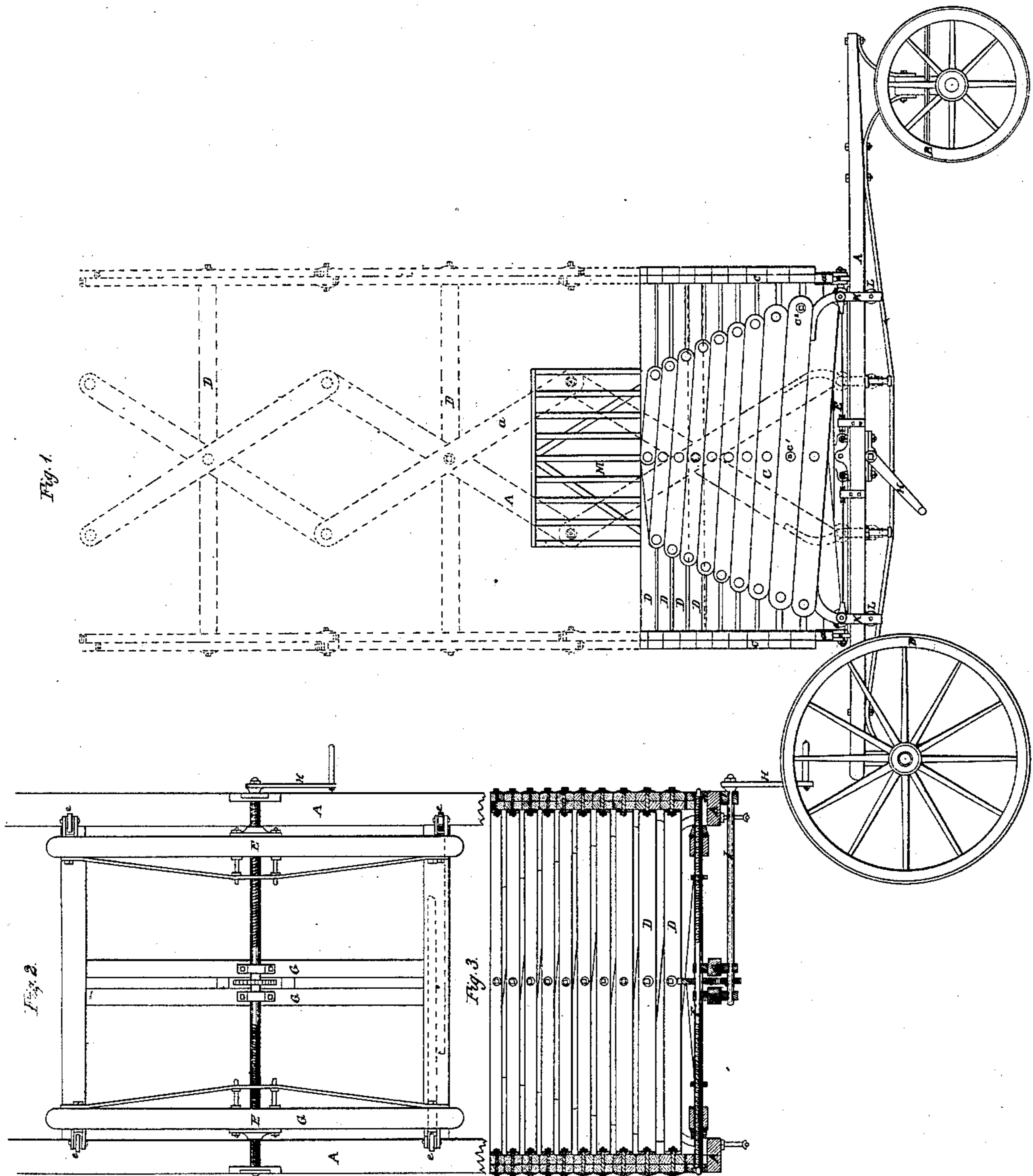


B. P. Lamason,
Fire Escape,

N^o 45,453.

Patented Dec. 13, 1864.



Witnesses:
James M. Gintock
James Wilson

Inventor:
Benny P. Lamason

UNITED STATES PATENT OFFICE.

BENJAMIN P. LAMASON, OF ALEXANDRIA, VIRGINIA, ASSIGNOR TO
HIMSELF AND SIDNEY D. KING, OF SAME PLACE.

IMPROVED SIGNAL-TOWER.

Specification forming part of Letters Patent No. 45,453, dated December 13, 1864.

