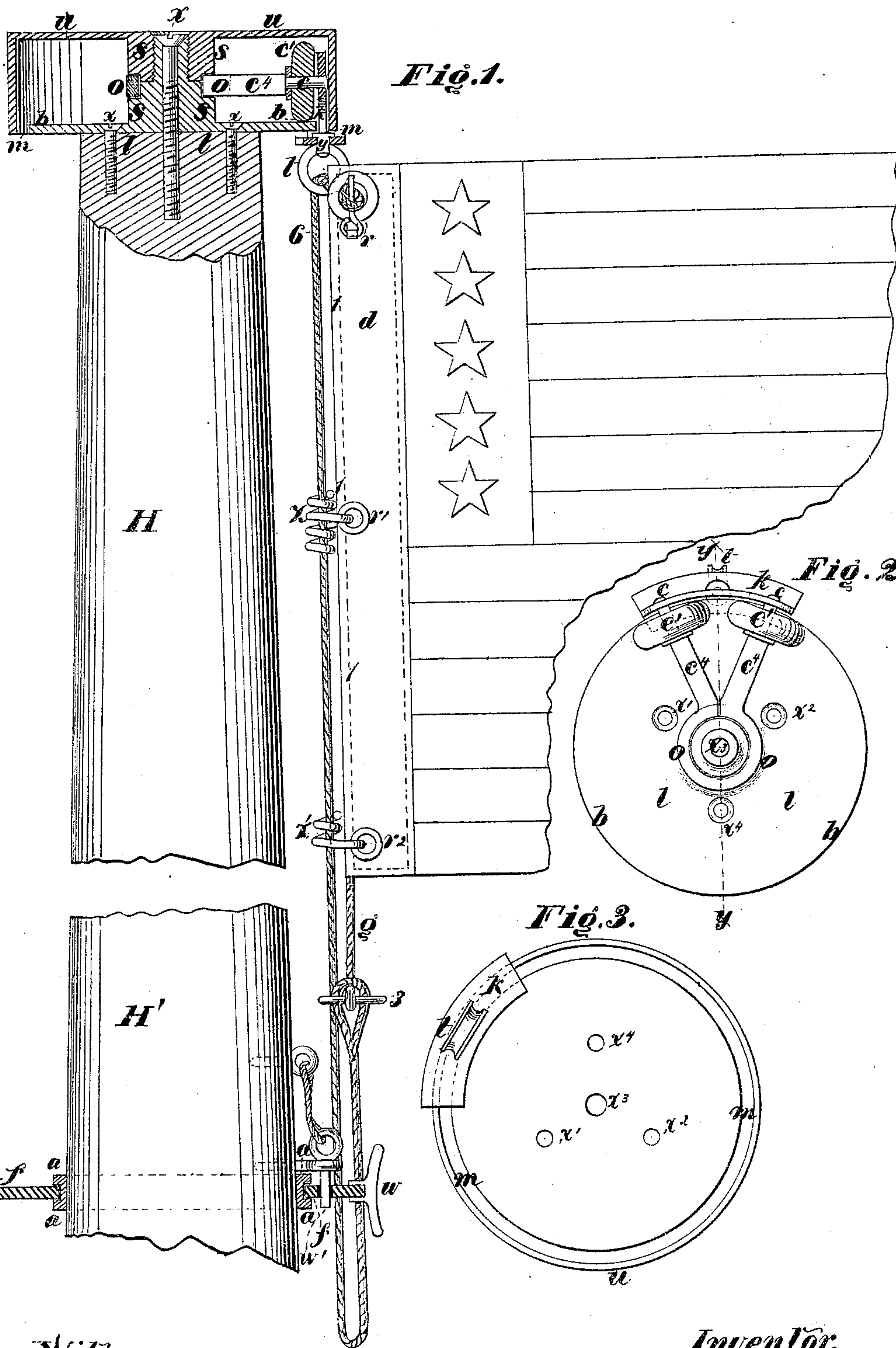


J. W. MACKENZIE.

Improvement in Flag-Hoisting Apparatus.

No. 126,469.

Patented May 7, 1872.



Witnesses

Albert Hart,  
John Deivitt.

Inventor.

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Fig. 1.

