

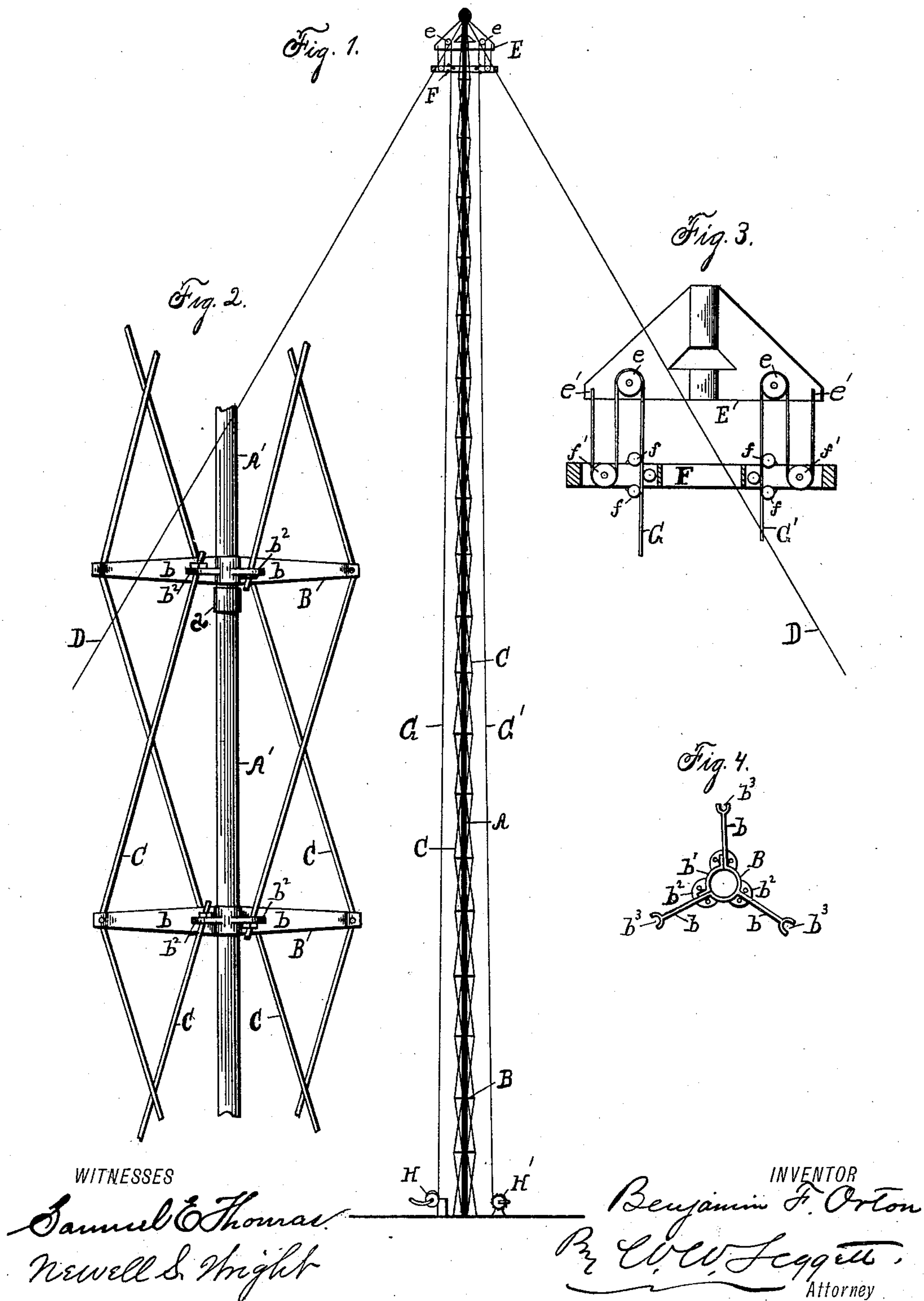
(No Model.)

B. F. ORTON.

TOWER FOR ELECTRIC LIGHTS.

No. 280,850.

Patented July 10, 1883.



# UNITED STATES PATENT OFFICE.

BENJAMIN F. ORTON, OF EAST SAGINAW, MICHIGAN.

## TOWER FOR ELECTRIC LIGHTS.

SPECIFICATION forming part of Letters Patent No. 280,850, dated July 10, 1883.

