F. A. DeMEY.
Mounting Ordnance.

No. 36,457.

Patented Sept. 16, 1862.

Fig 1

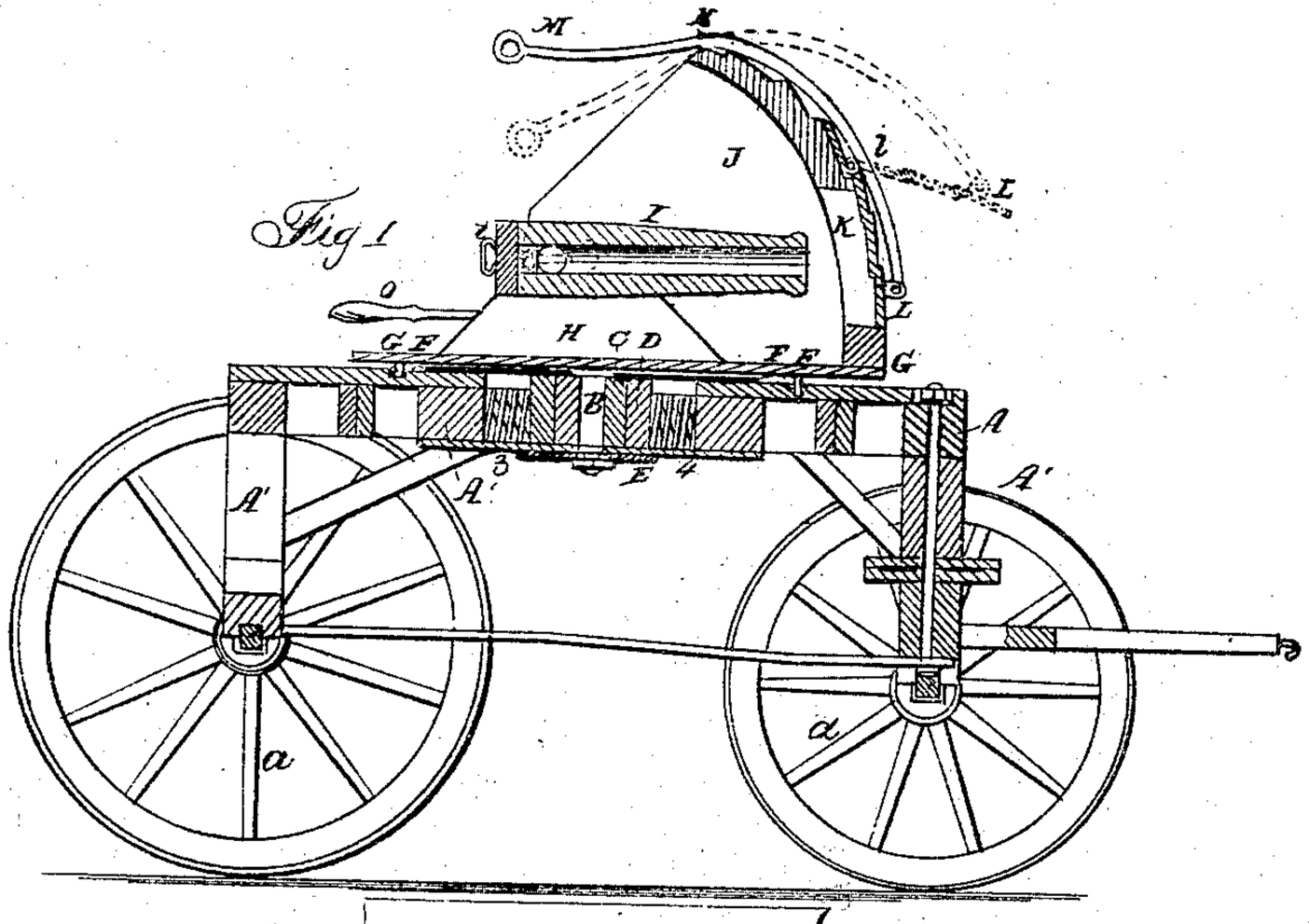


Fig 2

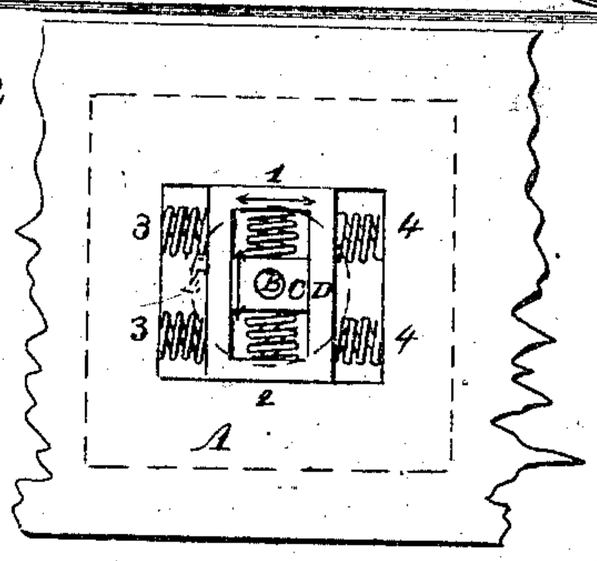
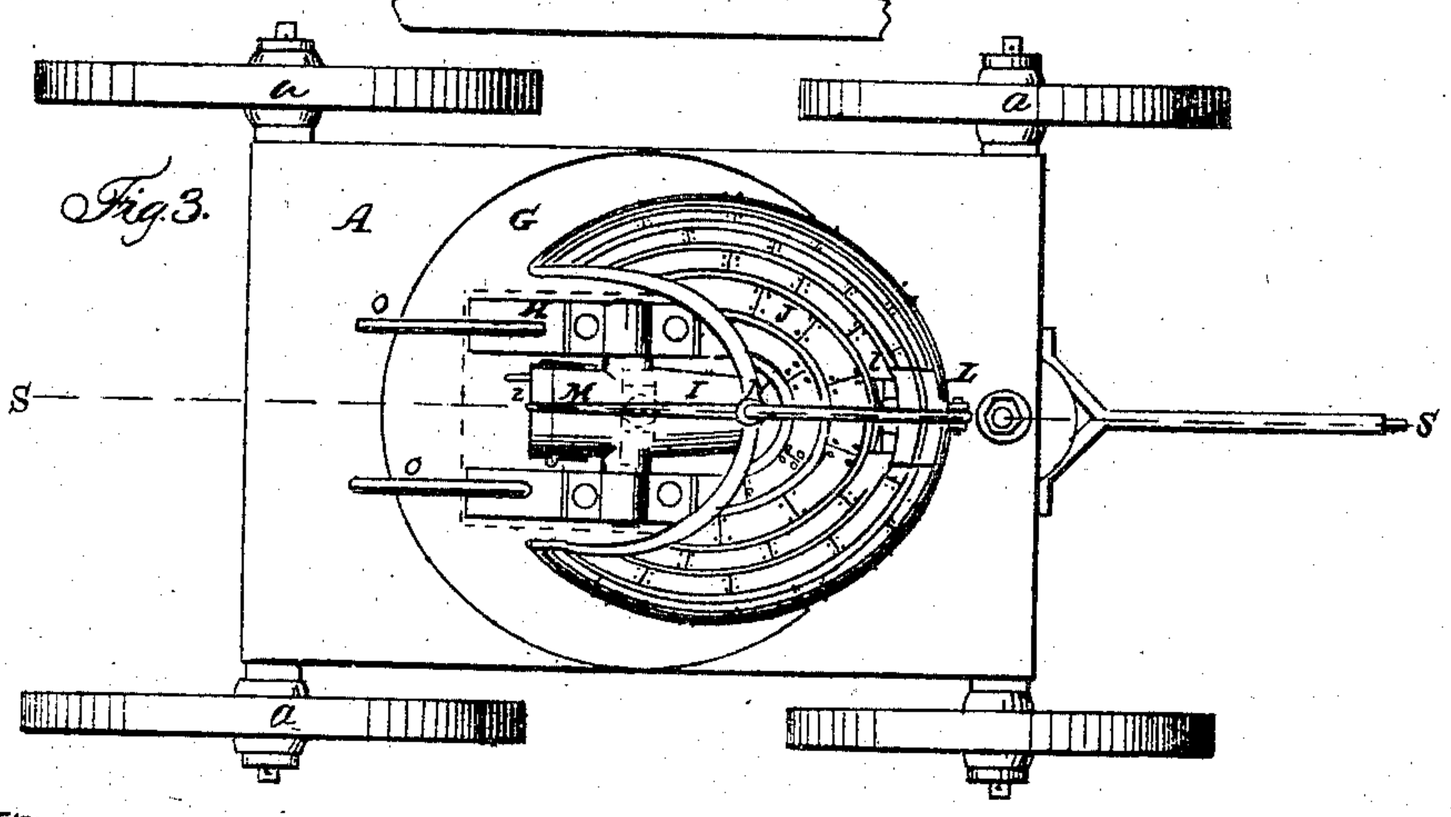


Fig 3.



Witnesses

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FERDINAND A. DE MEY, OF NEW YORK, N. Y.

IMPROVEMENT IN MOUNTING FIELD-ORDNANCE.

Specification forming part of Letters Patent No. **36,457**, dated September 16, 1862.

