(No Model.) 2 Sheets—Sheet 1.

A. CUTHBERT.

DISAPPEARING GUN CARRIAGE.

No. 525,489. Patented Sept. 4, 1894.

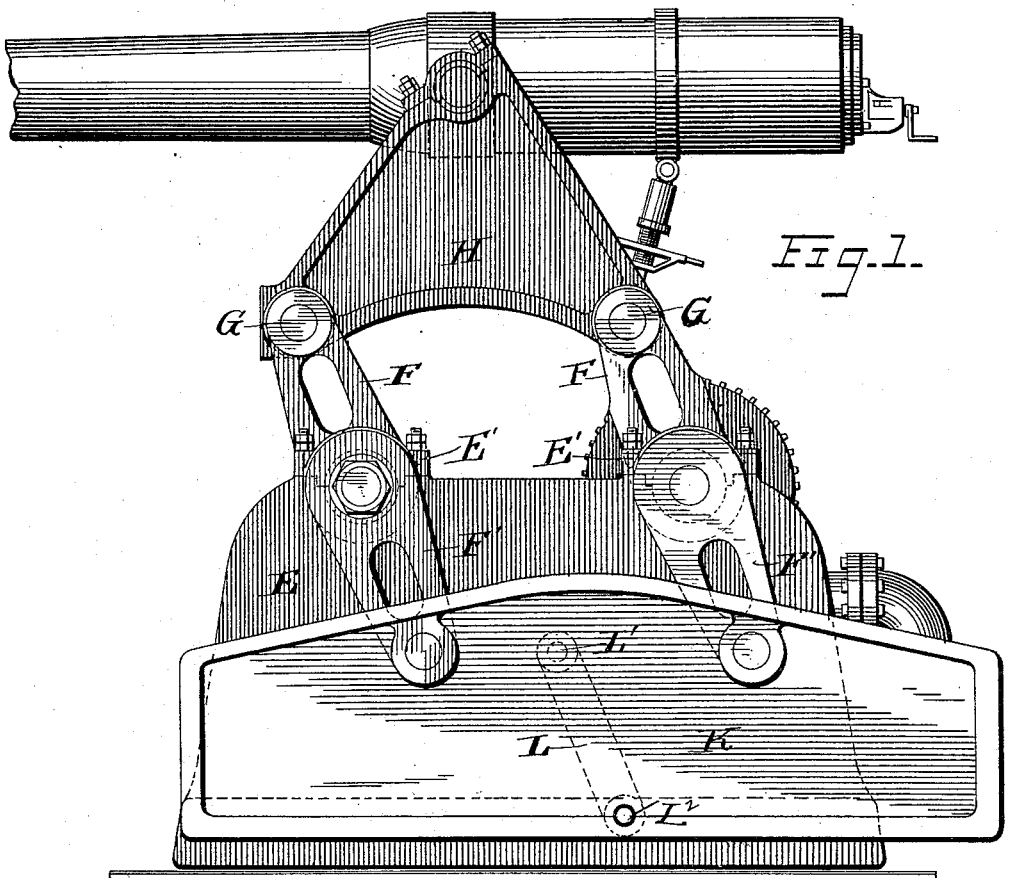

Fig. 1.

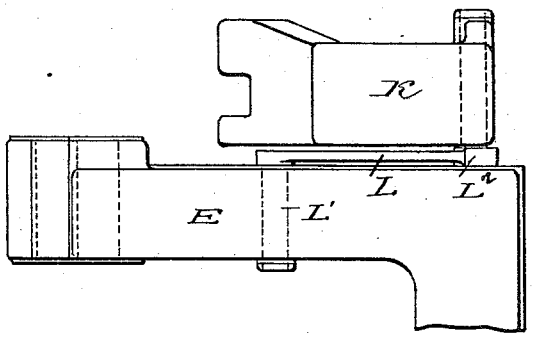

Fig. 4.

Witnesses
E. Nottingham
G. F. Downing.

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(No Model.) 2 Sheets—Sheet 2.

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DISAPPEARING GUN CARRIAGE.