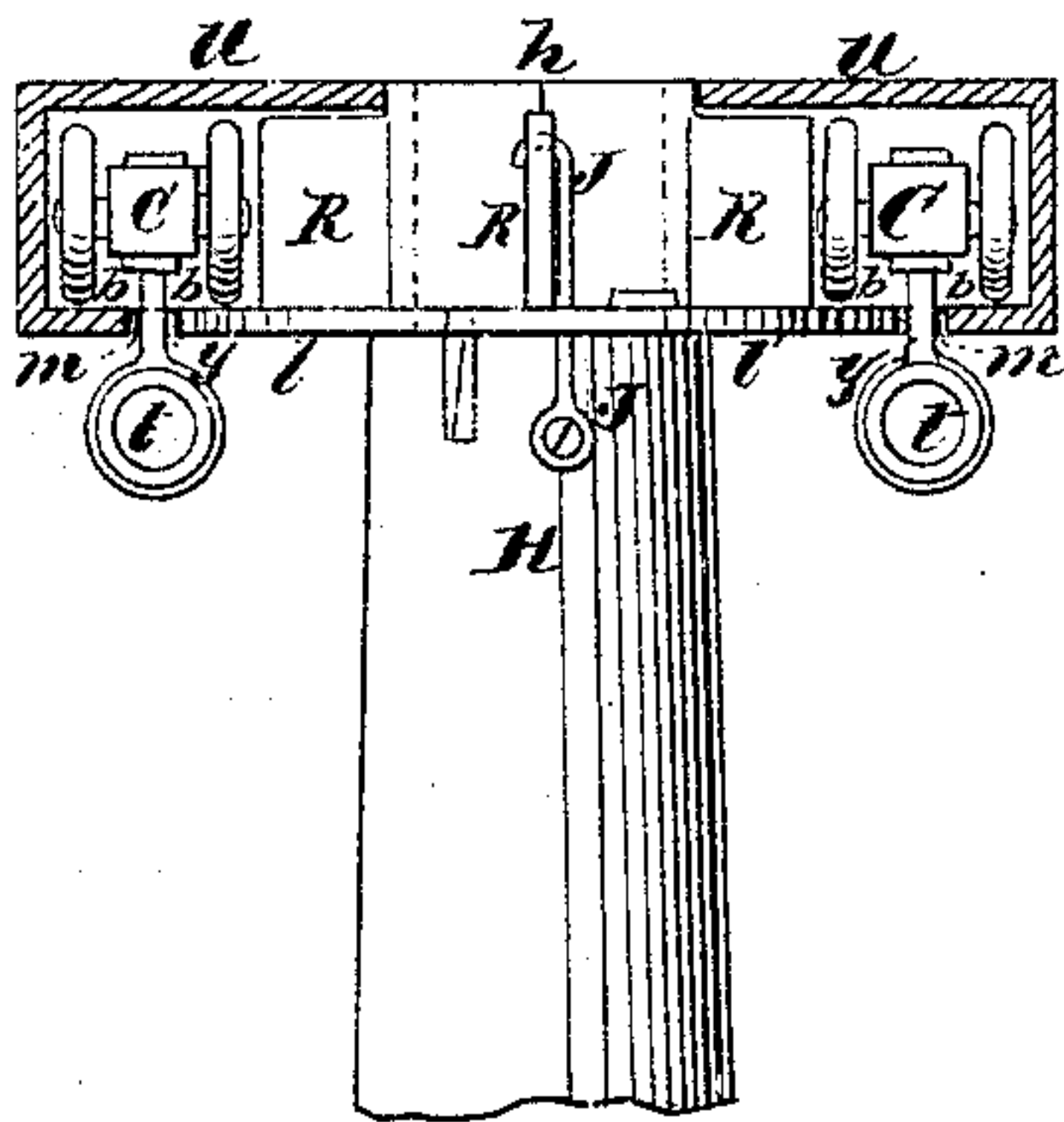


Fig. 4.

