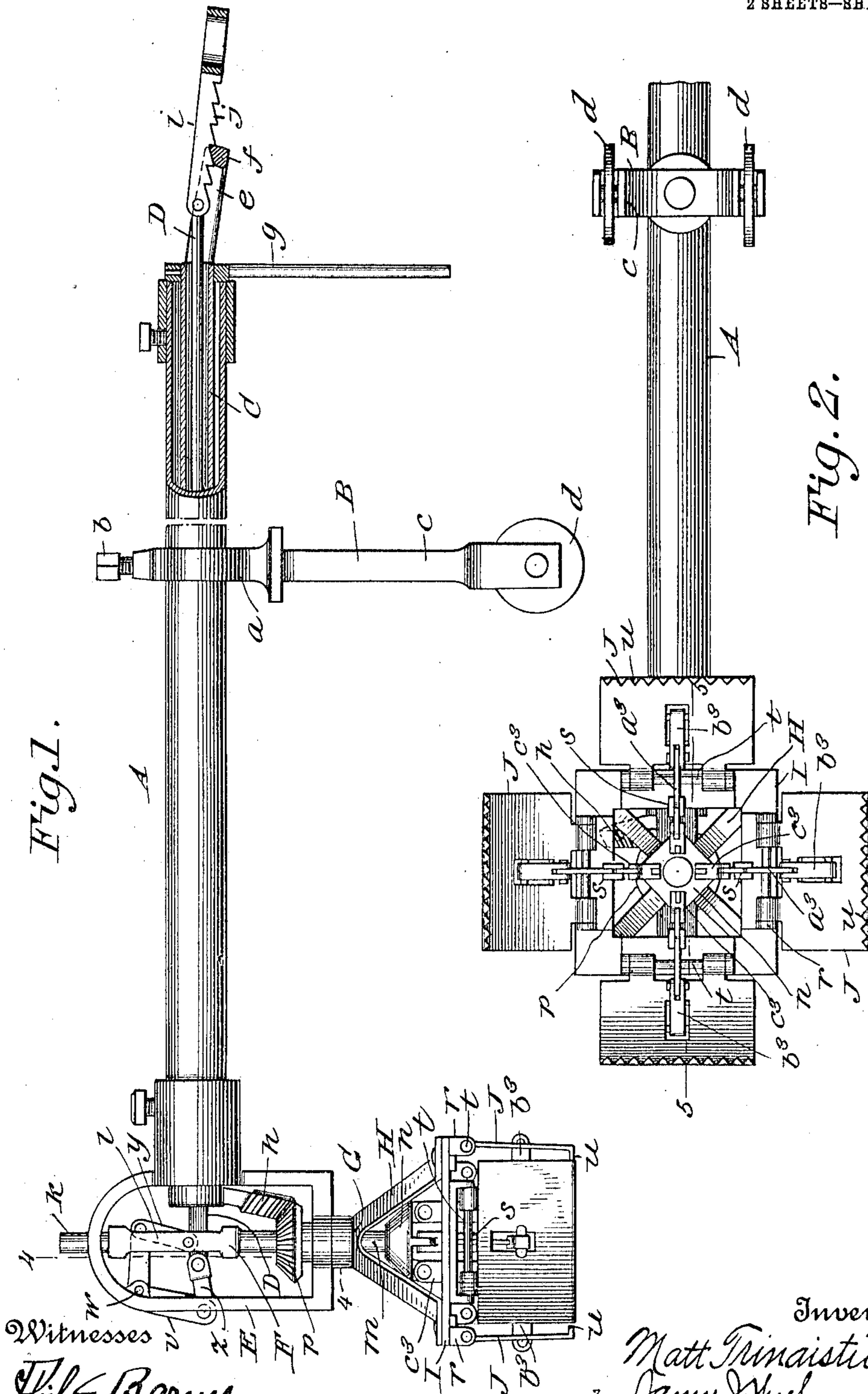


M. TRINAISTICH.  
BRICK HANDLING APPLIANCE.  
APPLICATION FILED JULY 2, 1909.

947,403.

