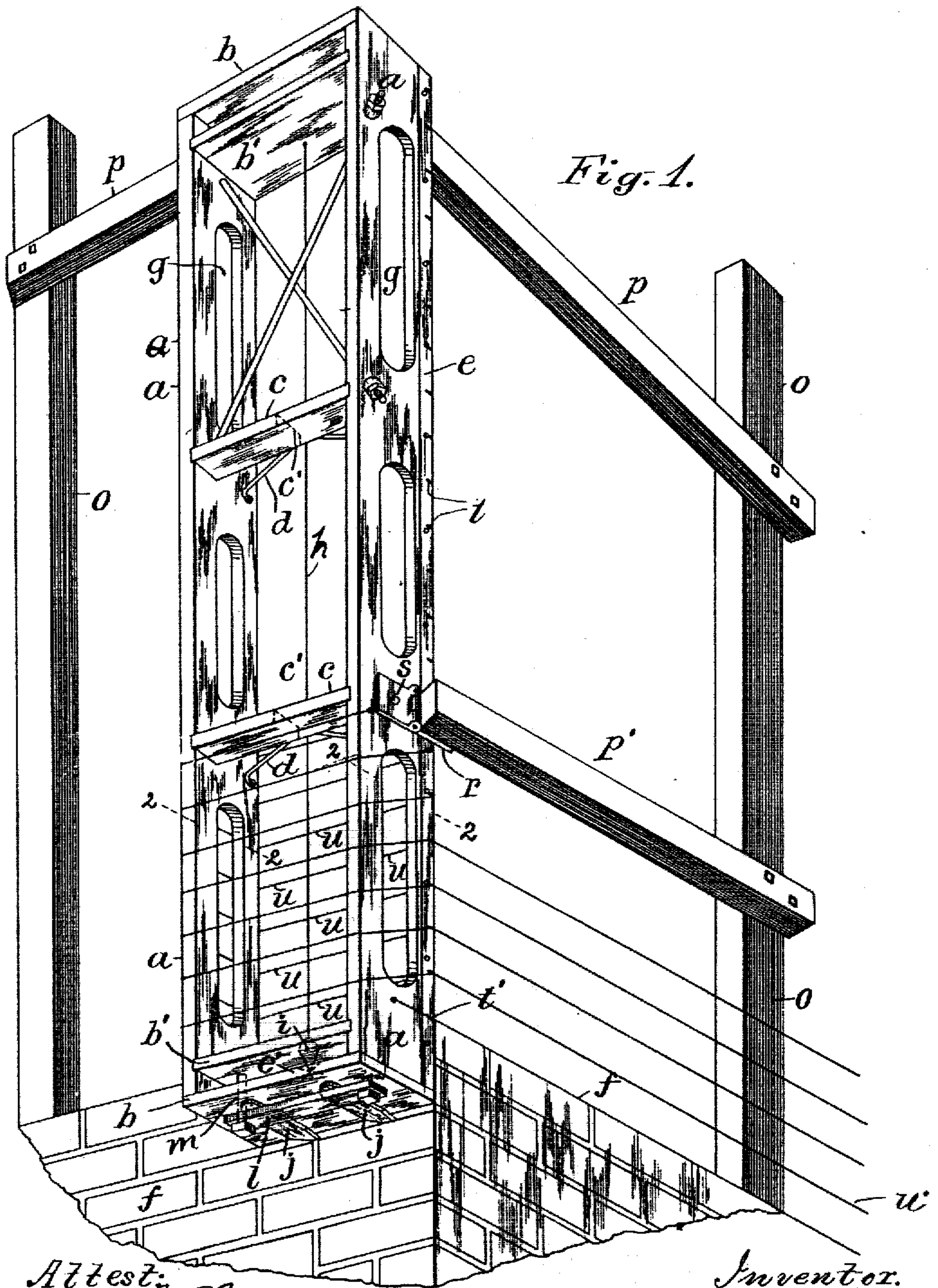


No. 815,570.

PATENTED MAR. 20, 1906.

