(Model.)

W. H. MILLIKEN.

Telegraph Pole.

No. 232,360. **Patented Sept. 21, 1880.**

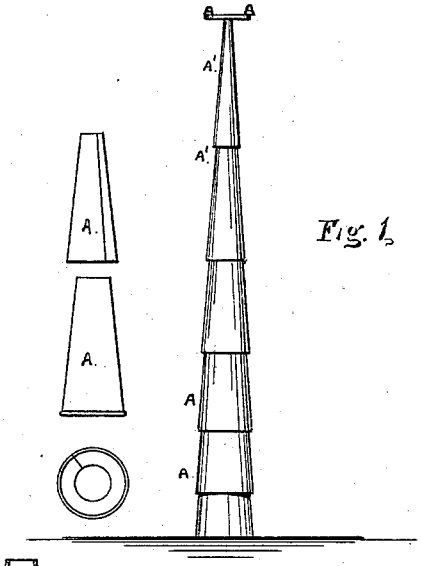


Fig. 1.

Fig. 4.

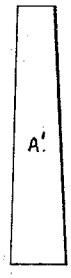


Fig. 2.

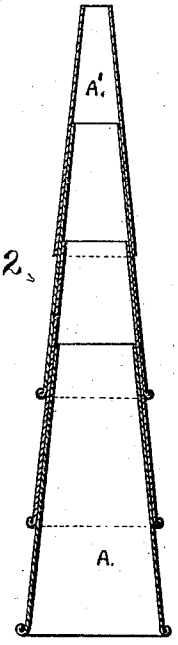
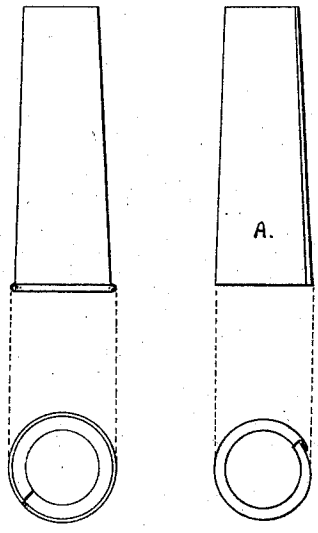


Fig. 3.



Witnesses:
S. F. Tappan
Edward C. Odeon

Inventor:
William Henry Milliken
By Orrin Smith
Attorney.

N. PETERS, PHOTO-LITHOGRAPHER, WASHINGTON, D. C

UNITED STATES PATENT OFFICE.

WILLIAM H. MILLIKEN, OF SAN FRANCISCO, CALIFORNIA, ASSIGNOR TO THE IRON TELEGRAPH POLE COMPANY, OF SAME PLACE.

TELEGRAPH-POLE.

SPECIFICATION forming part of Letters Patent No. 232,360, dated September 21, 1880.

Application filed July 16, 1880. (Model.)

To all whom it may concern:

Be it known that I, WILLIAM HENRY MILLIKEN, of the city and county of San Francisco, in the State of California, have invented a certain new and useful Improvement in the Construction of Metallic Telegraph-Poles, and which invention is also particularly adapted to the construction of gas-light or lamp posts, fence-posts, and other like structures, as will be fully set forth and described in the following specification and the accompanying drawings.

My invention has for its object to produce an improved metallic pole for use as a telegraph-pole, a fence or a gas-light post, and for other structures where a cheap, durable, strong, and indestructible pole or post is required, and in situations also where a good conductor of electricity is desirable.

My invention therein consists in constructing a metal pole from tapering sheet-metal sections, forced one upon another, and made relatively of such size that the lap of the sections will decrease gradually toward the top of the pole, the pole thereby produced being of pyramidal form and having greater weight and solidity toward its base, all of which will be more fully set forth hereinafter.

Referring to the accompanying drawings for a better understanding of my invention, Figure 1 is an elevation of a telegraph-pole constructed in accordance with my invention. Fig. 2 is a vertical section through the center of several united sections forming part of a pole or post. Fig. 3 is a detail view of detached sections; and Fig. 4 is a view of one of the smaller sections that are used for the upper end of these structures.

These sections are made of tapering or conical form by bending or rolling sheet metal around a core, die, or former, and lapping and securing the edges together by a stove-pipe or lap joint. They are made of sizes and lengths according to the position they occupy in the structure, whether at the base or at or toward the upper end, and so that the lap of the sections one upon another will gradually decrease toward the top of the pole; but they all require to have the same general taper, so that the adjoining surfaces shall fit closely together.

The sections that go to form the lower end of the pole are made of greater diameter than the upper ones, and they can be inserted into each other a greater or less distance, as required to give proper strength or stiffness to the bottom part. In the detail view, Fig. 2, the lower sections are shown as extending into each other for one-half their length or more; but this will not be required for the sections that form the top of the pole, as the number of sections is constantly decreasing toward the top, and more flexibility can be given without impairing the strength. The lower sections also can, if it be required, be strengthened by a bead or rim formed in the well-known manner, by turning up the edge over and around a wire; but this will not be necessary except in constructing poles of very great length, as for supports for telegraph-wires.

In the drawings, A represents the larger sections, and A′ the smaller ones. These sections, being placed together and pressed upon each other to the required number, are then treated to a bath composed of hot asphaltum or coal-tar tempered with linseed-oil in the following proportions: To fifty gallons of asphaltum placed in a suitable boiler or tank is added one gallon of linseed-oil, and the same proportion of asphaltum and oil is retained for any quantity of the mixture, and the mixture is then boiled until it attains such temper and consistency that when applied to a metal surface it will hold without cracking. This stage can be ascertained by dipping a piece of metal plate into the mixture, and if, after being withdrawn and allowed to cool, it can be bent back and forth without causing the asphaltum coat to crack or rub off, the temper of the compound is at the proper point. If, however, the asphaltum does not have the property of holding its surface under such treatment, it will be necessary to increase the quantity of oil in the compound. When this bath has reached the proper state the post or pole is dipped into it, and then, after becoming thoroughly coated, it is taken out and allowed to dry and become set.

In the construction of poles or posts of any kind after the manner of this invention the larger sections to form the bottom are taken

in succession and forced down upon or telescoped over each other, each being inserted gradually a shorter distance, and then the next smaller ones in order, until the required length is attained; but the power or pressure used should not be so great as to spread or tend to separate the sections at their joints. The structure, when finished, is set in place by first filling up and packing the hollow space within it, and then setting the base into the hole provided for it and tamping the earth firmly around it.

In the construction of telegraph-poles the hole in the top of the small section will serve to hold the stem or arm having the insulator-pins, or the insulator itself may be provided with a socket to fit over the apex of the top section, and thus cover the opening.

As thus constructed my invention provides a strong and durable pole or post, having also qualities of lightness, cheapness, and indestructibility, and also ease of transportation, for the sections, when of any great size, may be made in one locality and afterward carried to and set up in another. Such structures also will not be affected by atmospheric influences or be injured or destroyed by lightning, and when used for telegraph-poles they can serve as a ground-connection.

I am aware that it has before been contemplated to make a metallic telegraph-pole of sections having a slight taper, secured together by placing one over the other; but such a pole would not, if used, possess the necessary stability.

Having thus fully described my invention, what I claim as new is—

A metallic pole made of pyramidal shape from tapering sheet-metal sections put together with a gradually-decreasing lap toward the top of the pole, so that the pole will be heavier and stronger toward its base, substantially as described.

In testimony that I claim the foregoing I have hereunto set my hand this 22d day of October, 1878.

WILLIAM HENRY MILLIKEN. [L. S.]

Witnesses:

C. W. M. SMITH,

JOHN RAFFERTY.