To all whom it may concern:

Be it known that I, FERDINAND A. DE MEY, of the city, county, and State of New York, have invented a certain new and important Improvement in Mounting and Protecting Guns, which I denominate a "Revolving Field-Battery;" and I do hereby declare that the following is a full and exact description thereof, which has been prepared with a view to the obtaining of Letters Patent for the same.

The accompanying drawings, forming a part of this specification, are figures illustrating my invention.

Figure 1 is a longitudinal vertical section of my entire construction. It is on the line S S in Fig. 3. Fig. 2 is a plan view of a portion, showing my springs and slides for accommodating the recoil of the gun; and Fig. 3 is a plan view of my entire construction.

Similar letters of reference indicate like parts in all the figures.

My invention is intended for general field service, but is especially useful for light or flying artillery, or for service in those situations where the position requires to be very frequently and rapidly changed, or where the gun requires to be served during a movement, as on a rapid and continuous advance or retreat. A very marked advantage attending its use also lies in the protection afforded by its revolving shield or turret against rifle-balls and all small projectiles. Another advantage lies in the commanding position it affords in the event of receiving a charge, either of infantry or cavalry.

The gun I employ is a breech-loader. No particular style of such gun is required, as any may be used. The construction of breech-loading artillery known as "Bishop's patent," patented in the year 1856, will answer well, and is probably among the best for the purpose.

I mount my breech-loading gun on a revolving platform, providing all the well-known facilities (not represented) for elevating and accurately laying the piece. On the same platform, and revolving necessarily with the gun, is a stout shield of iron, of the form represented, adapted to protect the gun from missiles received in front and on either side, and to protect the gunners in the manner which is obvious. This shield may be of any desired form and construction; but I prefer riveted plates of rolled iron united so as to form a partial dome of the form represented, or of a form a little wider at the point opposite the breech of the gun. Opposite the muzzle I provide a suitable port for the discharge of the gun, and protect it by a stout shield of iron hung in the manner represented, so that it may be raised and lowered at pleasure. It is raised and held up during the interval of the discharge, and dropped, so as to protect the opening, during the loading of the piece.

I mount my platform, in the manner of a railway turn-table, on another platform, which latter is supported on stout wheels in the manner shown, so that the whole may be readily moved and rested at pleasure without unlimbering. The turning of the gun and shield upon the carriage may be effected by the direct efforts of the men applied to the handles or levers projecting rearward, or by any suitable mechanism therefor; and it will be obvious that the shield will always be so presented as to defend the gun and the gunners from missiles coming from that point toward which the gun is directed, and in which the enemy is supposed to lie in greatest force, while the other side of the gun and turret is exposed for light and ventilation. I connect my revolving platform to the carriage-platform through the intervention of stout horizonal springs so arranged as to allow, in connection with the housings or slides, a sufficient horizontal motion of the one relatively to the other in every possible direction to provide for the recoil. The construction of this latter feature and the several others will be better understood from a careful description, referring to the details of the figures by letters of reference; and to enable those skilled in the art to make and use my invention, I will so describe the entire invention.

A is a stout platform of timber, carried at the height of about six feet (more or less) from the ground by the means of the stout risers A′ A′ and the four wheels *a a a a*. The forward wheels are adapted to turn upon the king-bolt in the ordinary manner to any extent desired, and a suitable tongue of any length or character desired is provided, as usual, for the attachment of the horses. The risers are stoutly braced, as represented, and the whole is provided with all ordinary and approved appliances for durability and easy motion.

B is a swiveling-pin, welded or otherwise firmly connected to the turn-table plate above. It is supported in a stout slide, C, as shown in Figs. 1 and 2, which latter part is free to slide between the parallel surfaces of the inclosing-slide D. The latter slide, D, is free to slide between the parallel surfaces of the inclosing-framing, which forms part of the carriage A. Stout springs 1 and 2 tend to confine the slide C near the center of the carriage by tending toward the center of the slide D, and corresponding springs, 3 3 and 4 4, conduce to a like effect by tending to hold the entire slide C, with its contents, in the center of the space represented within the platform A. Each slide is allowed by the springs to move, and the direction of the motion of each is indicated by the arrows in red, which are pointed at each end, to indicate that the motion may be in either direction in the line indicated. The slide D is provided with a broad plate on its upper and lower faces, which overlaps upon the carriage-platform A, and also to a certain extent upon the central slide, C, so as to hold the whole in the same horizontal plane. The outline of these plates is indicated in dotted lines in Fig. 2. The hole to receive the swiveling-pin B must be oblong, as represented, to allow the pin and its connection to slide within D. A large washer, E, of such size as to completely cover this hole on the under face of the plates, is shown in Fig. 1 and outlined in Fig. 2. Below this I secure a nut, or a nut and jam-nut, so as to prevent any derangement of the parts by any ordinary violence.