A. VREELAND.  
OPEN DOUBLE PLUMB RULE.  
APPLICATION FILED APR. 13, 1905.

3 SHEETS—SHEET 1.



Attest:  
L. L. L.  
Arthur F. Heaton.

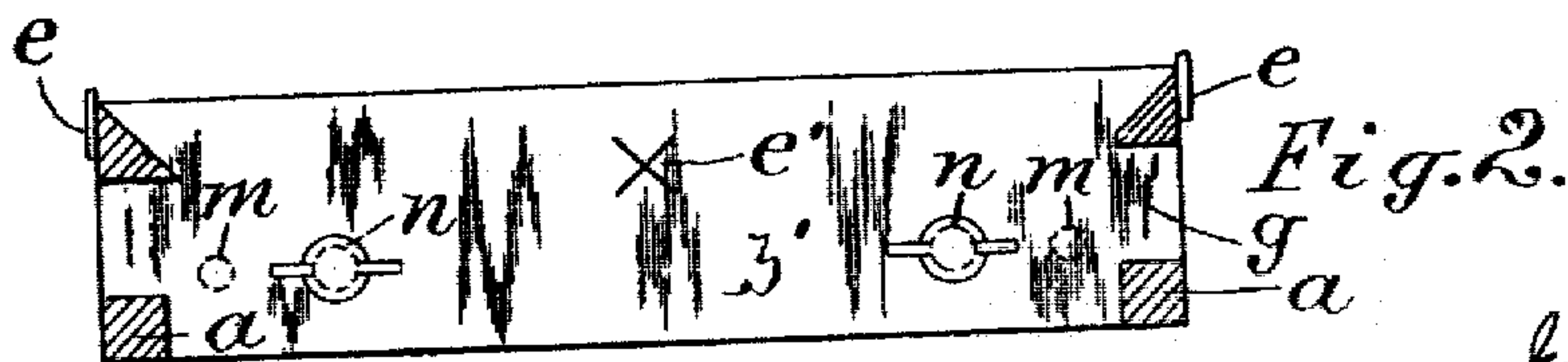