Patented Jan. 25, 1910.

2 SHEETS—SHEET 1.



Witnesses  
Phil. E. Barnes  
J. J. Sheehy Jr.

Inventor  
Matt Trinaistich,  
by James J. Sheehy  
Attorney

M. TRINAISTICH.  
BRICK HANDLING APPLIANCE.  
APPLICATION FILED JULY 2, 1909.

947,403.

Patented Jan. 25, 1910.

2 SHEETS—SHEET 2.

Fig. 3.

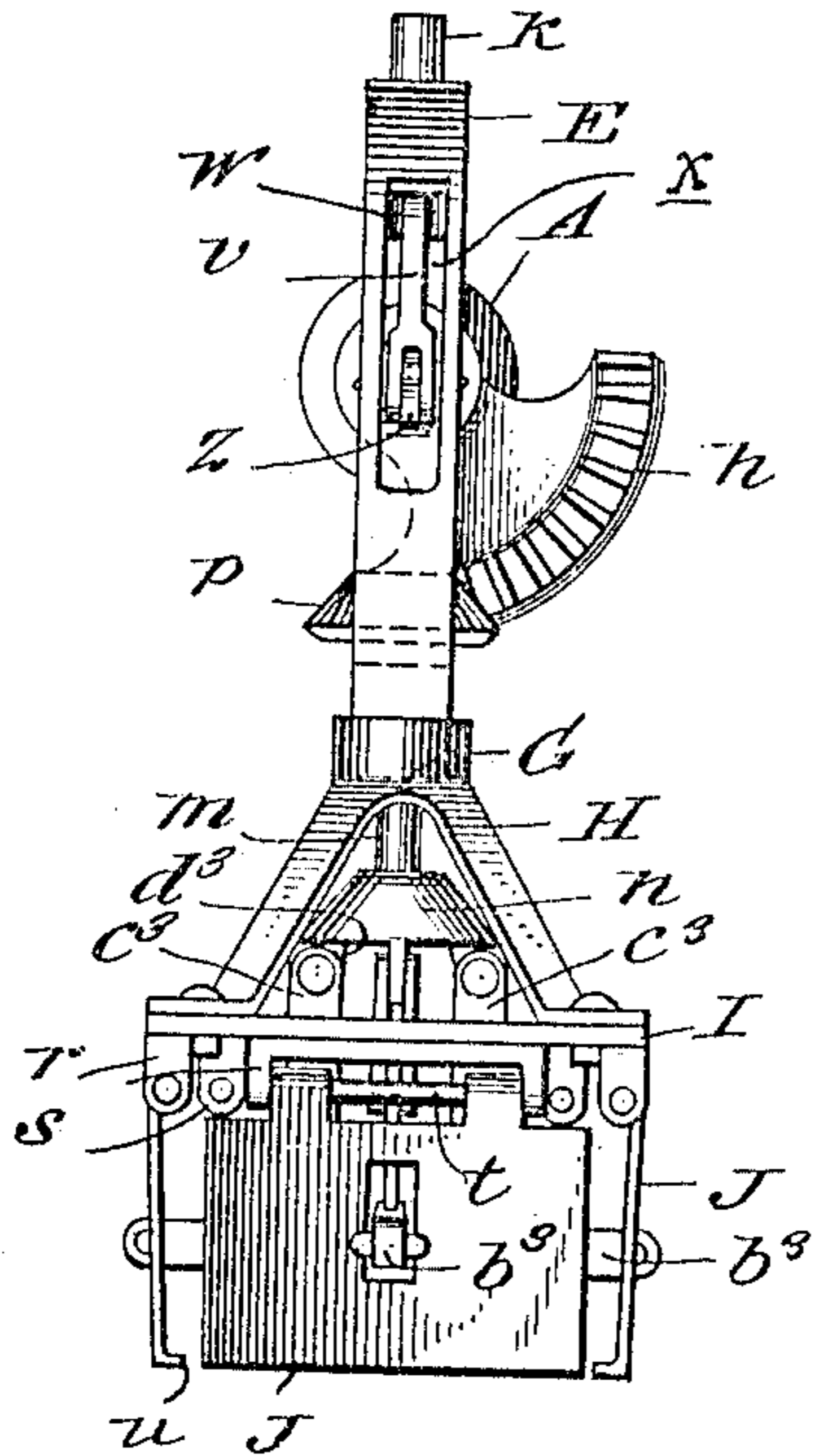


Fig. 4.