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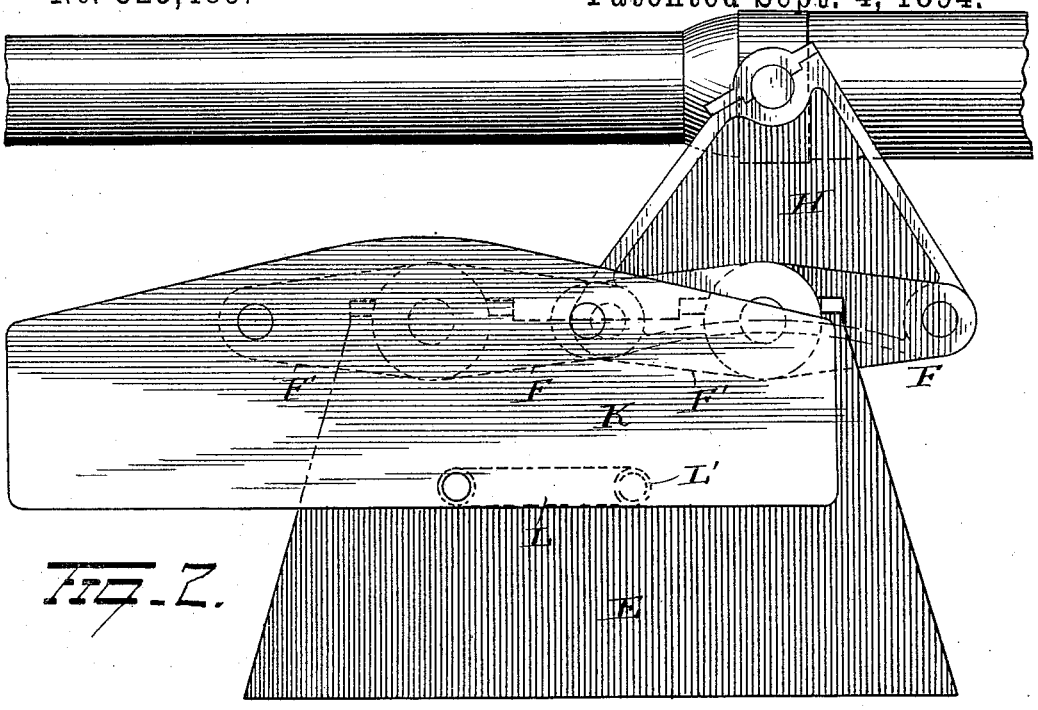

Fig. 2.

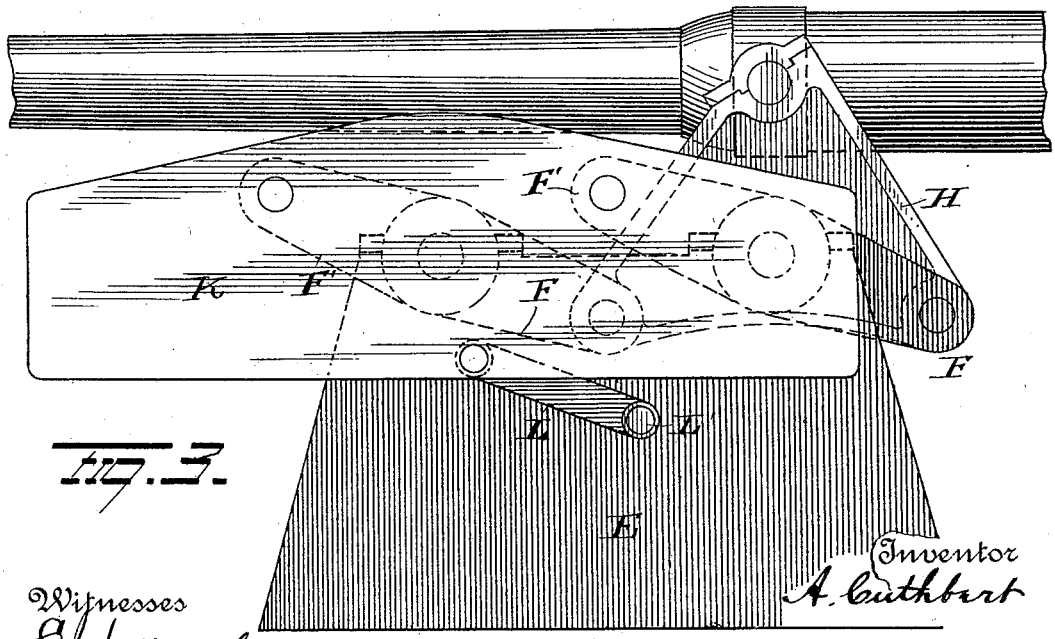

Fig. 3.

Witnesses
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UNITED STATES PATENT OFFICE.

ALEXANDER CUTHBERT, OF ALLIANCE, OHIO, ASSIGNOR TO THOMAS R. MORGAN, SR., OF SAME PLACE.

DISAPPEARING GUN CARRIAGE.

SPECIFICATION forming part of Letters Patent No. 525,489, dated September 4, 1894.

Application filed February 15, 1894. Serial No. 500,290. (No model.)

To all whom it may concern:

Be it known that I, ALEXANDER CUTHBERT, of Alliance, in the county of Stark and State of Ohio, have invented certain new and useful Improvements in Disappearing Gun Carriages; and I do hereby declare the following to be a full, clear, and exact description of the invention, such as will enable others skilled in the art to which it appertains to make and use the same.

