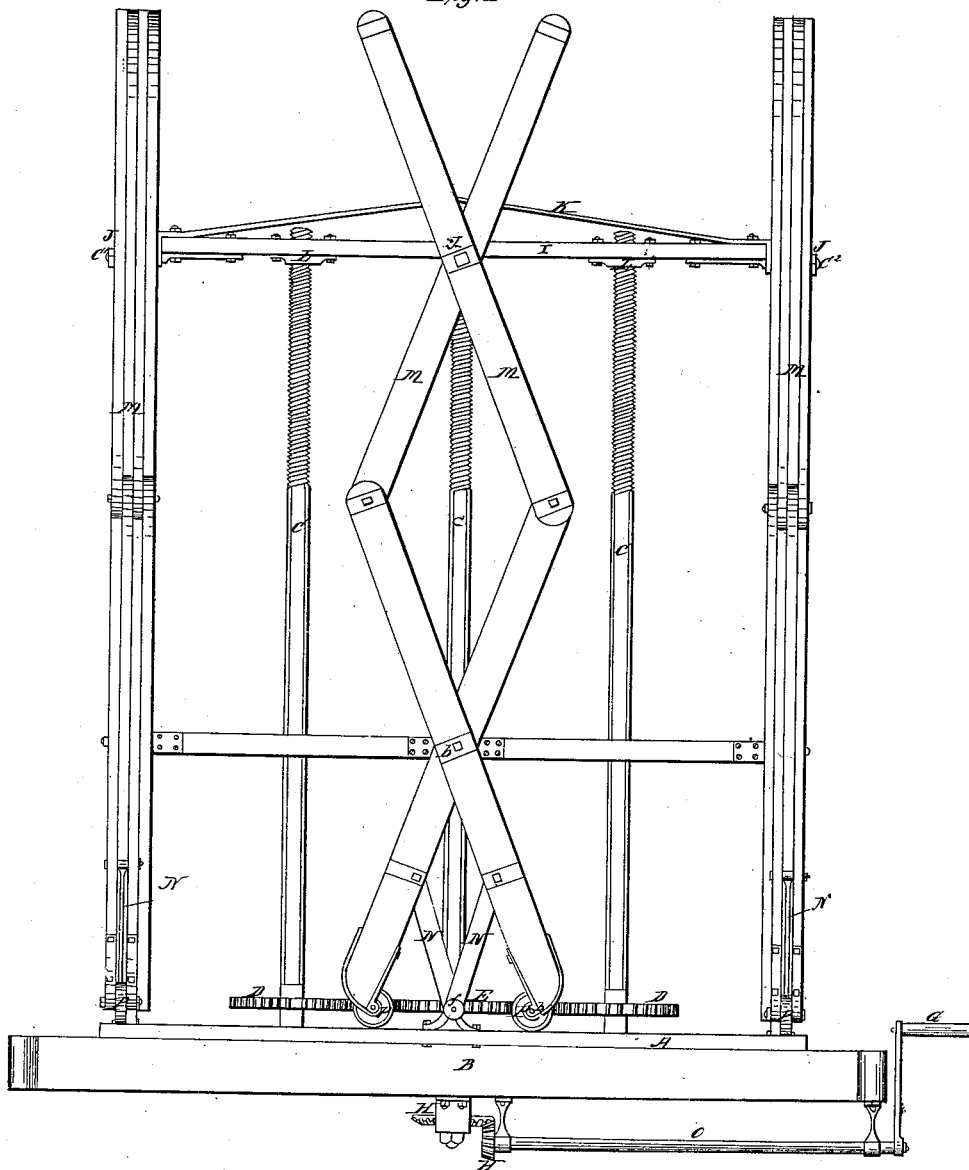


B. P. LAMASON & S. D. KING.  
SIGNAL TOWER.

2 SHEETS—SHEET 1.

Fig. 1

Plate No 2.