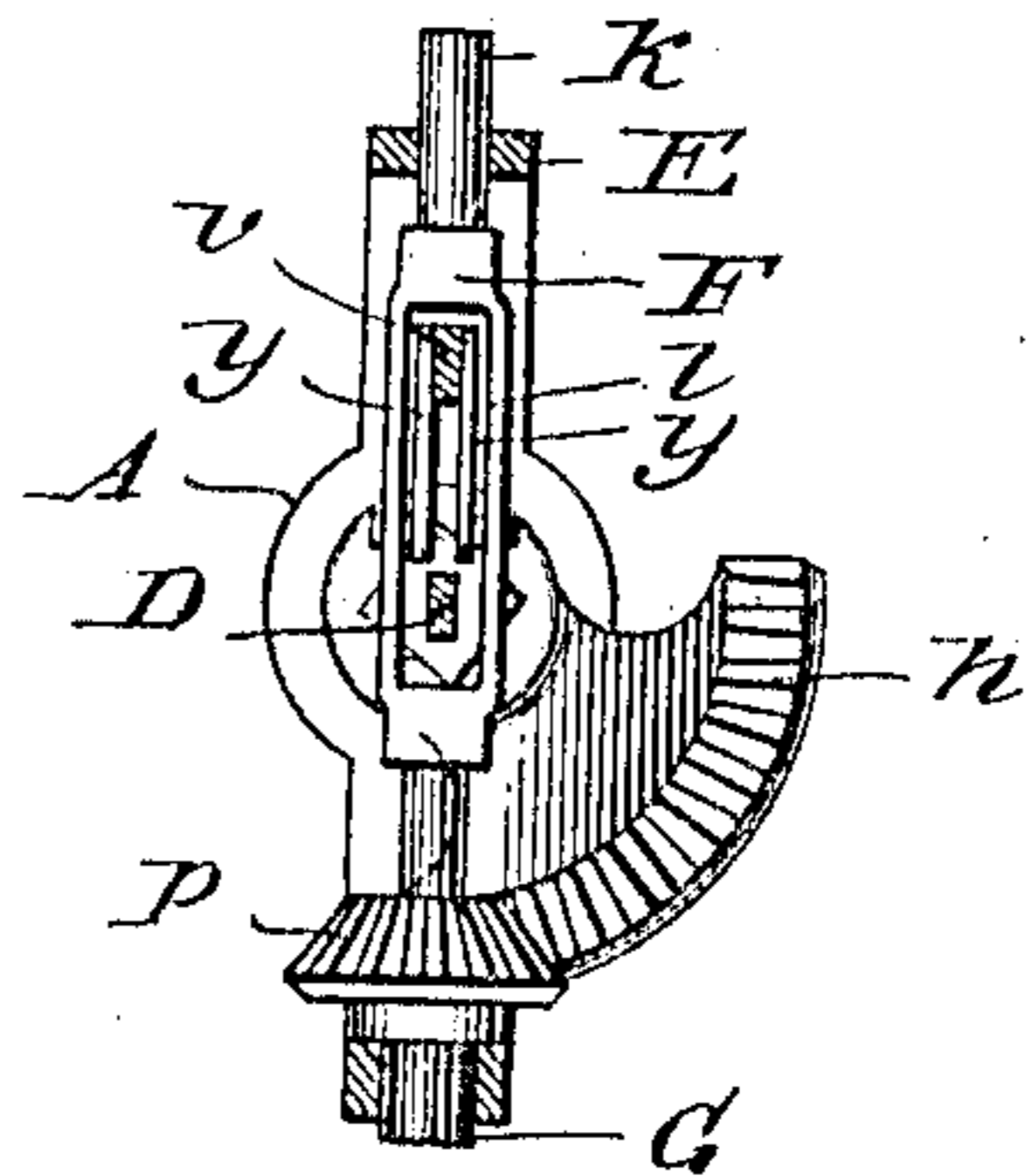


Fig. 5.