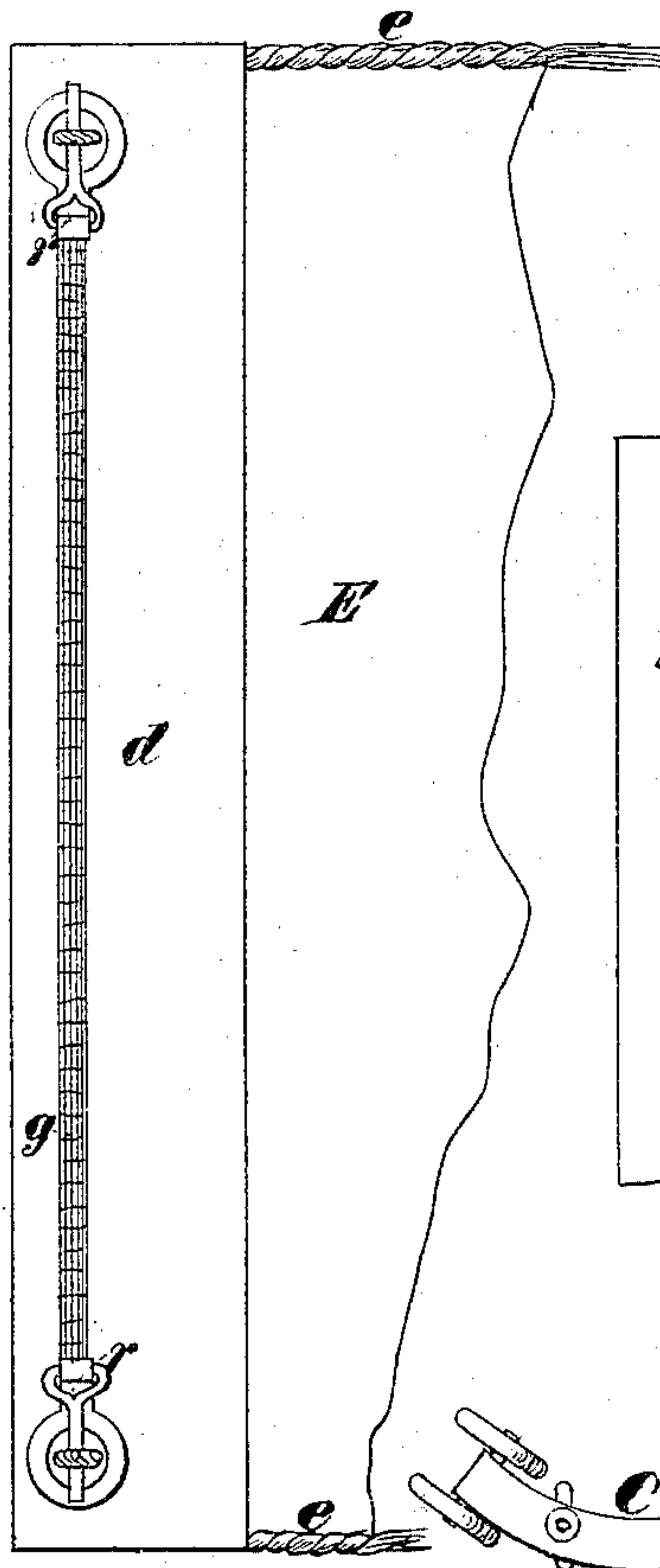


Fig. 5.

