

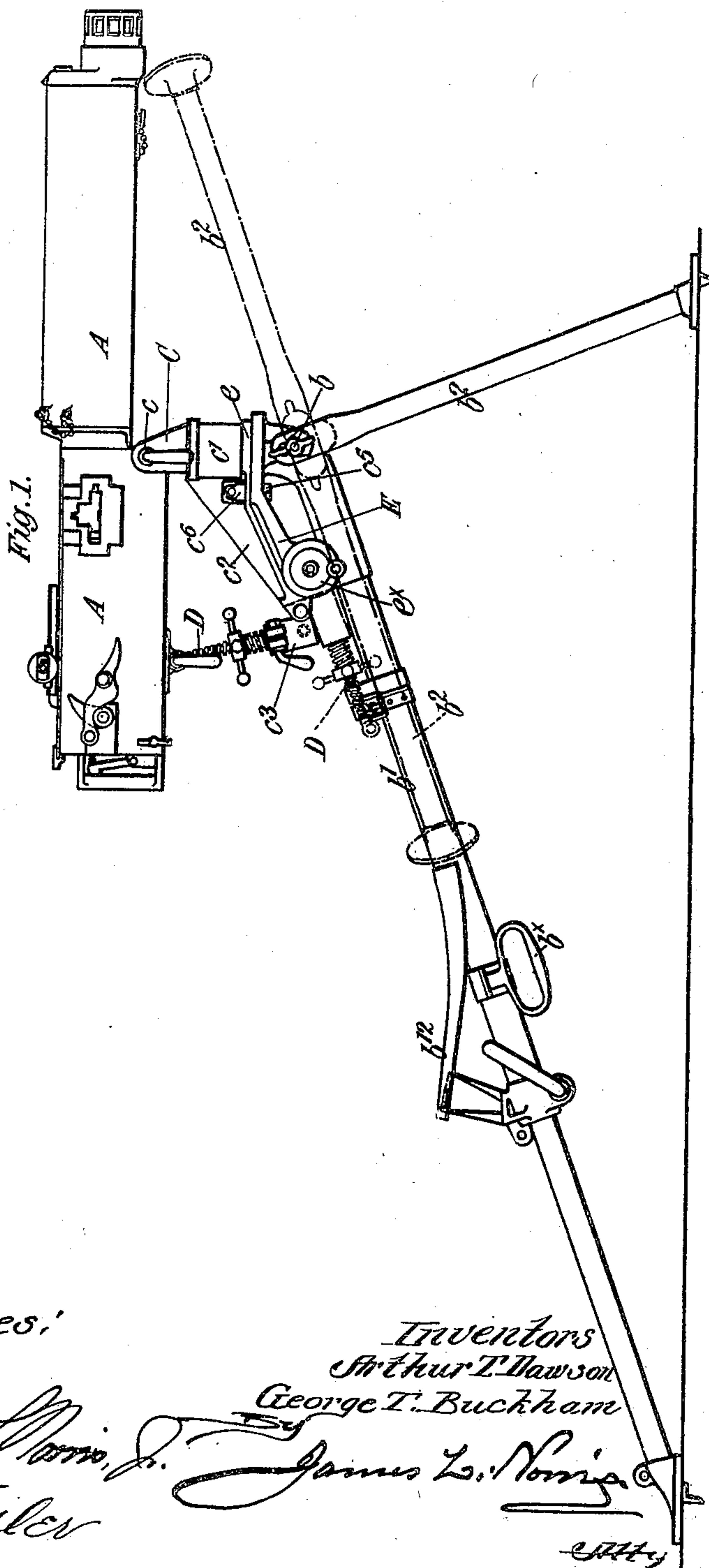
No. 793,995.

PATENTED JULY 4, 1905.

A. T. DAWSON & G. T. BUCKHAM.
GUN CARRIAGE OR MOUNTING.

APPLICATION FILED MAR. 14, 1905.