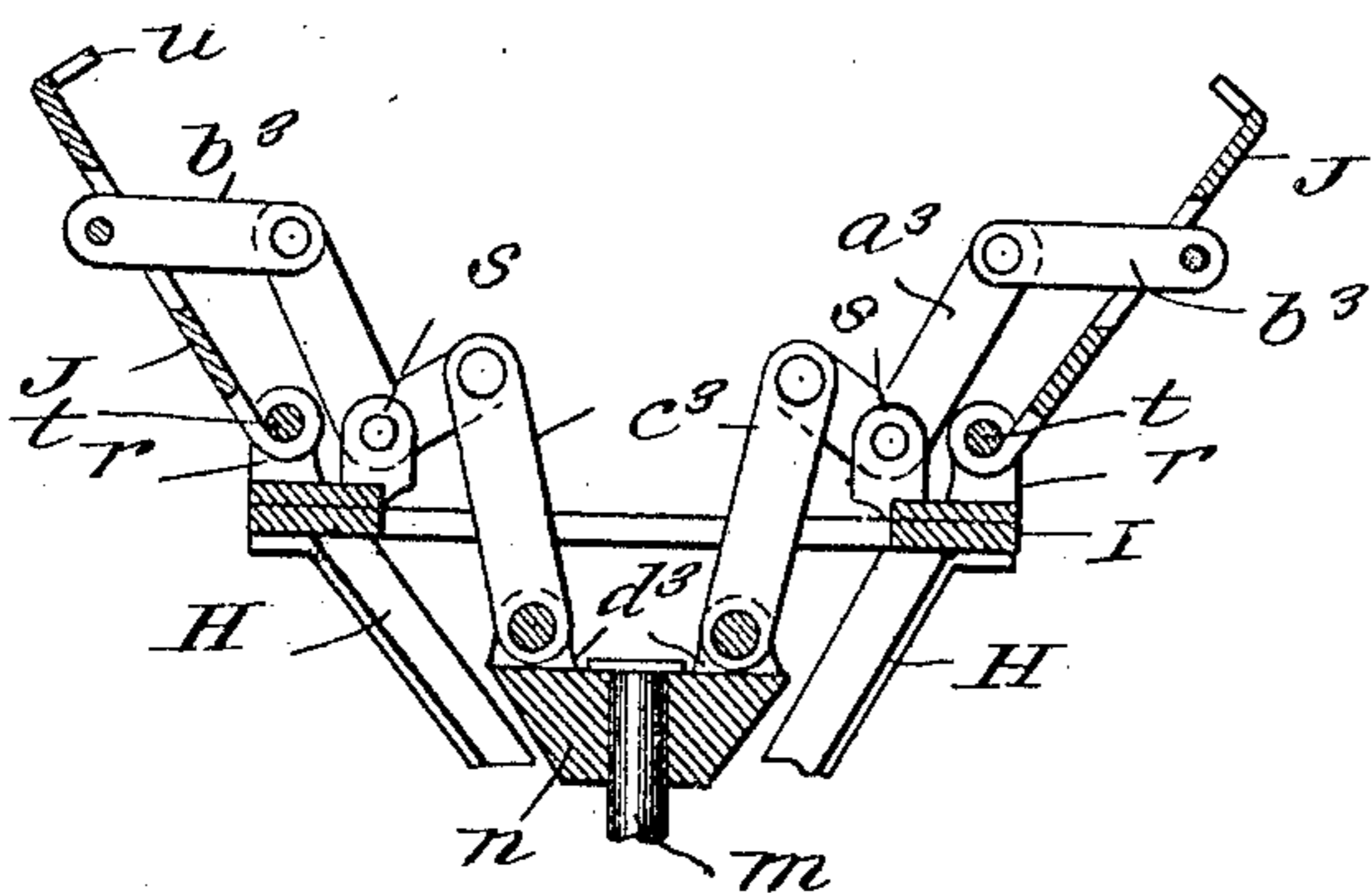