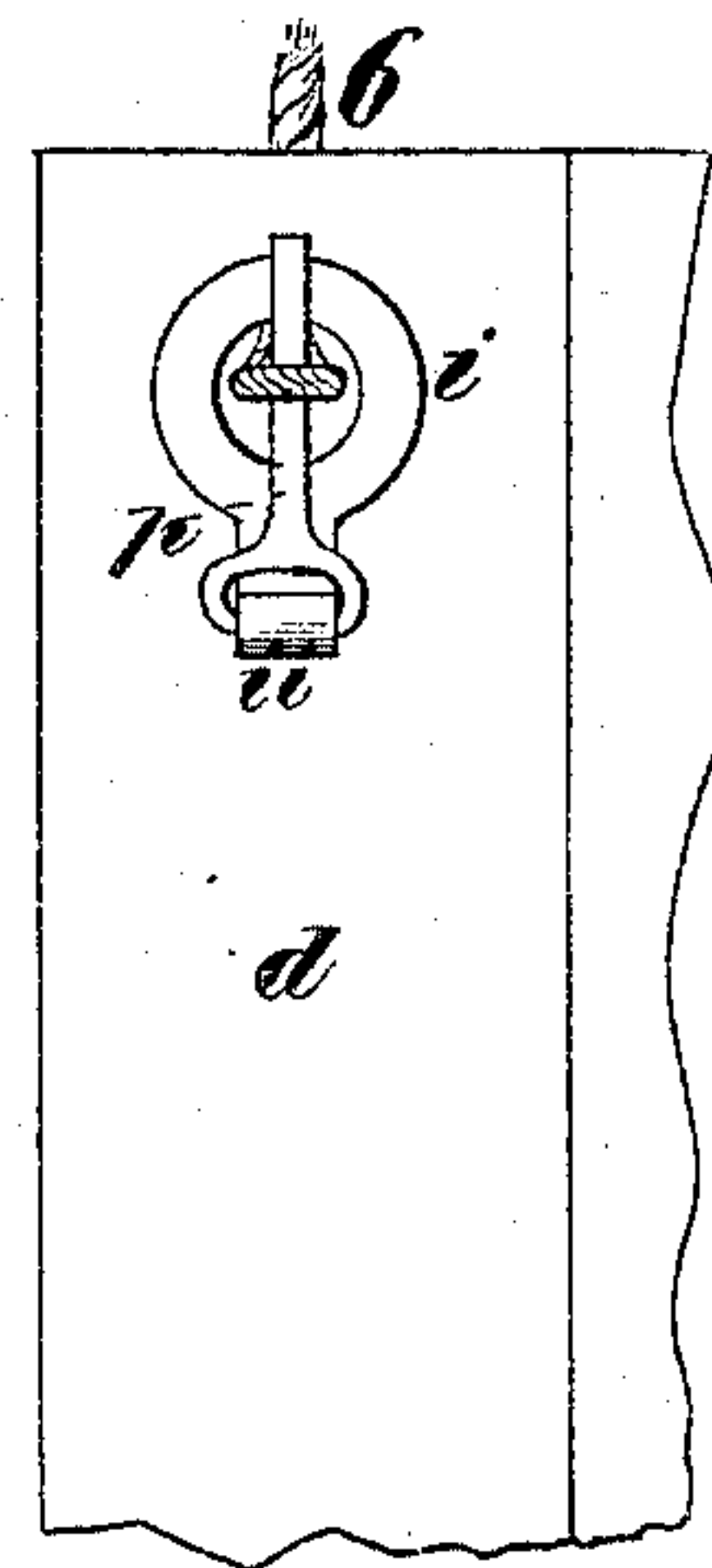


Fig. 2.

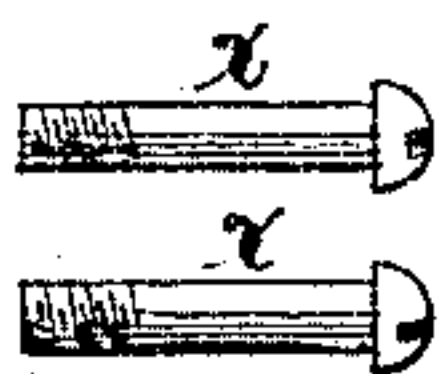
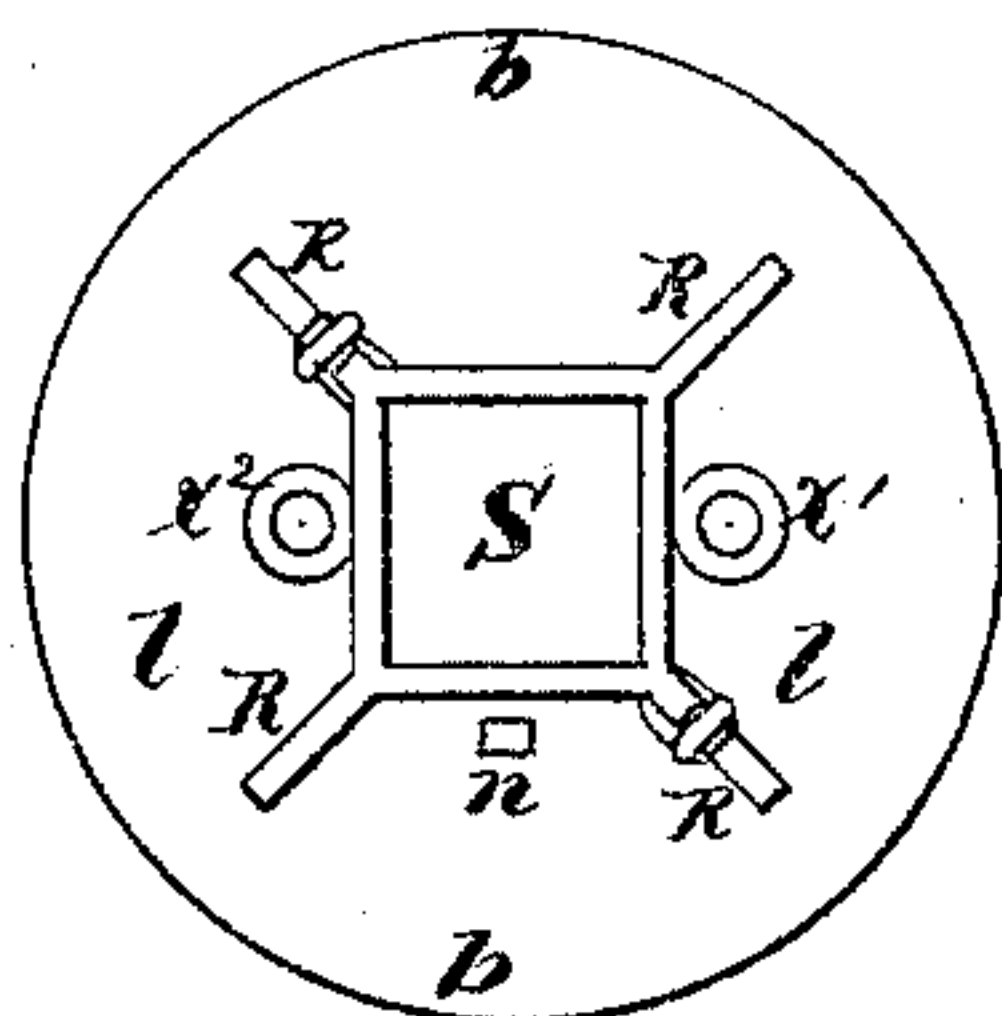


