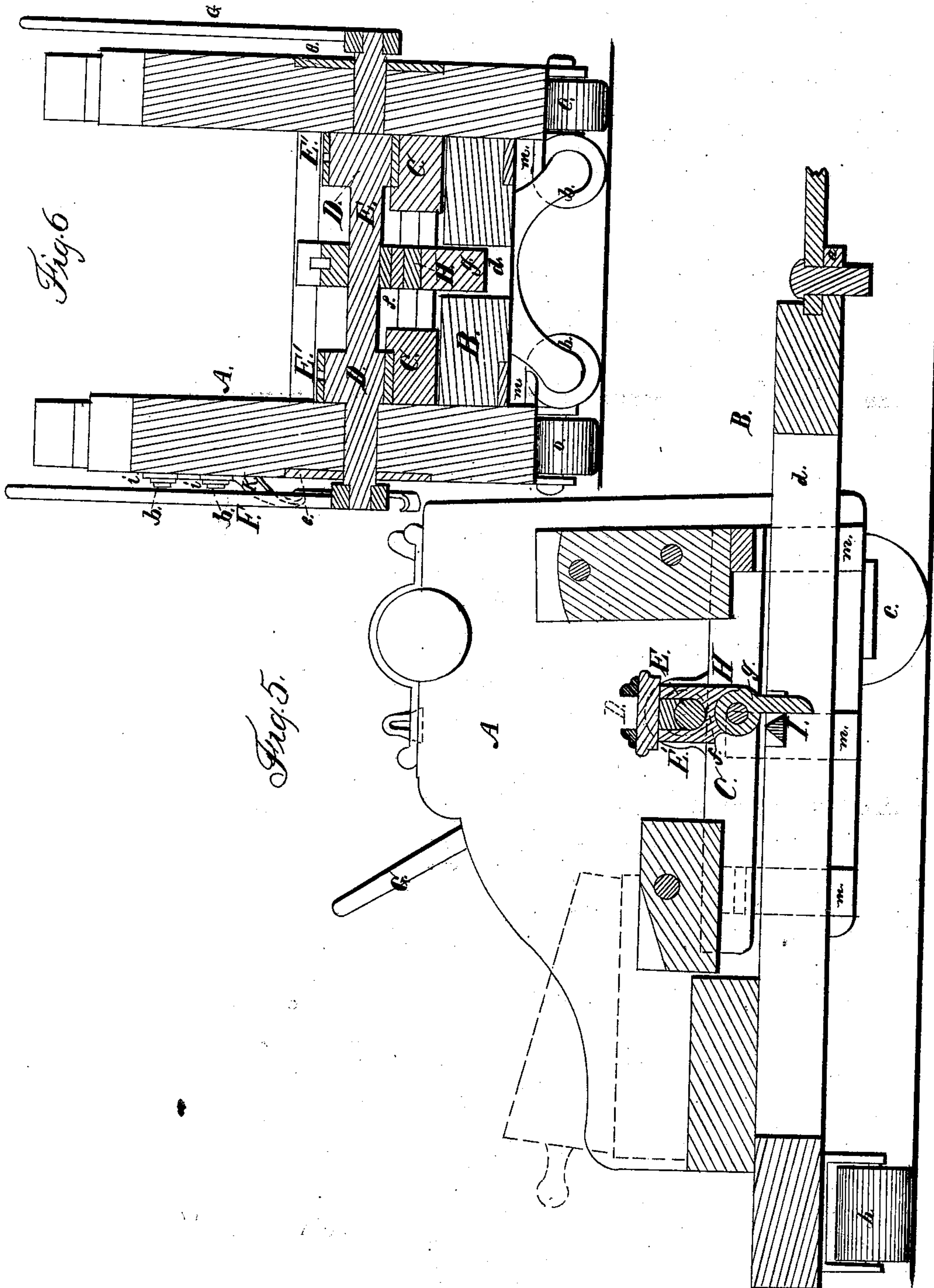


G. J. VAN BRUNT.

Gun-Carriage

No. 20,597.

Patented June 15, 1858.



UNITED STATES PATENT OFFICE.

G. J. VAN BRUNT, OF DEDHAM, MASSACHUSETTS.

IMPROVEMENT IN GUN-CARRIAGES.

Specification forming part of Letters Patent No. 20,597, dated June 15, 1858.

To all whom it may concern:

Be it known that I, GERSHOM J. VAN BRUNT, a captain in the United States Navy, and a resident in the town of Dedham, of the county of Norfolk and State of Massachusetts, have invented an Improved Gun-Carriage, to be used either on shipboard or in forts; and I do hereby declare that the same is fully described and represented in the following specification and the accompanying drawings, of which—

Figure 1 denotes a top view of the said carriage and its tongue or slide. Fig. 2 is a side elevation of the same. Fig. 3 is a front end elevation. Fig. 4 is a rear end elevation. Fig. 5 is a longitudinal central and vertical section. Fig. 6 is a vertical and transverse section of the carriage, taken through the eccentric-shaft, to be hereinafter described.