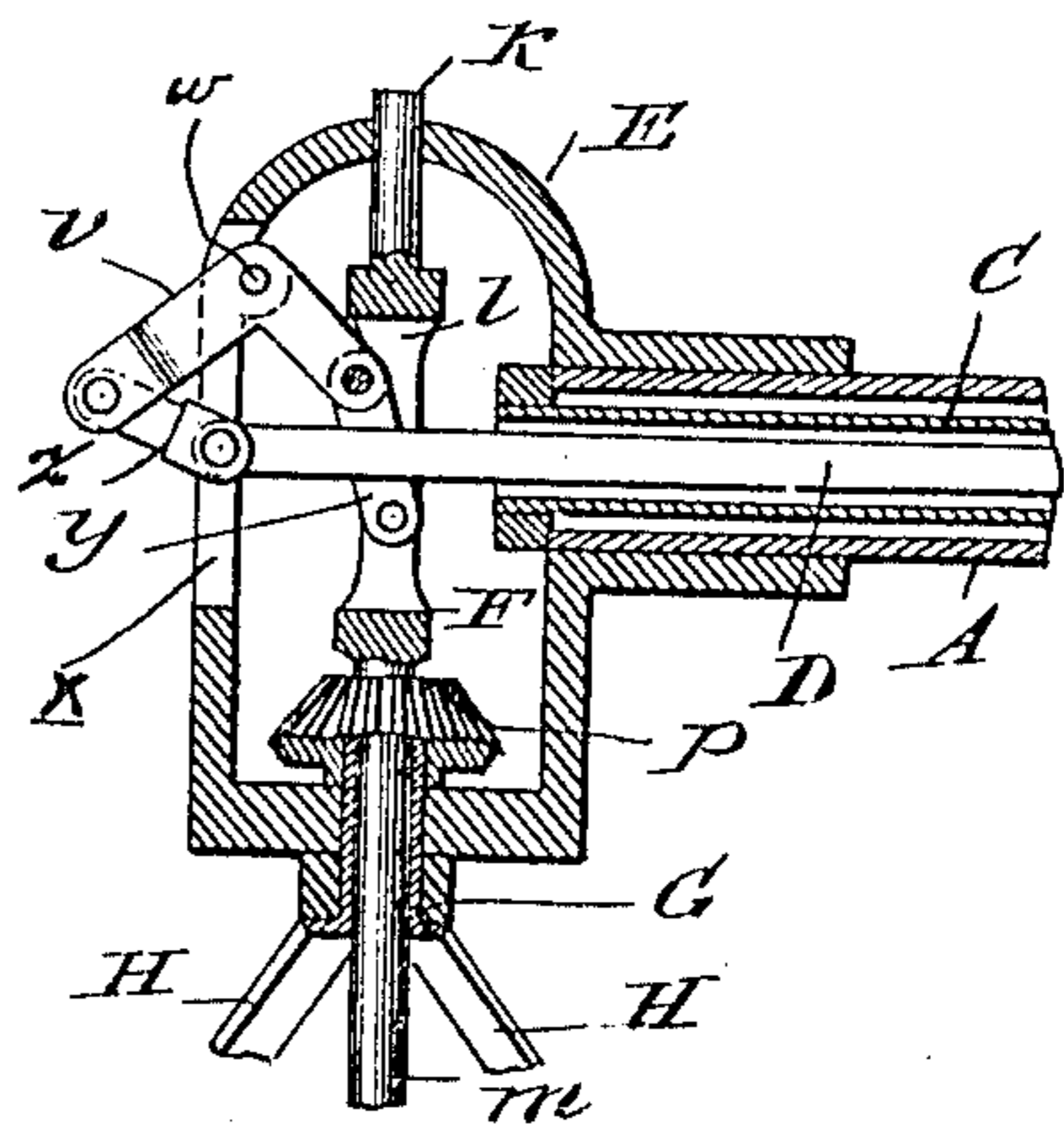