Witnesses:

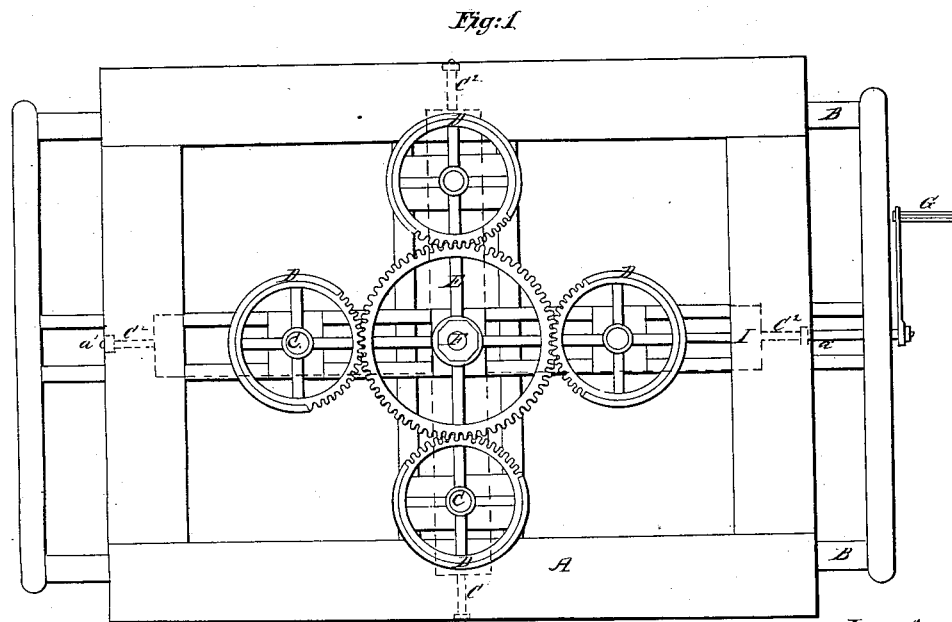
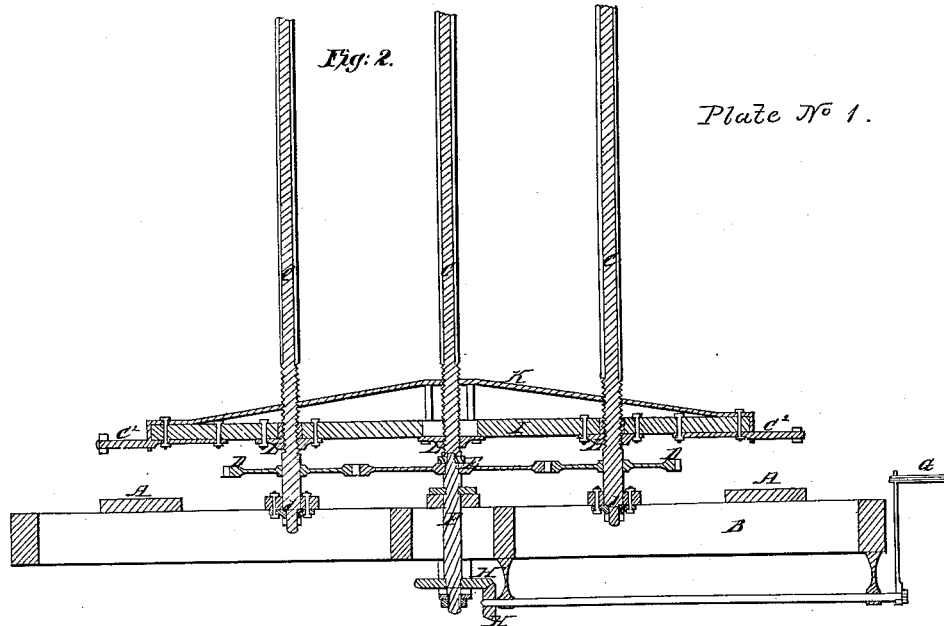
R. H. Morgan,  
P. R. Chand.

Inventor:

B. P. Lamason  
S. D. King

B. P. LAMASON & S. D. KING,  
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Witnesses:  
R. W. Morgan  
P. B. Carand.