Fig. 3.

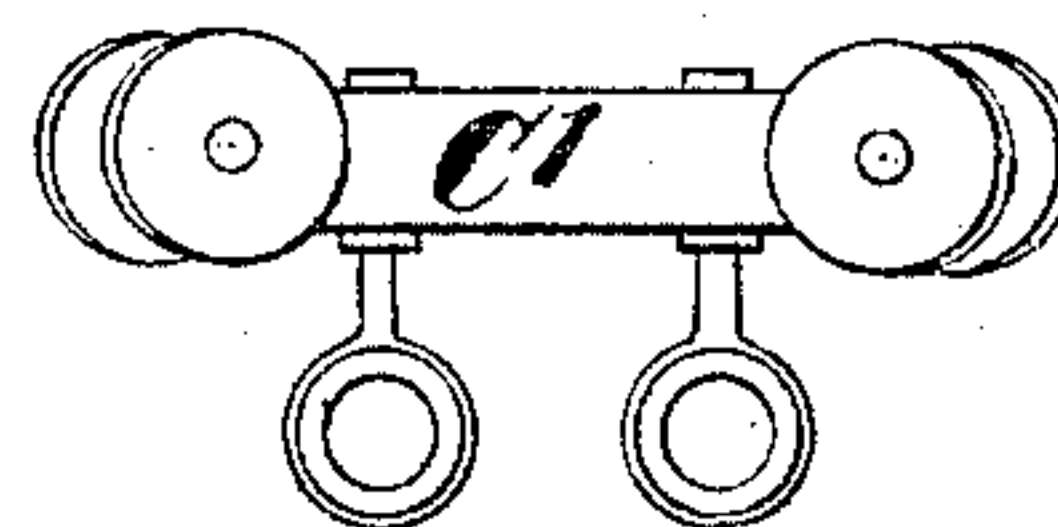
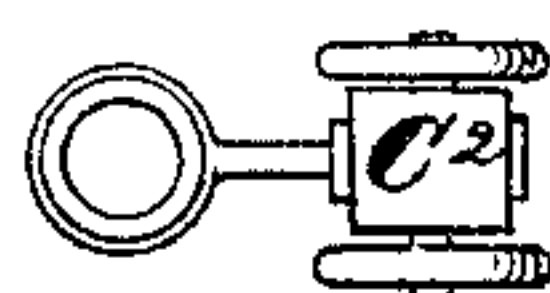