Fig. 6.



Witnesses

Phil E. Barnes  
J. J. Sheehy Jr.

Inventor

Matt Trinaistich.

By James Sheehy

Attorney

# UNITED STATES PATENT OFFICE.

MATT TRINAISTICH, OF TRINIDAD, COLORADO.

BRICK-HANDLING APPLIANCE.

947,403.

Specification of Letters Patent.

Patented Jan. 25, 1910.

Application filed July 2, 1909. Serial No. 505,750.

*To all whom it may concern:*

Be it known that I, MATT TRINAISTICH, citizen of Austria, residing at Trinidad, in the county of Las Animas and State of Colorado, have invented new and useful Improvements in Brick-Handling Appliances, of which the following is a specification.

My invention has to do with the replacing of old brick at the bottoms of coke ovens with new brick; and it contemplates the provision of a device through the medium of which a workman standing outside a hot coke oven may expeditiously and easily take out old brick and as readily place new brick in proper positions at the bottom of the oven and in that way avoid the delay of waiting for the oven to cool.

The invention will be fully understood from the following description and claims when the same are read in connection with the drawings, accompanying and forming a part of this specification, in which:

Figure 1 is a side elevation, partly broken away, of the device constituting the best practical embodiment of my invention of which I am cognizant, as the same appears when its grippers are in their innermost positions. Fig. 2 is an inverted plan view of the device with the grippers in their outermost positions. Fig. 3 is a front elevation with the working parts positioned in the same manner as in Fig. 1. Fig. 4 is a detail vertical section, taken in the plane indicated by the line 4—4 of Fig. 1. Fig. 5 is a detail transverse section taken in the plane indicated by the line 5—5 of Fig. 2. Fig. 6 is a detail longitudinal vertical section illustrative of the connection intermediate the forward end of the longitudinally movable rod and the plunger or vertically movable rod of the device.

Similar letters designate corresponding parts in all of the views of the drawings, referring to which:

A is the body of my novel device which is hollow and preferably in the form of a tube, as shown. The said body is provided at an intermediate point of its length with a support B which comprises a ring *a*, a set screw *b* for adjustably fixing the support at the desired point in the length of the body A, a yoke *c* fixed to and depending from the ring *a*, and wheels *d* carried by the yoke. Obviously when supported by the means just described, the device is adapted to be ex-

peditionously and easily moved, and it will also be manifest that the body A and the support frame may be rocked in the wheels *d* when it is desired to lower or raise the grippers at the forward end of the device.

Fixed to the rear end of the body A is a loop-shaped handle *e* having its rear bar *f* shaped to form a keeper, and journaled in and extending throughout the length of the body A and beyond the rear and forward ends thereof is a tubular shaft C having at its rear end a handle *g* and at its forward end a sector gear *h*. It will also be seen by reference to Fig. 1 that an endwise movable rod D extends loosely through the tubular shaft C, and that hinged and adapted to swing vertically on the rear end of the said rod is a supplemental handle *i* having beveled teeth *j* and adapted, therefor, to be adjustably fixed on the keeper portion *f* of the main handle *e*.

Fixed on and extending above and below the forward end of the body A and in advance of said body is an upright frame E, and extending loosely through the top and the bottom of said frame is a vertically movable plunger F. This plunger is preferably made up of an upper pin *k*, and an open portion *l*, loosely connected to the lower end of the pin *k* and extending downwardly about the proportional distance illustrated and terminating in a depending shaft portion *m* which extends through and below the bottom of the frame E and has a rotary head *n* loosely mounted on its lower end for a purpose hereinafter set forth.