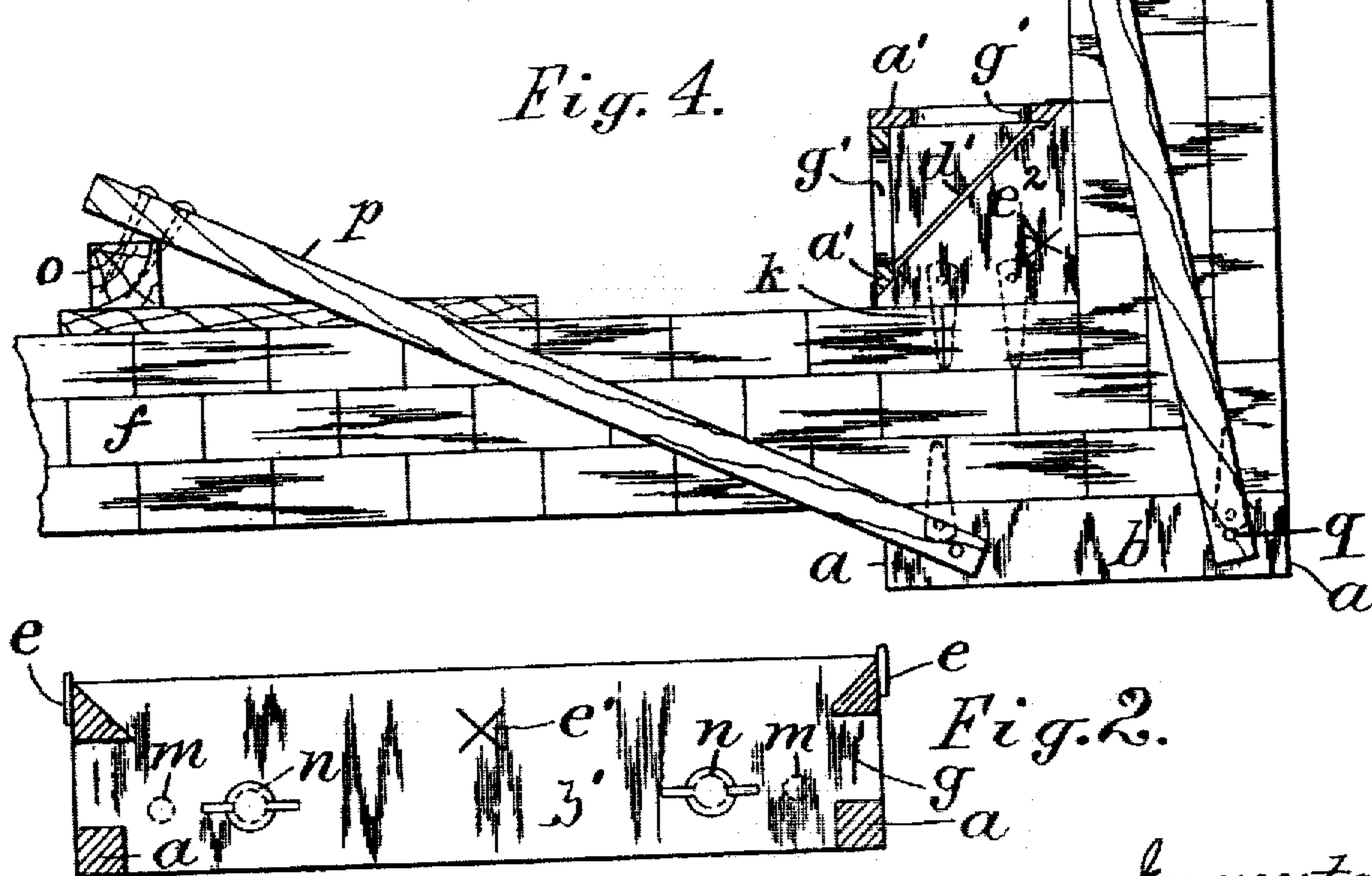
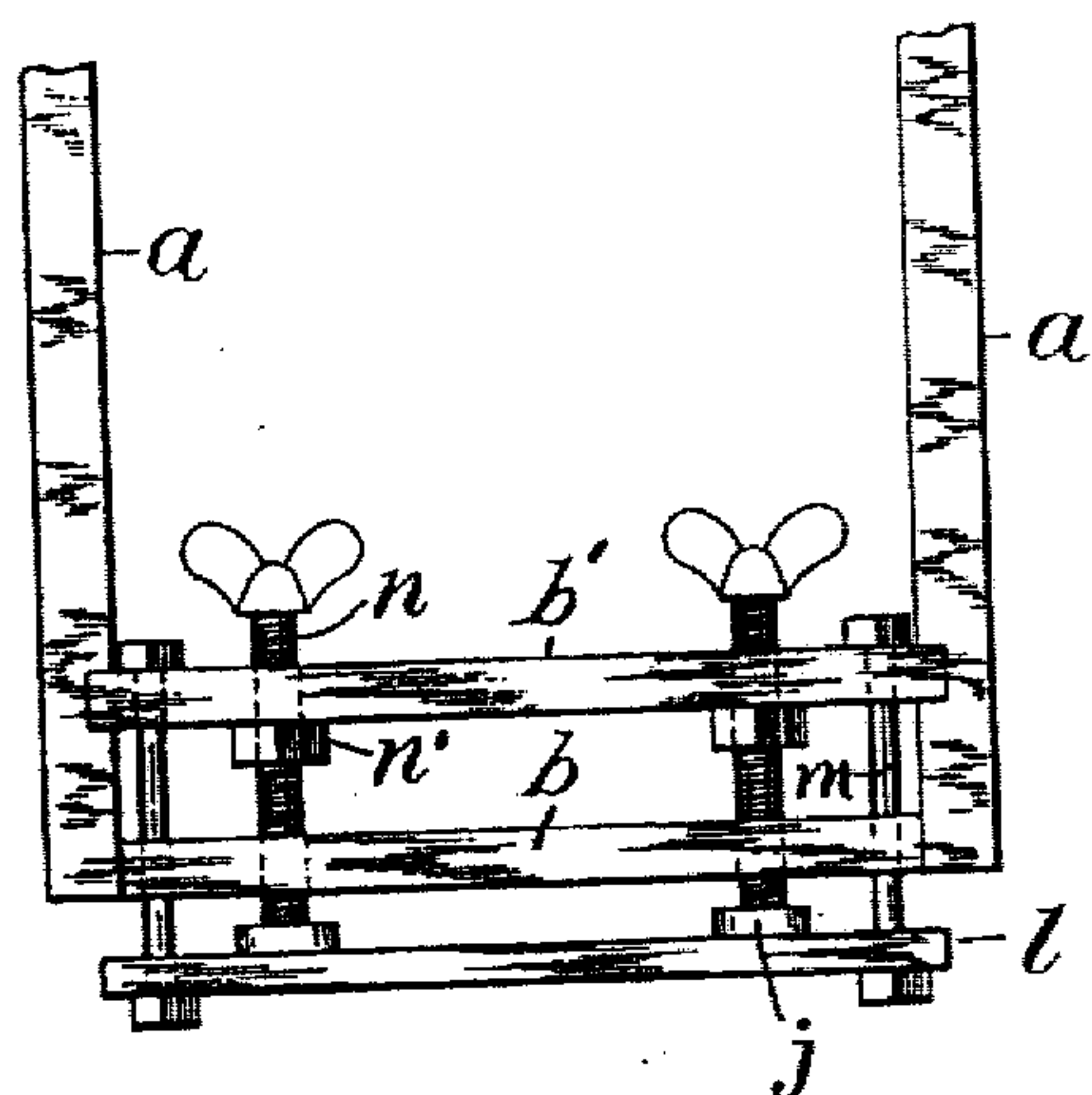
Inventor.  
Aaron Vreeland, per  
Thomas S. Crane, Atty.