2 SHEETS—SHEET 1.



Witnesses:

James L. Harris, Jr.
Ed Kesler

Inventors
Arthur T. Dawson
George T. Buckham

James L. Norris

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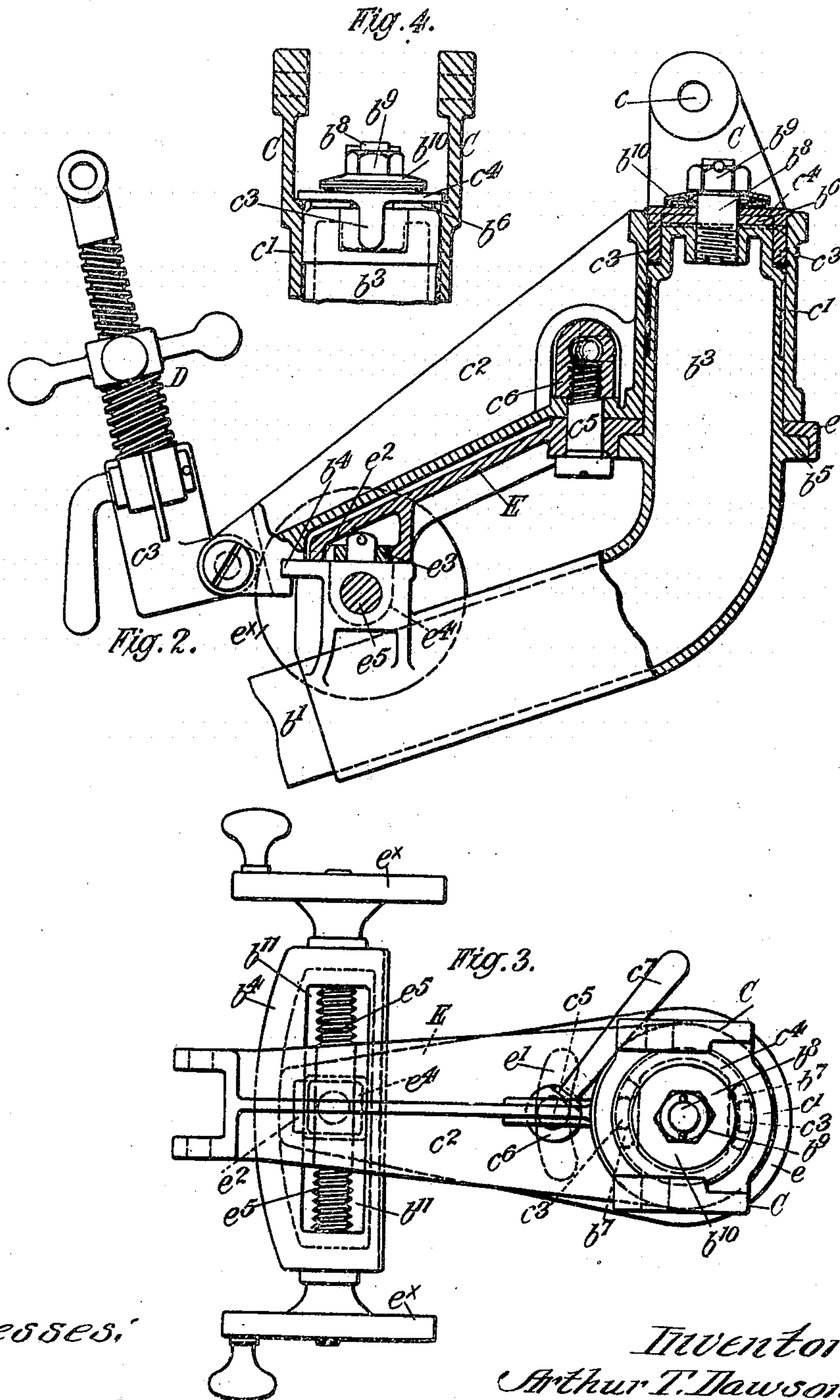
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Witnesses:

James L. Morris, Jr.
C. H. Kesler

Inventors

Arthur T. Dawson
George T. Buckham

James L. Morris
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UNITED STATES PATENT OFFICE.

ARTHUR TREVOR DAWSON AND GEORGE THOMAS BUCKHAM, OF LONDON, ENGLAND, ASSIGNORS TO VICKERS SONS & MAXIM LIMITED, OF WESTMINSTER, ENGLAND.

GUN CARRIAGE OR MOUNTING.

SPECIFICATION forming part of Letters Patent No. 793,995, dated July 4, 1905.

Application filed March 14, 1905. Serial No. 250,078.

To all whom it may concern:

Be it known that we, ARTHUR TREVOR DAWSON, lieutenant of the royal navy, director and superintendent of ordnance works, and
5 GEORGE THOMAS BUCKHAM, engineer, subjects of the King of Great Britain, residing at 32 Victoria street, Westminster, London, England, have invented certain new and useful Improvements in Gun Carriages or
10 Mountings, of which the following is a specification.

Our improvements relate to carriages or mountings chiefly designed for automatic or other machine guns, and particularly applicable to field-guns with mountings having a tripod form of support with a telescopic rear leg and with pivoted front legs.