Journaled in the bottom of the frame E and surrounding and adapted to turn about the portion *m* of the plunger F is a sleeve G, having a miter gear *p* at its upper end, intermeshed with the before-mentioned sector gear *h*. At its lower end the sleeve G is fixed to arms H which depend and diverge therefrom, and fixed in turn to the said arms H is a rectangular, horizontally disposed frame I, each bar of which is provided with a pair of depending lugs *r*, and is also provided with a depending bifurcated lug *s*, the latter being arranged at the inner edge of the bar and about midway between the lugs *r*.

Connected in a hinged manner through pintles *t* with the lugs *r* of frame I are a plurality of swinging grippers J having inwardly directed and serrated lower edges *u*,

and by reason of the construction described it will be manifest that the workman standing at the outer end of the body A is enabled to rotate the group of grippers J about a center so as to position the grippers to the best advantage; the driving connection for the said purpose being from the handle *g* through the tubular shaft C, the sector gear *h*, the miter gear *p*, the sleeve G, the arms H and the frame I, to the grippers J hinged to and carried by the said frame I.

In order to enable the workman standing at the outer end of the body A to open and close the grippers J without interfering with the described turning of the several grippers about a center, I provide in addition to the vertically movable plunger F and the head *n* rotatable on the lower end of the plunger, the mechanism best shown in Figs. 1, 5 and 6 of the drawings, which mechanism comprises a bell-crank *v*, pivoted at *w* to the front bar of the frame E and having one of its arms adapted to move in a slot *x* of the frame bar, and its other arm adapted to move in the open portion *l* of the plunger F, links *y* connecting the last named arm of the bell-crank and the open portion *l* of plunger F, and disposed at opposite sides of the forward portion of the endwise movable bar D, a link *z* extending between and connecting the forward end of said bar D and the depending arm of the bell-crank *v*, bell-cranks *a*<sup>3</sup>, best shown in Fig. 2, fulcrumed in the bifurcated lugs *s* below the frame I and having depending arms pivoted to links *b*<sup>3</sup> pivoted to and extending inwardly from the grippers J, and links *c*<sup>3</sup> pivoted to the other arms of the bell-cranks and to depending lugs *d*<sup>3</sup> on the head *n*, which latter is adapted, as before stated, to rotate freely about the lower portion of the plunger F, and is also adapted to be raised and lowered by the said plunger. Thus, when it is desired to move the grippers J inwardly to take hold of a brick, or outwardly to release a brick, the supplemental handle *i* is released from the keeper portion *f* of the main handle *e*, and the operating connection is from the said supplemental handle *i* through the rod D, the link *z*, the bell-crank *v*, the links *y*, the plunger F, the head *n*, the links *c*<sup>3</sup>, the bell-cranks *a*<sup>3</sup>, and the links *b*<sup>3</sup>, to the grippers J; it being manifest that on forward movement of the supplemental handle *i* and rod D, the grippers J will be opened, while when said handle *i* and rod D are retracted, the grippers J will be moved inwardly or toward the center about which they are grouped. It will also be manifest that by putting the toothed edge of the supplemental handle *i* in engagement with the keeper portion *f* of the main handle *e*, the grippers J may be detachably secured in their inward positions and in that way retained in engagement with a brick, so

as to enable the workman while manipulating the body A with one hand to rotate the grippers about their center by manipulating the supplemental handle *g* with his other hand. Then when the gripped brick is in the position desired and it is in order to release and deposit the same, the workman has but to disengage the supplemental handle *i* from the keeper portion *f* and move the said handle *i* and the rod D forwardly, when the grippers will be positively swung outwardly as before described.

In addition to the practical advantages hereinbefore ascribed to my novel device, it will be noted that the said device is simple, compact and inexpensive in construction, and that as a whole it is well adapted to withstand the exposure to heat and the rough usage to which devices of corresponding character are ordinarily subjected.