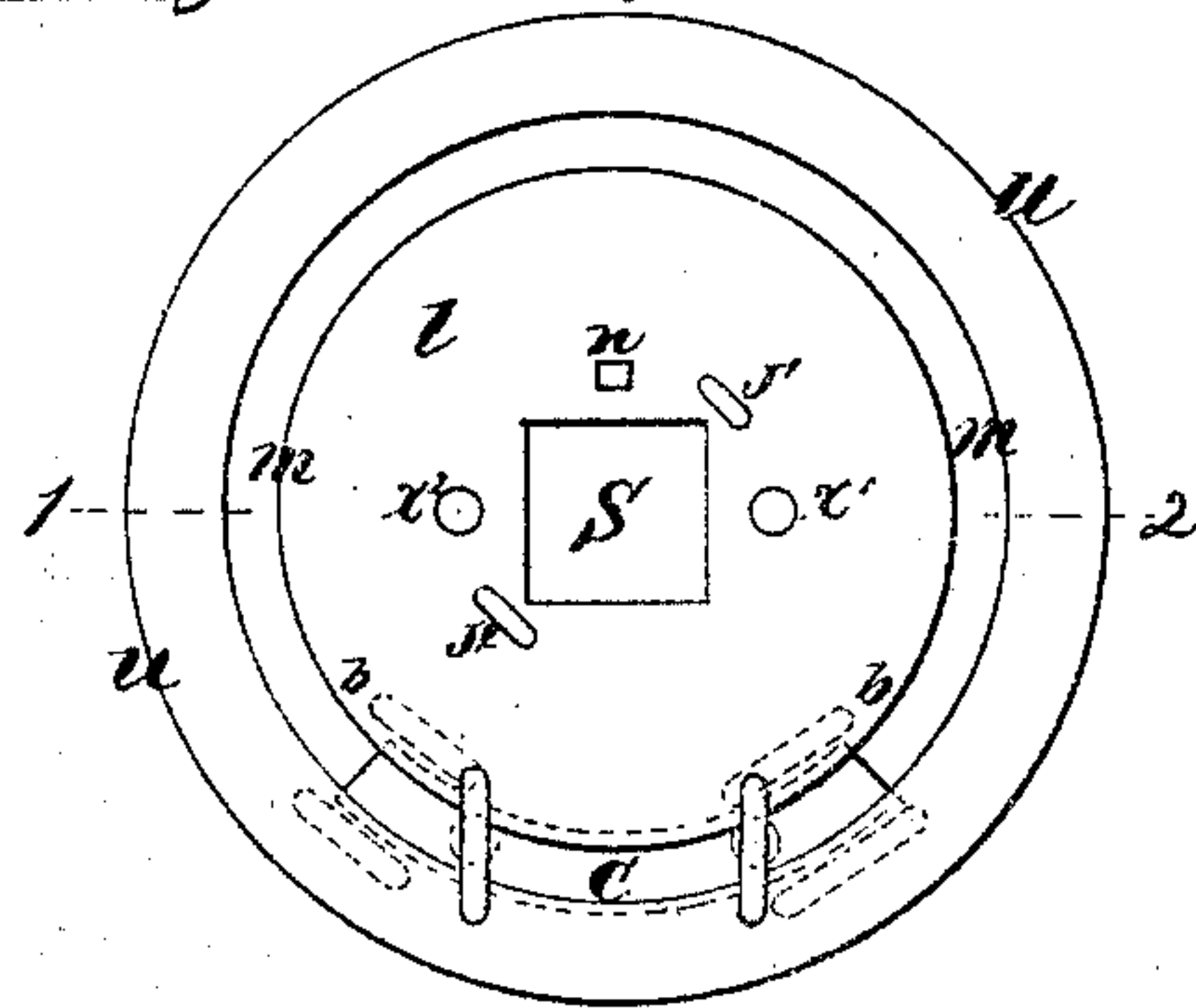
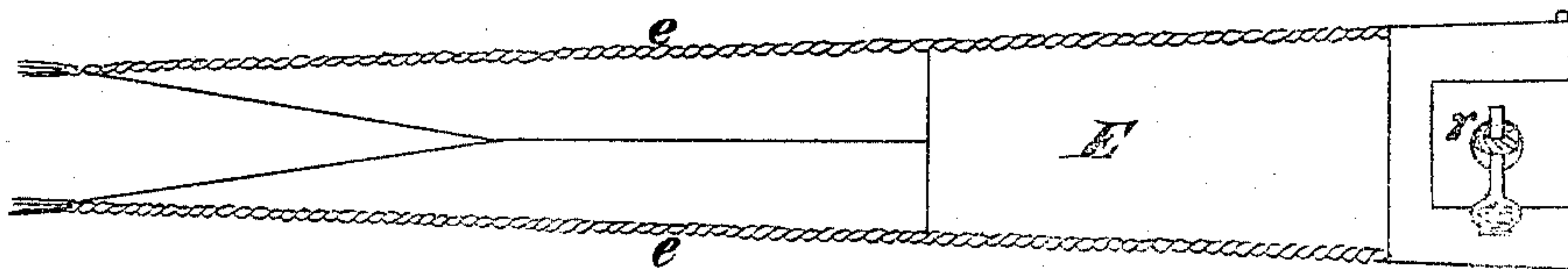