Application filed October 6, 1882. (No model.)

*To all whom it may concern:*

Be it known that I, BENJAMIN F. ORTON, of East Saginaw, county of Saginaw, State of Michigan, have invented a new and useful Improvement in Towers for Electric Lights; and I declare the following to be a full, clear, and exact description of the same, such as will enable others skilled in the art to which it pertains to make and use it, reference being had to the accompanying drawings, which form a part of this specification.

My invention consists in the combinations of devices and appliances hereinafter specified, and more particularly pointed out in the claims.

In the drawings, Figure 1 is a side elevation of a tower embodying my invention. Fig. 2 is an enlarged view of a portion of the same. Fig. 3 is a separate view, showing the platform and the carriage for sustaining the lamps. Fig. 4 is a separate view, showing one of the spiders.

The object of my invention is to provide a strong, economical, and durable tower for the elevation of electric lights and wires, and for other similar uses.

In carrying out my invention, A represents the mast, which may be made of any desired diameter and length, and of any suitable material. For the sake of economy I prefer to construct it of comparatively small diameter, and by coupling suitable metallic pipes or pillars, A', together in any proper manner, as shown at a.

B represents any desired number of spiders, preferably having three or more arms, b, secured to the collar b', adapted to be clamped upon the mast.

C represents a series of truss-rods secured either to separate clamps fastened above and below the couplings of the pipes, or, as shown in the drawings, they may be secured to brackets b<sup>2</sup>, forming a part of the clamping-collar of the spider, as may be desired. I design to construct the arms b of the spiders with an eye, b<sup>3</sup>, adapted to receive the truss-rods. This eye may be constructed on the outer edge of the arm, as shown, or through the end of the arm back from the edge; or the truss-rods may be bolted to the outer end of said arm, if pre-

ferred. The truss-rods are thus secured at the ends of the spider-arms and to the brackets b<sup>2</sup>. Said truss-rods may be provided with any suitable means whereby they may be properly tightened. I prefer to provide the mast with double trusses, as shown in the drawings, the trusses being so constructed and arranged that the ends of one set of trusses terminate at the middle of the next set, the trusses thus breaking joint. By double trussing the mast, lighter couplings can be used.

D represents a series of guy-rods secured to the mast, by means of which the mast may be suitably guyed.

E represents a stationary supporting-frame secured upon the top of the mast, provided with pulleys e.

F is a suitable platform or carriage for sustaining the lamps, adapted to be raised and lowered upon the tower. Said platform is provided with a series of suitable pulleys, f and f', adapted to receive the hoisting-cables G and G'. Said cables are secured to the frame E, as shown at e', and at the base of the tower to the drums H and H', upon which they may be wound and unwound. Said drums may be provided with any suitable brake for regulating the descent of the platform F.

It is evident that the hoisting-cable will be always taut, as the weight of the carriage F is always upon it.

What I claim is—

1. The combination, with a tower consisting of a mast constructed of any desired number of pipes or pillars properly coupled together and provided with guys, a series of spiders clamped to said mast at intervals, trusses extending over the arms of said spiders and secured at their extremities to suitable couplings upon the mast, of a supporting-frame at the top of the mast, a carriage adapted to be raised and lowered upon the mast, and mechanism adapted to raise and lower said carriage, substantially as described.

2. The combination, with a tower constructed as herein described, and provided with the stationary supporting-frame E, of a carriage adapted to be raised and lowered upon said tower, and mechanism consisting of pulleys e, f, and f', and cables G, arranged as herein de-



scribed, and in connection therewith means for winding and unwinding said cable, substantially as and for the purpose set forth.

3. The combination, with a tower constructed  
5 substantially as herein described, and provided with the stationary supporting-frame E, of a carriage adapted to be raised and lowered upon said tower, and mechanism consisting of pulleys *e*, *f*, and *f'*, and cables G G', arranged upon  
10 the exterior of the mast in the manner de-

scribed, whereby they guide and steady the carriage in its ascent and descent, all constructed and arranged as and for the purpose set forth.

In testimony whereof I sign this specification 15  
in the presence of two witnesses.

BENJAMIN F. ORTON.

Witnesses:

FORD O. RUSLING,  
JNO. C. YAWKEY.