My invention relates to an improvement in disappearing gun carriages, and is designed more particularly as an improvement on the gun carriage disclosed in W. B. Gordon's patent, No. 497,977, granted him May 23, 1893. Where the counterweights are each carried by two cranks, there is a tendency when the cranks are horizontal and the counterweights necessarily elevated, and particularly so when the counterweights are heavier at one end than the other, for the heavier ends to drop thus elevating the lighter ends. When this occurs it is necessary to first elevate the depressed end until the cranks are again in a horizontal position or on a dead center, before the counterweights can be lowered.

The object of my invention is to provide means for holding the counterweights horizontal while passing the dead center and it consists broadly in two pairs of cranks carrying a top carriage at their upper ends and counter weights at their lower ends, and an independent crank for each counterweight located below the cranks carrying the counterweights and connecting the counter-weights and frame or housing.

My invention further consists in certain details of construction and combination of parts as will be more fully described and pointed out in the claims.

As my invention relates solely to the devices for holding the counterweights horizontal throughout their entire movement it will be unnecessary to go into the details employed for maneuvering the gun or carriage.

In the accompanying drawings, Figure 1 is a view in side elevation of a Gordon gun carriage embodying my invention. Fig. 2 is a diagrammatic representation of same showing the cranks on their dead centers. Fig. 3 is a similar view showing the counterweights in their elevated positions and the gun in its depressed position, and Fig. 4 is a view of one of the cranks L.

A represents a base or bed plate constructed in any desired manner and supported on any suitable pivot or foundation. The side frames E of the carriage are permanently fastened to the bed plate A. Each side frame is provided on its upper edge with bearings E′ in which are mounted the crank arms. These arms are arranged parallel, two to a side and are connected at their upper ends to shafts G, which pass through the cheek pieces H rigidly braced a suitable distance apart to receive the gun between them, each piece having trunnion bearings for the reception of the trunnions of the gun I. The shafts G pass through the cheek pieces which constitute the top carriage, from side to side and are journaled therein, one in front and one in the rear, and are rigidly fastened at their outer ends to the parallel arms F of the crank arms. These arms are each in effect two cranks, the inner cranks F, which are clearly shown, are located in planes inside the inner faces of the side frames, and support the top carriage, and the outer cranks F′ rest on the outside of the side frame and support the counterweight K, which latter counterbalance the weight of the gun. The four parallel crank arms are as before stated journaled in the side frames E of the lower carriage and at their lower ends to the counter weights, hence it follows that when the upper carriage with the gun thereon is rising the counterweights are descending and vice versa.

As the crank arms are connected at their tops to the top carriage they together with the counterweights carried thereby are prevented from moving independently.

From the foregoing it will be seen that the carriage as thus far described consists of a bed plate carrying a main carriage or side frames, parallel crank arms journaled in said side frames, counter weights each carried by two arms, and a top carriage carried by the four arms, so that as the gun and top carriage move rearwardly and downwardly from the effect of the recoil, the counter weights move forwardly and upwardly until they come to a rest. When in this latter position the gun is

in its lowest position, or in its position for loading, and the counterweights are in their elevated position, and hence in a position to raise the gun or assist in raising it to its firing position.

The above features are the invention of said Gordon; my invention consists essentially in connecting the counterweights to the side frames E by the cranks L. These cranks L instead of being double cranks like cranks F. F′ are single cranks and of a length equal to the length of the outer cranks F′. These cranks L are carried on crank pins L′ journaled in the side frames E approximately in the plane of the lower crank pins on cranks F′ when the counterweights are in their normal position as shown in Fig. 1. The lower crank pins L^2 of cranks L pass through or partly through the counterweights near the lower edges of the latter and hence it will be seen that as the counterweights move upwardly by the recoil of the gun, or downwardly to restore the gun to its firing position the cranks L (one for each counterweight) are moved and absolutely prevent the counterweights from tipping at either end thus permitting them to pass the dead center while in horizontal position.

It is evident that slight changes and alterations might be resorted to without departing from the spirit and scope of my invention, hence I would have it understood that I do not confine myself to the details herein shown and described but consider myself at liberty to make such changes and alterations as fairly fall within the spirit and scope of my invention.

Having fully described my invention, what I claim as new, and desire to secure by Letters Patent, is—

1. In a disappearing gun carriage, the combination with a main frame, two pairs of pivoted arms or cranks mounted therein and a top carriage for a gun, the said carriage supported upon the upper ends of said pivoted arms or cranks, of two counterweights each carried by two of the pivoted arms or cranks and a third crank connecting each counterweight with the main frame of the carriage.

2. In a disappearing gun carriage, the combination with a main frame, two pairs of pivoted arms or cranks mounted therein and a top carriage for a gun, the said carriage supported upon the upper ends of said pivoted arms or cranks, of two counterweights each carried by two of the pivoted cranks or arms, and a third crank connecting each counterweight with the main frame of the carriage, the said third cranks being located in a plane below the axis of the main cranks or arms, substantially as set forth.

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

ALEXANDER CUTHBERT.

Witnesses:
H. W. HARRIS,
W. H. MORGAN.