Fig. 6.



Witnesses.

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John W. Mackenzie.



# UNITED STATES PATENT OFFICE.

JOHN W. MACKENZIE, OF SAN FRANCISCO, CALIFORNIA.

## IMPROVEMENT IN FLAG-HOISTING APPARATUS.

Specification forming part of Letters Patent No. 126,469, dated May 7, 1872.

I, JOHN W. MACKENZIE, of the city and county of San Francisco, State of California, have invented certain Improvements in Flag Apparatus, of which the following is a specification:

The object of my invention is to provide an enabling means of clearing flags when foul aloft, and to avoid the necessity of hauling them down and going through the various ensuing details necessary to clear and reset them, and to avoid the danger of tearing and soiling them. Another object is to provide means for a neater and more uniform system of bending and setting flags without encroaching upon established forms and regulations. The invention consists, first, of an improved truck, so arranged and combined in structure as to act automatically and in union with other means employed and acted upon by the wind. The truck is a round metallic box, arranged with a circular opening between the edges of its upper and lower parts. Its inside contains a carriage upon wheels, moving upon an inside circular road that is formed upon either side of the circular opening. Connected with the carriage and coming through the opening to the outside is a means for attaching the halyard-blocks or thimble that is used for hoisting the flag, which is acted upon by the wind, and revolved around and cleared or prevented from becoming wrapped around the staff. The trucks are made of a combination of metals; brass, wrought and cast iron may be used in making them; second, upon the lower part of the staff, and in connection with the truck I use the follower for the purpose of saving the time and labor of unbelaying and belaying again. The belayed parts can be revolved around to a line perpendicular to the head of the flag. In construction it is a flat metal ring, working in a metal collar, and having belaying-pins upon its outer edge. Parts 3, 4, 5, and 6 relate to improvements that are applied to the flag itself, and having a necessary and dependent connection in carrying out the object and purpose of the invention; third, is the roping of the edges of the flag with horse-hair twine, thereby making it less prehensile, and preventing it from being held wrapped fast aloft around the stays or other ropes. The twine is laid up two-stranded, and made with long jaws; fourth, is a selvage-

strap for flag-heads. It is a marled skein, formed with two eyes in its bights, and is put over one part of the eyelet and single part of the head-cloth, then the other part of the head-cloth is placed over the eyelet and selvage, then the other plate is placed on and riveted down, showing the selvage between the head-cloth. The selvage is used to prevent the twisting of the flag upon its head, as is the case when a twisted rope is used; fifth, is an improved brass grummet-buckle. Its flange plate is formed with a neck in which the tongue is hinged. The eye of the halyards is passed through the grummet and buckled with the tongue. This does away with knotting or toggling. The utility of this device is neatness and despatch in bending. The grummet-buckles may be made either round or oval; sixth, the improved fair leader is made of wire, and is formed with a loop in the center. A right-and-left worm is formed on each of its ends. The bight of the hoisting part of the halyards is turned into the center of the worm, thereby avoiding the necessity of finding the end and reeving it through.