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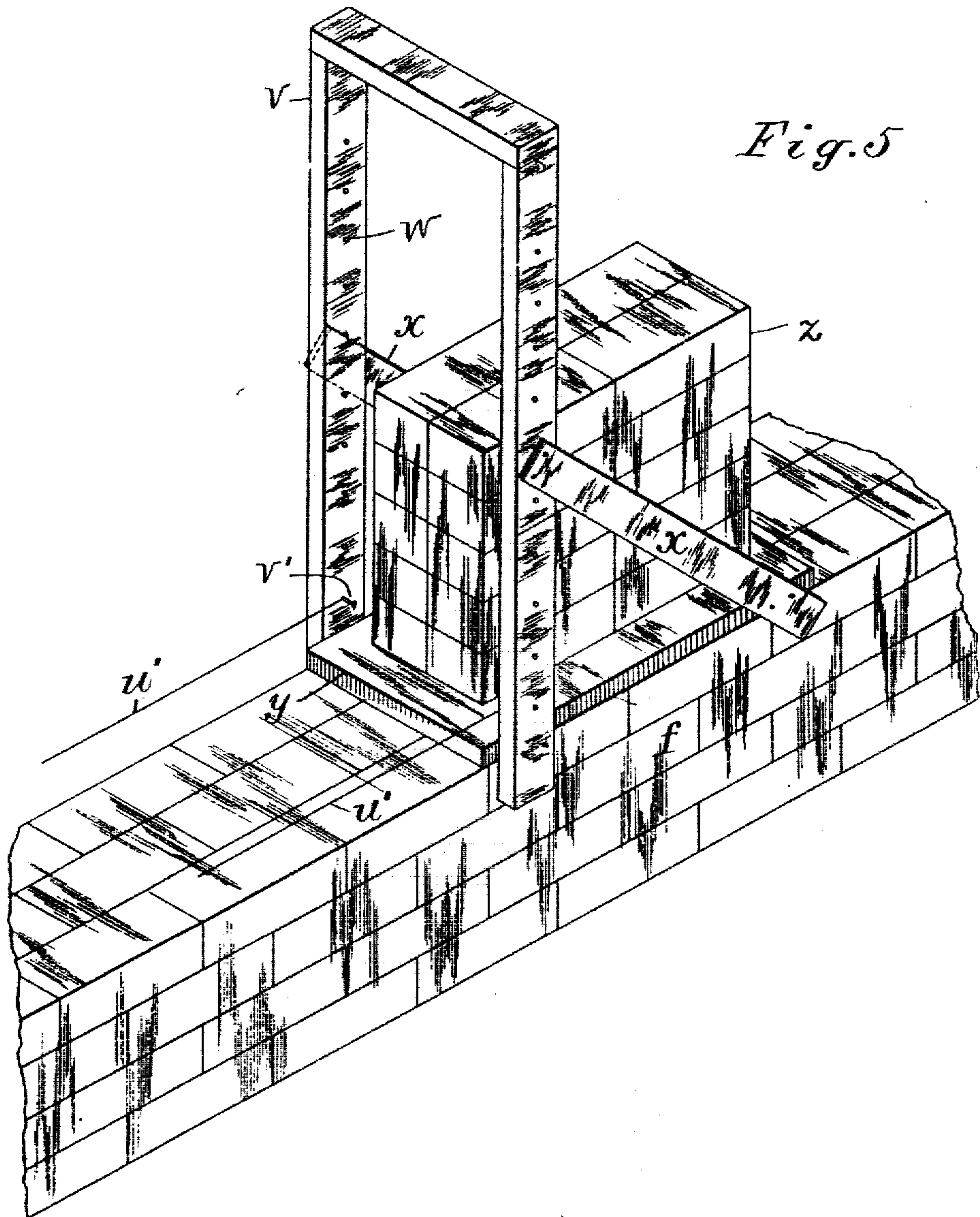