According to our invention the top carriage is constructed with a cross-head supported on a pivot formed by a vertical cylindrical portion of the tripod-stand, the said cross-head in which the gun is mounted being arranged in combination with a part termed a "traversing plate," on which the
25 boss of the cross-head rests and which can be readily locked to or released from the top carriage, so that both can be turned together upon the pivot, or the top carriage can be turned separately from the traversing plate about the said pivot, thereby enabling the
30 gun to be trained or traversed either by the simple pressure of the hand for rough laying or by the traversing mechanism for fine laying.

35 In order that our said invention may be clearly understood and readily carried into effect, we will describe the same more fully with reference to the accompanying drawings, in which—

40 Figure 1 is a side elevation of a tripod-mounting furnished with our improvements, the said figure representing the gun and mounting in their firing position. Fig. 2 is a vertical section, and Fig. 3 a plan, showing on a larger scale the top carriage and
45 traversing plate and the portion of the trail that carries the same. Fig. 4 is a sectional

elevation of the upper part of the cross-head and pivot as seen at right angles to Fig. 2.

In all the figures like letters of reference indicate similar parts.

A is the gun.

b' b^2 b^2 are the three legs or members of the tripod-mounting, of which the member b' constitutes the trail, to which latter the other members b^2 b^2 are pivoted at b .

C is the cross-head, in which the gun is trunnioned at c , said cross-head having a boss or bearing c' , by means of which it is pivoted to the vertical cylindrical portion b^3 of the trail b' . The said cross-head has an arm c^2 extending rearwardly from its boss or bearing c' to the traversing segment b' , forming part of the said trail b' , the said cross-head and rearwardly-extending arm together constituting what we term the "top carriage." At its extreme end the said arm c^2 has a clamp or support c^3 for the elevating mechanism D. This arm c^2 is so arranged that in turning about its pivot b^3 it slides upon the traversing segment. E is the traversing plate, which has a boss or bearing e fitting around the said cylindrical portion b^3 immediately below the boss or bearing c' of the top carriage and which is supported in place by a collar b^5 , Fig. 2, on said cylindrical portion b^3 . The rearward extension of this traversing plate is arranged to travel when turning about the pivot b^3 upon the aforesaid traversing segment b' . The said top carriage is so formed at the upper end of the boss or bearing c' as to limit the training movement, for which purpose the upper end of the cylindrical portion b^3 has a stationary plate b^6 formed with segmental slots b^7 , Fig. 3, for the reception of depending lugs c^3 of a plate c^4 , adapted to turn with the boss or bearing c' . The parts are kept in place upon the cylindrical portion b^3 by a screw b^8 , projecting upward centrally from the said cylindrical portion b^3 and having a nut b^9 and also spring-washers b^{10} to prevent or minimize slackness or play at the pivot. The

aforesaid arm e^2 carries a clamping-screw e^5 and nut e^6 , whereby the top carriage and traversing plate can be locked to and released from each other, the traversing plate having in it a slot e^7 , Fig. 3, wherein the said screw can move to permit of the necessary lateral adjustment of the top carriage relatively to the plate, either the nut or the screw being provided with a handle or lever e^8 for tightening or slackening the same. In the drawings the nut e^6 is provided with the handle. When released, the said top carriage, together with the gun, can be freely turned by hand about the vertical pivot to quickly traverse the gun to any required position.

For the accurate or fine training or traverse of the gun we provide at or near the end of the traversing plate a rectangular longitudinal recess e^2 , in which is fitted the die or holder e^3 of the nut e^4 of the traversing screw e^5 , which screw extends along a transverse slot or aperture b^{11} , formed in the traversing segment. In this transverse slot or aperture the said nut is caused to travel to the right or left by the action of the screw operated by the hand-wheels e^x , thereby moving the top carriage in the required direction for the lateral training or traversing of the gun. The said rectangular recess e^2 is somewhat longer than the die e^3 , so that the latter as the nut e^4 moves along the said slot or aperture will have sufficient freedom in the said recess to permit the nut during the circular movement of the traversing plate to follow the rectilinear direction due to the revolution of the traversing screw.

It will be seen from the above description that when the clamping screw or bolt e^5 , which locks the top carriage to the traversing plate, is slackened the gun and top carriage can be moved together independently of the traversing plate and quickly turned either to the right or left about its vertical pivot by the pressure of the hand alone, thus affording the means for immediate rough laying of the gun, whereas if fine or accurate laying be required the clamping-screw e^5 must be tightened to lock the said top carriage to the traversing plate, and then the gun can be trained by the hand-wheel e^x of the aforesaid traversing screw on either side of the trail.