In the upper surface of the carriage-platform A, I mount small friction-wheels F, as represented, adapted to carry the revolving platform or turn-table, as represented.

G is my revolving platform. It is circular, and turns freely around the pintle or swiveling-pin B, resting its weight upon the anti-friction wheels F, or "friction-wheels," as they are generally called by mechanics.

H H are two stout supports of timber resting firmly upon G, and adapted to carry the trunnions of the cannon.

I is the cannon, provided with a removable breech, *i*, and with all the appurtenances of a serviceable breech-loading cannon. This style of cannon, although not much used, is so well known as to require no special description. The same is the case with the elevating screw-sight, lock, vent, and other details which pertain to all ordinary cannon. All the ordinary means of insuring the efficiency and correctness of aim of any gun may be used with mine, including the use of rifle-grooves, polygonal bore, and all the known styles of rifle-projectiles, rifle or plain canister, &c.

J is a stout dome or partial dome, made of iron or steel, or partly of wood and partly of the stronger material. The material may be bolted or otherwise applied together in any known manner; but I prefer to bolt or rivet the parts in the form of rolled iron of moderate thickness, the upper edges only being presented to the eye, the lower edges being abutted against the wood-work or other foundation upon which these surface-plates are laid. The manner of applying these plates and the bolts or rivets for securing the same is indicated in Figs. 1 and 3, as also the extent to which I deem it most expedient to carry the dome up over the gun and men. I prefer, however, to make the back edges of the shield or partial dome wider apart, so as to give more space each side of the gun within the dome. I would, as a matter of convenience, generally prefer to make the dome or partial shield J about the same breadth as the turn-table G.

K is a port or aperture in the shield J, of such size as to allow the safe firing of the cannon through the same, and also to provide for elevating and depressing the piece to all the angles required.

L is a bullet-proof cover hinged to the shield G at *l*, as represented.

M is a lever of the form represented, adapted to slide through an eye or bearing, as represented at N, and to be pulled downward by the hands of the men, or by other suitable means, so as to elevate the cover L at the moment of firing. On releasing M the parts again resume the position shown by the black lines in Fig. 1, they having been, during the act of firing, in the position shown by the red lines. The action of releasing may be made automatic, if desired, by providing a simple catch to hold the end of M, or to hold a cord or the like attached thereto, which shall be released by the motion or concussion of the parts on the discharge of the piece.

O O are the handles by which the turn-table G and its load is revolved.

A motion of the cannon I upon the platform or turn-table G may be allowed by any known means, if it be found necessary or desirable, in order to provide more completely for the recoil of the gun; but it is obvious that such motion must be limited by strong springs or great friction, so as to prevent an excess of motion.

My wheels *a* and risers A′ may be made larger or smaller than represented, so as to give a greater or less elevation to the gun above the ground. I prefer to make the height of the platform G about six feet above the earth. This enables me to fire my gun over the heads of the horses, if well trained, and to operate over the infantry, who may, if necessary, be completely in front of the gun, for its protection or for any other purpose.

The advantages due to some of the features of my invention may be recapitulated briefly as follows: The mounting of my gun at such an elevation as to command in all directions over the horses and men in its vicinity, taken in connection with the rotation on the swivel-pin and the ability to fire in all directions without changing the position of the carriage, or while it is moving, allows the gun to be better protected by infantry to aid the operations of infantry, and to be served during a rapid march better than ordinarily, and allows a

gun to be moved from a dangerous position more rapidly and with less loss of time in the firing than ordinarily, while it also makes a gun less easily captured by cavalry, even if the infantry defenses are overcome. The combination therewith of the front shield, in connection with the breech-loading principle, allows the men and the material to be better protected from rifle-shot and shells than ordinarily, even though their elevated position makes them conspicuous objects for an enemy's aim. The employment of the slides and springs in connection with my invention, as above, diminishes the shock of the concussion upon the running parts, and avoids or diminishes the motion of the gun relatively to the platform G and shield, so that the gun need not recoil out of the wings of the shield, even if the shield is made of moderate size.

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

1. The combination of a gun, front shield, revolving table, and supporting-carriage, with a provision for the recoil of the gun when fired in any direction thereon, the whole being arranged to operate as artillery, either in a state of rest or of motion, without necessary alteration, substantially as described.

2. The employment, in a carriage for ordnance substantially of the character herein described, of the slides C D, and of springs controlling the motion thereof, arranged to operate as herein set forth, and this I claim irrespective of the precise construction of the springs.

In testimony whereof I have hereunto set my name in the presence of two subscribing witnesses.

F. A. DE MEY.

Witnesses:
THOMAS D. STETSON,
JAMES LYMAN.