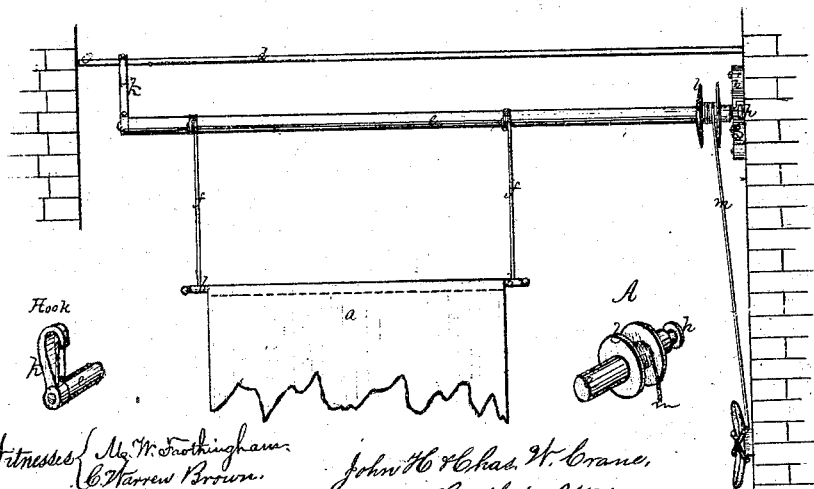
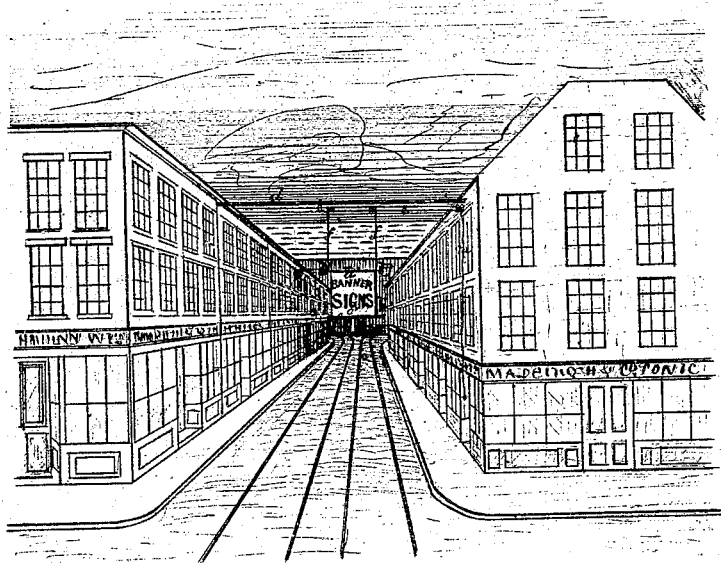


J.H. & C.W. Crane,

Sign.

No. 113,403.

Patented April 4, 1871.



Witnesses {
Alfred M. Frothingham
Charles Harrow Brown

John H. & Chas. W. Crane,
By their Atty's

Wash. Halsted & Gould

UNITED STATES PATENT OFFICE.

JOHN H. CRANE AND CHARLES W. CRANE, OF BOSTON, MASSACHUSETTS.

IMPROVEMENT IN SUSPENDING SIGNS, &c.

Specification forming part of Letters Patent No. **113,403**, dated April 4, 1871.

To all whom it may concern:

Be it known that we, JOHN H. CRANE and CHARLES W. CRANE, both of Boston, in the county of Suffolk and State of Massachusetts, have jointly invented an Improvement in Pendent or Banner Street-Signs; and we do hereby declare that the following, taken in connection with the drawings which accompany and form part of this specification, is a description of our invention sufficient to enable those skilled in the art to practice it.

Our improvement relates to the method of hanging pendent banner-signs to be suspended over streets from the buildings on one or both sides of the street. In our improvement we suspend the sign by means of two vertical lines attached, one end of each, to opposite ends of a stretcher or bar in the upper edge of the sign, and the other ends of the lines to the stretcher or roll from which the sign is to be hung. Suspended in this manner the sign acquires from the action of the wind a pendulous vibrating or swinging motion crosswise of the street and in the vertical plane of the banner at rest. The upper ends of the suspending-lines are so fastened to the stretcher and the stretcher to the building as to prevent the strain of the sign in its vibrations from changing their positions, which would in a great degree hinder or prevent the regular pendulous motion of the sign. This manner of suspension also prevents twisting of the sign, and from the novelty of the movement attracts attention.

The drawing represents a pendent or banner sign hung in accordance with our invention.

a denotes the sign, formed of suitable flexible material, attached at top to a bar or stretcher, *b*, and at bottom to a bar or stretcher, *c*. *d* denotes the line crossing the street from the opposite buildings, the sign being suspended from a stretcher or roll, *e*, hung at one end from the line. Near each end of the upper stretcher, *b*, is a cord or chain, *f*, and the two cords *ff* rise from the bar to the stretcher or roll *e*, from which the sign is to be hung. The roll *e* is made with end gudgeons, and at the end nearest the building the gudgeon is journaled in a bearing, *g*, and the gudgeon has a flange

or a head, *h*, as seen at A, by which it is kept from end movement, a swinging button, *i*, serving to keep the gudgeon down in the bearing or to permit it to be removed when desirable. The gudgeon at the opposite end of the roll turns in a bearing in a hook, *k*, which serves to hang the end of the roll to the line *d*. This hook may have a spring to prevent or permit, when desirable, its disengagement from the line. The roll turns freely in its bearings, and at its inner end it has a pulley, *l*, around which is wound a winding-cord, *m*. By means of this cord the roll may be rotated by a person in an upper or lower window or in the street, and the length of the lines *ff* between the roll *e* and the stretcher or bar *b* may be altered, varying the number of vibrations in a given time and the length of vibration to suit the varying conditions of the wind; or the sign may be partially or wholly furled, a weight hung, if expedient, from the lower stretcher, winding around and binding the sign to the roll. The sign may not only thus be readily furled; but by unshipping the nearest end of the roll from its bearing the roll may be drawn toward and into the building, and by releasing the hook from the line the roll and the sign may be securely housed.

Instead of suspending the extended end of the roll from the line *d*, it may be suspended by guy-ropes extending from the upper part of the building, a suitable bearing being attached to the lower end of the guys for journaling the roll.

Instead of the pulley, a crank may be attached to the end of the roll to rotate it, and in some cases would be preferable.

We claim—

Suspending flexible street-signs from cords or wires by means of the pendent traversing journal or hook *k*, lock-bearing *g*, furling-roller *e*, and cords *ff*, said roller operated by a pulley and cords or crank, when the several parts are constructed and arranged substantially in the manner herein described.

JOHN H. CRANE.
CHAS. W. CRANE.

Witnesses:

FRANCIS GOULD,
M. W. FROTHINGHAM.