To all whom it may concern:

Be it known that I, B. P. LAMASON, of the city and county of Alexandria, in the State of Virginia, have invented a new and Improved Portable Signal-Tower; and I do hereby declare the following to be a full and exact description of the same, reference being had to the accompanying drawings, making part of this specification, in which—

Figure 1 is a side elevation of my improved signal-tower. Fig. 2 is a plan of a portion of the truck or wagon-body, exhibiting the devices for operating the extensible frames, hereinafter referred to. Fig. 3 is a central transverse section representing the tower as folded or contracted, ready for transportation.

Similar letters of reference indicate corresponding parts in the several figures.

The subject of my invention is a "signal-tower" designed especially for the use of the army and adapted to be readily conveyed any distance upon a truck or wagon-body, and by means of a very simple apparatus carried by the latter to be extended or run upward to a height of one hundred feet, more or less, in order to make its top constitute a suitable point for observation and signaling. It may also be folded down or contracted until it assumes such a compact form that it may be transferred from one locality to another with facility.

In order that others skilled in the art to which my invention appertains may be enabled to fully understand and use the same, I will proceed to describe its construction and operation.

In the accompanying drawings, A represents a wagon-body mounted upon wheels B, these parts being made of strong material securely put together, in order to sustain the tower mounted thereon. This tower consists, essentially, of four extensible frames, C C, which are disposed at the four sides of a hollow square—that is to say, each frame occupies a position at right angles to the other. Each frame is composed of bars arranged in two parallel series, crossing each other at oblique angles, and pivoted or bolted at each intersection, as shown at C', and the pairs thus formed are pivoted or bolted to each other at their ends, as at C². Frames constructed as above described

are commonly known as "Jacob's ladder" or "lazy tongs" frames.

The frames are connected and caused to move together, when the requisite power is applied, by platforms D, one of which may be attached at each corner to the intersecting bars. At the center of each platform is an opening to admit the passage of the operators within the inclosure formed by the frames A *a*, when extended upward in the manner indicated by the red lines in Fig. 1. The lower pairs of bars of the front and rear frames are indicated by the letter C. These bars C are made double to give them additional strength, as they are subjected to the greatest strain, and at their free ends they are connected by suitable joints to sills E E, which rest upon the body A and are placed parallel with the longitudinal center of the latter. These sills E E are provided with rollers *e e*, which adapt them to be readily moved inward or outward—or, in other words, away from or toward the center of the body A—by a right and left screw, F, which has a central bearing in longitudinal bars G, and end bearings at the sides of the body A. The screw F is rotated by a crank, H, upon a shaft, I, through the medium of gear-wheels J J, which latter may serve to multiply the power applied to the crank by hand or otherwise. When the tower is contracted, as represented in Fig. 3, the turning of the crank H causes the sills E to move inward and toward each other, and they carry with them the ends of the lower bars. The bars being all connected—the front and rear bars to the ends of sills E E and the side bars with a chain to their several ends, moving over the wheel or pulley N N, and attached to the sills E E—have transmitted to them the motion given to the bars *a*, and as the sills E continue to move inward the frames C *c* are "opened out" and gradually extended upward until they assume the position represented by the red lines in Fig. 1. The upper platform is thus carried to the desired elevated position to enable the operators to make the necessary observations and signals. A reverse motion of the crank H causes the ends of the bars *a* to move outward and the frames, in consequence thereof, are contracted or folded down upon each other, as in Fig. 3.

When the tower is elevated, the platforms D are ordinarily about ten feet above one another. To enable the persons in charge to ascend from the lowest to the highest platform, I propose to employ ladders hinged to each succeeding platform, which occupy perpendicular or nearly perpendicular positions between the several platforms when the tower is raised up, but which are adapted to fold between the platforms when the tower is lowered. By means of these ladders the ascent may be rapidly and easily made.

K may represent strong pivoted arms, which constantly bear against the lower bars of the side frames and brace them against any lateral strain they may receive, for the purpose of preventing them from running off the body A. The braces K, which are adapted to effectually resist lateral pressure by having their lower ends provided with grooved wheels *z*, fit and move upon proper guides, which are secured to the under side of body-frame A.

By using four frames, C, arranged in the

manner described, the tower when raised will constitute a firm steady structure.

M may represent railings which are hinged to the upper platform, D in order that they may lie flat thereupon or be raised up, as in Fig. 1, to form a safety-inclosure when the tower is raised.

Having thus described my invention, the following is what I claim as new therein and desire to secure by Letters Patent:

1. The extensible and contracting frames C, employed in combination with the connecting-platforms D and movable sills E, the whole being constructed and arranged to operate in the manner herein set forth.

2. In combination with the above, the right-and-left screw F and crank H, together with the shaft I and gears J J, when arranged to operate in the manner and for the purpose herein described.

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