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3 SHEETS—SHEET 3.



Attest:  
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Aaron Vreeland, per  
Thomas S. Crane, Atty.



# UNITED STATES PATENT OFFICE.

AARON VREELAND, OF SINGAC, NEW JERSEY.

## OPEN DOUBLE PLUMB-RULE.

No. 815,570.

Specification of Letters Patent.

Patented March 20, 1906.

Application filed April 13, 1905. Serial No. 255,269.

*To all whom it may concern:*

Be it known that I, AARON VREELAND, a citizen of the United States, residing at Singac, county of Passaic, and State of New Jersey, have invented certain new and useful Improvements in Open Double Plumb-Rules, fully described and represented in the following specification and the accompanying drawings, forming a part of the same.

10 The present invention relates to certain improvements in the plumb-rule shown in my Patent No. 761,430, granted May 31, 1904, and particularly to the form of plumb-rule in which the body of the rule has open-  
15 ings in the sides for sighting the plumb-line.

The invention includes a construction for the plumb-rule by which the interior is accessible, and the side next to the brickwork is wholly exposed for laying the brick and  
20 striking the joints, also means for protecting the edges of the rule from wear, for making the plumb-rule of skeleton construction, and for mounting the plumb-rule upon a wall to project above the same and for bracing and  
25 steadying the rule when thus mounted.

The invention also includes a box plumb-rule having marks along the edge next the wall indicating the levels of the successive courses and having a wire wrapped around  
30 the rule at such marks to show the levels of the successive courses.

The invention also includes a movable stand for holding a guide-line in conjunction with the plumb-rule.

35 In the drawings, Figure 1 is a perspective view of a box plumb-rule mounted upon a wall and provided with all of the improvements. Fig. 2 is a cross-section on line 2 2 in Fig. 1. Fig. 3 is an elevation of the lower  
40 end of the plumb-rule shown in Fig. 1, and Fig. 4 is a diagram showing the corner of two vertical walls with plumb-rules applied to the inner and outer corners of the same. Fig. 5 shows the stand for the guide-line.