### *Description of the Drawing.*

#### PLATE NO. 1.

Figure 1 is a cross-sectional view of a single road truck, (Sherman pattern.) *u u* upper plate; *l l*, lower plate; *o o*, eye of the radiating arms *c c*, working between the hubs *s s s s* of the upper and lower plates, around which it revolves. *c* is the end of the arms *c c*, upon which the wheels *c l* revolve. *m m* is a circular opening between the side of the upper plate *u* and the edge of the lower plate *l*. Attached to the end of the arms *c* is a pendent plate, *k*, with a swivel-bolt, *y*, and a thimble, *t*, hanging through the circular opening *m m*. *b b* is a circular road-way on the inside of the lower plate *l l*. *x x x*, screws holding the truck fast to the head of the staff *H*. *H 1* is the lower section of the staff *H*. *f f* is the follower. *a a a a* is the collar in which the follower *f f* revolves. *w* is a belaying-pin; *w 1*, stop-pin for keeping the follower *f f* fixed while belaying the halyards; *E*, section of a flag set and adjusted, showing the grummet-buckle *r* at the top of the head-cloth *d*, with the eye of the halyards *6* passed through and buckled



with the tongue; *r* 1, brass grummet in the middle of the head-cloth *d*, showing the loop of fair-leader *z* passed through it, and holding the halyards *6*; *r* 2, brass grummet at the bottom of the head-cloth *d* with fair-leader *z* 1. The selvage *g* is shown in the head-cloth *d* by the dotted lines 1 1 1 1, with its upper eye riveted by the grummet-buckle *r*. Its body runs down between the head-cloth *d*, coming through to the outside. Its lower eye is fitted with a toggle, 3.

Fig. 2 is a view of the lower plate *l l*, and showing the internal arrangement of its parts described in Fig. 1, and lettered as follows: *o o*, *c* 4, *c*, *c* 1, *k*, *y*, *t*, *b b*, *x* 1, *x* 2, *x* 3, *x* 4 are holes for the screws *x x x x*, described in Fig. 1.

Fig. 3 is a view of the lower face of a fitted truck, and showing the external arrangement of its parts described in Figs. 1 and 2, and lettered as follows: *u u*, *l l*, *m m*, *k*, *l*, *x* 1, *x* 2, *x* 3, *x* 4.

#### PLATE NO. 2.

Figure 1 is a cross-sectional view of a double road truck, (Farragut pattern.) *u u*, upper plate; *l l*, lower plate; *R R*, rib-rests on lower plate; *J J*, bolts hooked over the rib-rests *R R*, and fastened below to the head of the staff *H*; *b b b b*, double circular roadway on the inside of the upper plate *u u* and of the lower plate *l l*; *m m*, circular opening between the edges of the upper plate *u u* and of the lower plate *l l*; *c c*, end views of revolving four-wheeled carriage with swivel-bolt *y y* and thimble *t t* hanging through the circular opening *m m*; *h*, tenant of the staff *H*.

Fig. 2 is a view of the inside face of the lower plate *l l*; *b b b b*, the circular road-way; *S* socket to fit over the tenant *h* of the staff *H*; *R R R R*, rib-rests for the upper plate *u u*; *x* 1,

*x* 2, bolt-holes for the bolts *x x*. *n* is an aperture for the lightning-rod; *x x*, bolts securing the upper plate *u u* to the lower plate *l l*.

Fig. 3 is a view of the lower face of a fitted truck. The dotted lines show the internal arrangement of the four-wheeled revolving carriage *c c* upon the double roadway *b b b b*, on each side of the circular opening *m m*; *J 1 J 2*, holes for bolts *J J*, described in Fig. 1; *C*, top view of a four-wheeled revolving carriage; *C 1*, side view; *C 2*, end view of a two-wheeled revolving carriage.

Fig. 4, *E*, section of a flag with horse-hair roping *e e*; *g*, selvage strap in the head-cloth *d*, with its upper and lower eyes fitted around and riveted in by the grummet-buckles *r r*.

Fig. 5, view of grummet-buckle; *i*, flange plate with a neck, *i i*; *p*, tongue; *6*, halyards.

Fig. 6, view of a pennant, *E*, roped with horse-hair twine *e e*, and shape of the grummet-buckle *r* for pennants.

#### Disclaimer.

I do not claim as new the principle of inner wheels working upon an inner roadway, as that principle was patented by me November 12, 1861; neither do I claim any of the parts embraced in this invention separate from the uses and purposes in which they are employed, as set forth herein.

#### Claim.

I claim—

The combination of the roadway *b b*, metallic box-truck and follower *f f*, constructed and operated substantially as herein set forth.

JOHN W. MACKENZIE.

Witnesses:

OWEN GUNN,  
WM. HARNEY.