Inventor:  
B. P. Lamason  
S. D. King

# UNITED STATES PATENT OFFICE.

BENJAMIN P. LAMASON AND SIDNEY D. KING, OF ALEXANDRIA, VIRGINIA

## IMPROVEMENT IN SIGNAL-TOWERS

Specification forming part of Letters Patent No. 47,026, dated March 28, 1865.

*To all whom it may concern:*

Be it known that we, BENJ. P. LAMASON and SIDNEY D. KING, of the city of Alexandria, in the county of Alexandria, in the State of Virginia, have invented a new and useful Improved Mode of Elevating Signal and other Towers; and we do hereby declare that the following is a full, clear, and exact description of the construction and operation of the same, reference being had to the annexed drawings, and to the letters of reference marked thereon, making a part of this specification.

To enable others skilled in the art to make and use our improvement, we will proceed to describe its construction and operation. We construct it substantially of wood and iron, as shown in the accompanying drawings, in which—

Plate No. 1. Figure 1 is a plan view showing the position of the screws, wheels, &c. A is a wooden frame, resting upon and secured to sills B B of truck-frame; C C C C, vertical iron screws; D D D D, cog-wheels; E, pinion-wheel; F, vertical shaft. This also shows the form and position of truss-bolster. (Indicated by the red lines.) I represents wood-work of bolster, which is constructed in the form of a cross; C<sup>2</sup> C<sup>2</sup> C<sup>2</sup> C<sup>2</sup>, iron pivots secured to the several ends of bolster. To give strength and stiffness to the bolster, an iron truss extends longitudinally on top side of bolster, from pivot to pivot, and also transversely from pivot to pivot.

Fig. 2 represents a longitudinal sectional elevation through *a' a'*, showing the manner of securing the screws, &c., to frame A and sills B. C C C C are vertical screws; D D, spur-wheels; F, vertical shaft, upon the top end of which is secured the pinion-wheel E; H H, beveled gear-wheels, secured to lower end of vertical shaft F and crank shaft O; G, crank; I, bolster; K, iron truss on bolster; C<sup>2</sup> C<sup>2</sup>, pivots on ends of bolster; L L L, iron burrs; *d' d'*, journals on lower ends of screws; *c' c'*, journal-boxes secured to sills B, in which the screws C revolve.

Plate No. 2: Fig. 1 is a longitudinal side elevation showing the entire combination. M M M M are wooden arms or levers, which compose the tower; N N, short arms, the top ends of which are secured to the lower ends of tower-levers M, midway between the points

*b' b'*. The lower ends are secured to the frame A at the point *f*. The object of these arms is to secure the tower to the frame. The arms are so adjusted as to allow the rollers P P on the ends of tower-levers to have a continuous bearing upon the frame A, upon which are secured proper guides to keep the rollers in position. I represents truss-bolster. The pivoted ends C<sup>2</sup> C<sup>2</sup> pass through the second series of tower-levers at J. L L are iron burrs, which are secured to under side of bolster, and in which the screws C C C C revolve.

The second series of levers being secured to the bolster I, and the first or lower series being secured to frame A by means of the short arms N N, as shown, the following is the mode of operation: Power being applied to the crank G, motion is transmitted, through the medium of the beveled gear-wheels H H, vertical shaft F, and pinion-wheel E, to spur-wheels D D D D, in which vertical screws C C C C are secured, and causing them to rotate either backward or forward, as may be desired. Thus, motion being given to the screws which operate in the burrs L L, the bolster I is carried upward or downward at will. This movement of the bolster gradually opens and extends the tower-levers M until they assume the desired elevation.

Towers are easily elevated by this improved mode, and by these means compose a strong and substantial structure. The same device, with slight deviations, can be applied at the top or last series of the tower-levers as well as at the first series.

What we claim as our invention, and desire to secure by Letters Patent, is—

1. The short arms N N and the bolster I, when constructed and used in the manner and for the purpose herein described.

2. In combination with the above and with the vertical iron screws C C C C, the spur-wheels D D D D, pinion-wheel E, vertical shaft F, and bevel gear-wheels H H, arranged and operating substantially as and for the purpose herein specified.

BENJA. P. LAMASON.  
SIDNEY D. KING.

Witnesses:

P. W. MORGAN,  
P. R. EVANS.