45 Figs. 1, 2, and 3 show a box plumb-rule with side casings *a*, connected at each of their opposite ends by two cross-plates *b b'* and intermediate to their ends by narrow braces or cross-bars *c* at the outer side of the box, the  
50 inner sides of the cross-bars being connected by brace-rods *d* to the inner edges of the casings. The inner edges of the casings, as shown in Fig. 2, are beveled upon the inner side, and strips of hoop-iron *e* are secured

upon the outer sides of the casings and form 55 the edges in contact with the wall *f*. Slots *g* are formed in the casings to sight the plumb-line, and a plumb-line *h* is hung from the top of the box upon a line with the inner sides of the slots, as is clearly shown in Fig. 2. The 60 upper sides of the cross-bars *c* are formed with central lines *c'* to coincide with the plumb-line when the plumb-rule is set vertically, and the cross-plate *b'* at the bottom is formed with cross-marks *e'* to indicate an ap- 65 proximate setting of the plumb-bob *i*, and the exact setting of the plumb-rule is secured by finally sighting the line *h* across the inner edges of the slots *g* and adjusting the marks *c'* to coincide with the line. 70

The plumb-rule may be made twelve feet in height and supported next to the courses already laid by driving a wedge or plate *j* (see Fig. 1) or large nails *k* into one of the course-joints and setting the plumb-rule 75 upon the same. A clamp-bar *l* is shown attached to the base of the plumb-rule in Fig. 3 by bolts *m* and set-screws *n* projected through nuts *n'* in the base to pinch the plates *j* against the clamp-bar. When the base of 80 the plumb-rule is thus secured, the top may be braced, as shown in Figs. 1 and 4, by wooden braces *p*, extended from the top of the plumb-rule to different points upon joists *o*, secured upon the inner or outer sides 85 of the wall.

The joists are shown in Fig. 4 upon the inner side of the wall and the braces pivoted upon the top of the plumb-rule by bolts *q* and extended horizontally to the joists. The 90 plumb-rule is set perfectly vertical before the braces are secured to the joists.

A brace *p'* is shown in Fig. 1 attached to one leaf of a hinge *r*, the other leaf of which is pivoted upon the side casing of the plumb- 95 rule by a bolt *s*, so that the brace is always associated with the plumb-rule and may be turned longitudinally of the same when packed for transportation.

Fig. 2 shows that, owing to the skeleton 100 form of the box plumb-rule, the box of the rule is wholly open upon the inner and outer sides, so that a workman standing inside the wall can gain access to all the outer joints of the bricks when laying one course above the 105 other, while a workman standing upon a platform outside of the wall can operate through the plumb-rule itself to lay the



courses of bricks and to strike the joints of the courses.

To fit the box plumb-rule for use upon the inner corner of a wall, the box is made with two side casings  $a'$ , each having slots  $g'$ , the inner edges of which serve to sight the plumb-line, the location of which is indicated by the cross  $e^2$ . In Fig. 1 a scale of marks  $t$  is shown upon the edge of the casing next to the wall, the marks being spaced to correspond with the upper corners of the bricks in the successive courses, the initial mark at  $t'$  being set even with the course last laid and the successive marks thus indicating the proper level for the superposed courses.

In Fig. 1 a wire is shown wrapped around the plumb-rule and stretched in successive lines  $u$  between the casings  $a$  upon the inner side of the plumb-rule coincident with the scale-marks  $t$ , and when the plumb-rule is set vertical such lines extend perfectly level and guide the laying of the courses between the casings. The casings of the box plumb-rule may be made twenty, thirty, or forty inches apart, as may be desired, and even made wider to fill the entire space upon a wall between buttresses, so as to plumb the buttresses at the same time that the wires  $u$  guide the bricklayer in leveling the successive courses.