As before stated, the construction herein illustrated and described constitutes the best practical embodiment of my invention that I have as yet devised, but it is obvious that in the future practice of the invention such changes in the form, construction and relative arrangement of parts may be made as do not involve departure from the scope of my invention as defined in the claims appended.

Having described my invention, what I claim and desire to secure by Letters-Patent, is:

1. A device for the purpose described, comprising a hollow body having a loop-shaped handle at its rear end on which handle is a keeper portion, framework on the forward portion of the body, swinging grippers carried by said framework, a vertically movable plunger guided in the framework and having an open portion, a reciprocatory rod extending through the body and the open portion of the plunger, a supplemental toothed handle hinged to the said rod, bell-cranks fulcrumed on the framework and connected with the vertically movable plunger and the grippers and disposed intermediate said plunger and grippers, and a bell-crank mounted in the framework and interposed between and connected with the plunger and the reciprocatory rod.

2. A device for the purpose described, comprising a hollow body, a frame on the forward portion of the body, a revoluble frame connected with the first-named frame, and comprising a miter gear, a shaft journaled in the hollow body and having a sector gear intermeshed with said miter gear, grippers carried by and movable on the revoluble frame, and means for moving the said grippers on the revoluble frame and extending to a convenient point of the body.

3. A device for the purpose described, comprising a body, a frame on the body, a revoluble frame carried by the first-named

frame and having a miter gear, a sector gear intermeshed with said miter gear, means for actuating said sector gear extending to a convenient point on the body, grippers carried by and movable on the revoluble frame, an endwise movable rod extending to a convenient point of the body, and a connection intermediate the said rod and the grippers for moving the latter on the revoluble frame.

4. A device for the purpose described, comprising a tubular body, a frame fixed on the forward portion thereof, a tubular shaft extending through said body, a sector gear fixed on said tubular shaft and arranged in said frame, a sleeve journaled in the frame and having a miter gear intermeshed with said sector gear, a revoluble frame fixed to said sleeve, grippers hinged to said revoluble frame, a rod movable endwise in the tubular shaft, and means intermediate said rod and the grippers for swinging the latter.

5. A device for the purpose described, comprising a tubular body, a frame fixed on the forward portion thereof, a tubular shaft extending through said body, a sector gear fixed on said tubular shaft and located in said frame, a sleeve journaled in the frame and having a miter gear intermeshed with said sector gear, a revoluble frame fixed to said sleeve, grippers hinged to and depending from the revoluble frame, bell-cranks fulcrumed on said frame and connected with the grippers, a plunger movable in the first-named frame and through the sleeve, connections intermediate said plunger and the bell-crank, a bell-crank mounted in the first-named frame and connected with the plunger, and a rod movable endwise in the tubu-

lar shaft and connected with the said bell-crank.

6. A device for the purpose described, comprising a tubular body having a loop-shaped handle on which is a keeper portion, a wheeled support arranged under said tubular body at an intermediate point in the length thereof, a frame fixed on the forward portion of the tubular body, a tubular shaft journaled in the tubular body and having a handle at its rear end, a rod movable endwise through the tubular shaft, a handle hinged to the rear end of said rod and having teeth for engaging the keeper portion of the first-named handle, a sector gear fixed on the forward end of the tubular shaft and located in the said frame, a revoluble frame having a sleeve journaled in the first named frame and also having a miter gear on said sleeve and intermeshed with the sector gear, grippers hinged to said revoluble frame, bell-cranks mounted on the revoluble frame and connected with the grippers, a plunger movable in the first-named frame and the sleeve, a head loosely mounted on said plunger and connected with the bell-cranks, a bell-crank mounted in the first-named frame, a connection between said bell-crank and the plunger, and a connection between the endwise movable rod and said bell-crank.

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

MATT TRINAISTICH.

Witnesses:

LIZÈ TRINAISTICH,  
JEANNETTE WILSON.