In preparing the said mounting for transport the front legs b^2 can be turned to a forward position and adjusted in line with the rear leg or trail b' , as represented by the dotted lines on the right-hand side of Fig. 1. The rear leg or trail is provided with lateral handles b^x , one on each side, so arranged that four men can assist in carrying the said mounting. The tripod can be easily folded to form a compact load suitable for pack transport by turning inwardly the legs b^2

into a position alongside the trail b' , as shown by the dotted lines in Fig. 1, the gun being in the latter case removed from the top carriage.

A seat b^{12} is provided on the trail in a convenient position for the use of the gunner or firing-number when firing the gun.

Although we have shown our improvements applied to a tripod stand or mounting, we wish it to be understood that they are applicable to any other mounting or carriage in which the gun is mounted in a pivoted top carriage substantially as above described.

What we claim, and desire to secure by Letters Patent of the United States, is—

1. In a gun-mounting, the combination of a top carriage in which the gun is trunnioned, a pivot on the mounting about which the top carriage turns in its training movements, a traversing plate movable about the same pivot as the top carriage, traversing mechanism for actuating said traversing plate, and means whereby the top carriage can be moved either independently of the traversing plate for rough training by the hand or simultaneously with the traversing plate for fine training by the traversing mechanism.

2. In a gun-mounting, the combination of a top carriage in which the gun is trunnioned, a pivot on the mounting about which the top carriage turns in its training movements, a traversing plate movable about the same pivot as the top carriage, traversing mechanism for actuating said traversing plate, and a clamp for readily locking or unlocking the top carriage to or from the traversing plate for the purpose specified.

3. In a gun-mounting, the combination of a top carriage in which the gun is trunnioned, a pivot on the mounting about which the top carriage turns in its training movements, a traversing plate movable about the same pivot as the top carriage, traversing mechanism for actuating said traversing plate, a clamping-screw carried by the top carriage and projecting through a segmental slot in the traversing plate, a clamping-nut on said screw, and a handle for actuating said nut substantially as and for the purpose specified.

4. In a gun-mounting, the combination of a top carriage in which the gun is trunnioned, a rearwardly-extending arm forming part of said top carriage, a vertical pivot on the mounting about which the top carriage turns on its training movements, a traversing plate movable about said vertical pivot and situated immediately below the top carriage, a transverse screw rotatably carried by the mounting, a nut on said screw, a holder for said nut fitting in a longitudinal recess in the traversing plate, means for actuating said screw, and means whereby the top car-

riage can be moved either independently of or simultaneously with the traversing plate for the purpose specified.

5 5. In a gun-mounting, the combination of
a top carriage in which the gun is trun-
nioned, a rearwardly-extending arm on said
top carriage, a vertical pivot on the mount-
ing about which the top carriage turns in its
training movements, a traversing plate mov-
10 able about said vertical pivot and situated
immediately below the top carriage, a slotted
stationary segmental traversing segment sup-
porting the rear end of the traversing plate
and the rear end of the top carriage, a trans-
15 verse screw rotatably carried by said slotted
traversing segment a nut on said screw, a
holder for said nut fitting in a longitudinal
recess in the traversing plate, means for ac-
tuating said screw, and means whereby the
20 top carriage can be moved either independ-
ently of or simultaneously with the travers-
ing plate substantially as and for the pur-
pose specified.

25 6. In a gun-mounting, the combination of
a top carriage in which the gun is trun-
nioned, a vertical pivot on the mounting, a
cylindrical bearing on the top carriage fit-

ting around said pivot, a traversing plate, a
cylindrical bearing thereon also fitting
around said pivot below the bearing of the 30
top carriage, a collar on the mounting sup-
porting said superposed bearings, a cover-
plate located above the bearing of the top
carriage and movable therewith, depending
lugs on said cover-plate, a stationary plate 35
situated beneath said cover-plate and having
segmental slots for the reception of the de-
pending lugs, a screw and nut for retaining
said cover-plate and stationary plate on the
mounting, a spring-washer interposed be- 40
tween the cover-plate and the nut, and a
clamp for readily locking and unlocking the
top carriage to and from the traversing plate
substantially as and for the purpose speci-
fied.

45 In testimony whereof we have hereunto set
our hands, in presence of two subscribing
witnesses, this 1st day of March, 1905.

ARTHUR TREVOR DAWSON.
GEORGE THOMAS BUCKHAM.

Witnesses:

HENRY KING,
JOHN G. SHIELDS.