Figs. 4 and 5 show a portable guide-line stand having uprights  $v$  attached to a base  $y$  and set upon the wall at such a distance from the plumb-rule that guide-lines may be drawn from one to the other and a section of the wall thus built up as far as the bricklayer can reach. The uprights  $v$  of the stand are shown braced to the base  $y$  by bars  $x$  and the base loaded with a pile of bricks  $z$  to hold it firmly in position. The bars  $v$  are provided with guide marks or holes  $w$ , coincident with the guide-marks  $t$  upon the plumb-rule, and a nail inserted successively in such holes serves to set a guide-line level with the corresponding mark upon the plumb-rule.

Guide-lines  $u'$  are shown in Fig. 1 extended from the side of the plumb-rule, and two of the guide-lines are shown in Fig. 5 fixed to nails  $v'$  upon the uprights at a suitable distance above the wall  $f$  to lay the succeeding courses. The guide-line shown in Fig. 5 can be removed, if desired, when one course of brick has been laid between the plumb-rule and the stand and transferred to the next space above for laying the succeeding course, and one guide-line or a series of guide-lines may thus be kept in use between the plumb-rule and the stand until the section of wall is completed, when the stand would be transferred to a more remote point and lines stretched from the stand to the joints of the courses in the section last finished.

By making the guide-line stand with a base  $y$ , adapted to rest directly upon the top of the wall, the stand may be set in any desired po-

sition and secured temporarily in such position by loading the base, as with the pile of bricks  $z$ .

Having thus set forth the nature of the invention, what is claimed herein is—

1. A box plumb-rule having edges to contact with the brickwork and open upon the side next the brickwork, to permit the laying of bricks and striking the joints adjacent to the rule.

2. A box plumb-rule made wholly open upon the side next the brickwork and beveled upon the inner corners, and the outer sides next such corners furnished with metallic strips to contact with the brickwork.

3. A box plumb-rule made wholly open upon the side next the brickwork, and of skeleton form upon the opposite side to permit the laying of bricks in the wall from the outer side of the plumb-rule.

4. A box plumb-rule made wholly open upon the side next the brickwork, and of skeleton form upon the opposite side to permit the laying of bricks from the outer side of the plumb-rule, and the casings at the opposite edges of the plumb-rule having slots for sighting the plumb-line.

5. A box plumb-rule made wholly open upon the side next the brickwork, and of skeleton form upon the opposite side to permit the laying of bricks from the outer side of the plumb-rule, the side casings being strongly connected at the ends, and also connected intermediate to their ends by cross-bars at the outer side, and diagonal braces from such cross-bars to the inner edges of the casings.

6. A box plumb-rule provided with the side casings  $a$  having edges to contact with the brickwork, and open upon the side next the brickwork to permit the laying of the bricks and striking of the joints between the casings, the side casings having marks to indicate the levels of the several courses, and a wire wrapped around the box encircling said side casings at the said marks, to guide the laying of a plurality of courses.

7. The combination, with the box plumb-rule having the side casings  $a$  connected at their opposite ends by cross-plates  $b$  and intermediate braces or brace-bars, the casings having edges to contact with the brickwork and open next the brickwork to permit the laying of bricks and striking of the joints between the casings, of the wedges  $j$  driven into the joints of the brickwork, and the clamp-bar  $l$  attached to the base of the plumb-rule by bolts  $m$ , with means for pinching the said wedges against the said clamp-bar to support the plumb-rule thereon, substantially as herein set forth.

8. A box plumb-rule provided with the side casings  $a$  having edges to contact with the brickwork, and open upon the side next the brickwork to permit the laying of the bricks and striking of the joints between the cas-

ings, the side casings having marks to indicate the levels of the several courses, a wire wrapped around the box encircling said casings at the said marks to guide the laying of  
5 the plurality of courses, in combination with the portable guide-line stand having the up-rights *v* with base *y* adapted to set movably upon the top of the wall and sustain a load for holding the stand in place, and the up-  
10 rights *v* having a series of holes with pins to

support guide-lines level with the marks upon the plumb-rule, substantially as herein set forth.

In testimony whereof I have hereunto set my hand in the presence of two subscribing  
witnesses. 15

AARON VREELAND.

Witnesses:

L. LEE,

THOMAS S. CRANE.