In these drawings, A exhibits the gun-carriage, while B is its "tongue" or "slide," as it is sometimes termed, the latter being made to extend longitudinally through the former and turn horizontally at its front end on a "fighting-bolt" or upright pin or journal, properly arranged with respect to the port or embrasure, as the case may be. The part which turns on the joint-pin is shown at *a*. The tongue B should be constructed thicker at its rear end than it is at its front; or, in other words, should taper or gradually increase in thickness from the front to the rear end, and the said rear end should be suitably supported on one or more wheels arranged so as to enable the tongue to be moved around over the deck in the sector of a circle. Such supports or wheels are shown at *b b*. The carriage A is provided with wheels, as shown at *c c c c*, such enabling it to be moved forward and backward when these wheels are resting on the deck. A slot or passage, *d*, is formed longitudinally through or in the tongue, as shown in the drawings. On each side of the slot and on the upper surface of the tongue, as shown in the drawings, a friction-bearer, C, is arranged, it being connected with an eccentric, D, by a slot, E', which goes partially around the eccentric and is bolted to the friction-bearer. There is an eccentric, D, to each bearer C, both of such eccentrics being carried by a horizontal shaft, E, extended transversely through the carriage A, and being supported in metallic boxes or bearings in

the sides *e e* of the carriage. A lever, F or G, extends from each end of the shaft *b'*, as shown in the drawings. Furthermore, the shaft is furnished with a tripper, H, which is an arm extending from it into the slot *d* and constructed with a rule-joint, *f*, or one made so as to allow the lower portion, *g*, of the arm to be swung backward out of a straight line with the upper portion, but not forward beyond such line. A bar, I, projects across the slot *d* in the position shown in Fig. 5 of the drawings.

A curved spring-stop, K, formed as shown in the drawings, is arranged on one side of the carriage and held thereto by means of nuts *i i*, working on screws *k k*, which extend from the carriage through curved slots *l l*, made through the spring-stop, the same serving to enable a person to adjust the spring-stop in any desirable position within the limits of its motion. The said spring-stop is to arrest the downward movement of the lever F, and thereby define the amount of rotary movement of the eccentrics. From the lower part of each side of the carriage A there are projections or bars *m*, which extend a short distance underneath the tongue and operate with the pressure-bar C over it to hold the carriage to the tongue B when the said carriage is forced backward. During the recoil of the carriage immediately after the discharge of its gun, the friction-bearers C C will be caused to mount the slightly-inclined top surface of the tongue, and in so doing will elevate the carriage so as to raise its wheels off the floor or deck and cause the whole weight of the gun and the carriage to be brought into action to increase the friction of the bearers C C on the tongue. By the recoil or retraction of the carriage the tongue passes between the upper and lower sets of bearers (the lower set being the projections *m m*) like a wedge, and will gradually arrest the rearward motion of the carriage, the friction beyond that due to the weight of the carriage and gun being regulated by the eccentrics or the amount of depression given by them to the upper set of friction-bearers. Should the lever F be in a vertical position at the time of the discharge of the gun, the recoil of the carriage would carry the tripper H against the bar I, so as to cause the shaft to be rotated to a sufficient degree to insure the depression of the friction-

bearers C C to the proper extent to effect the stoppage of the carriage in the manner as hereinbefore explained.

From the above it will be perceived that my improved gun-carriage varies from the common truck-carriage principally in the appliances necessary to control and govern the recoil of the gun, which appliances, though all-powerful in accomplishing what is required, do not in any way interfere with the convertibility of the carriage, in case of necessity, into what is usually termed an "ordinary gun-carriage." With my invention no breeching is necessary to the carriage or its operation.

A thirty-two pounder gun with its carriage having my invention can easily be operated by two men on each side of it, as they or even a less number will be sufficient to run it to the battery after its recoil. Very little physical force will be required to relieve the compression of the friction-bearers after recoil of the gun. Extreme elevation or depression of the gun can be obtained as easily as with other carriages; and should the tongue be rendered useless by a raking shot or other cause, it can be removed readily and the carriage still be made available.

Another of the numerous advantages due to my invention is the security it affords the gun during a gale of wind, for when the friction-bearers or the compressors are down on the tongue the carriage will be immovable in a longitudinal direction. The more the carriage is thrown back the firmer will it be held to its tongue. Should the levers F G of the compressors or friction-bearers be neglected or suffered to stand upright, the gun will still be secure, as the inboard movement of it, when such may occur, will set the tripper H into

action, so as to cause the arrest of rearward movement of the carriage. Furthermore, my invention admits of a battery being cleared for action and discharged with great facility.

I do not claim herein a friction apparatus and a tapering bed or tongue applied to a gun-carriage, so as to arrest the rearward motion of the gun and carriage after a discharge of the piece, although I believe myself to have been the original and first inventor of the same; but

What I claim is—

1. The application of friction apparatus, substantially as described, to the gun-carriage and tongue in such manner that when the carriage is being retracted or under recoil it shall be elevated in a manner to raise its wheels off the deck or floor under it and cause the whole weight of the gun and carriage or that of the latter to be borne by the tongue or friction apparatus, and in a manner to increase the friction and pressure of the friction-bearers or the tongue on their supporting surface, substantially as described.

2. The arrangement of the shaft E, the friction-bearers C C, and their eccentrics D D and straps E' E', or equivalents, with reference to the gun-carriage A and the tongue B thereof.

3. The combination of the tripper H with the tongue and friction apparatus, the same being for the purpose and to operate as specified.

4. The combination of the adjustable spring-stop K with the gun-carriage A and the lever F of the friction apparatus.

G. J. VAN BRUNT.

Witnesses:

R. H. EDDY,

F. P. HALE, Jr.