

W. L. Williams,
Bundling Wood.

Patented Nov. 15, 1859.

No 26,147.

Fig. 3.

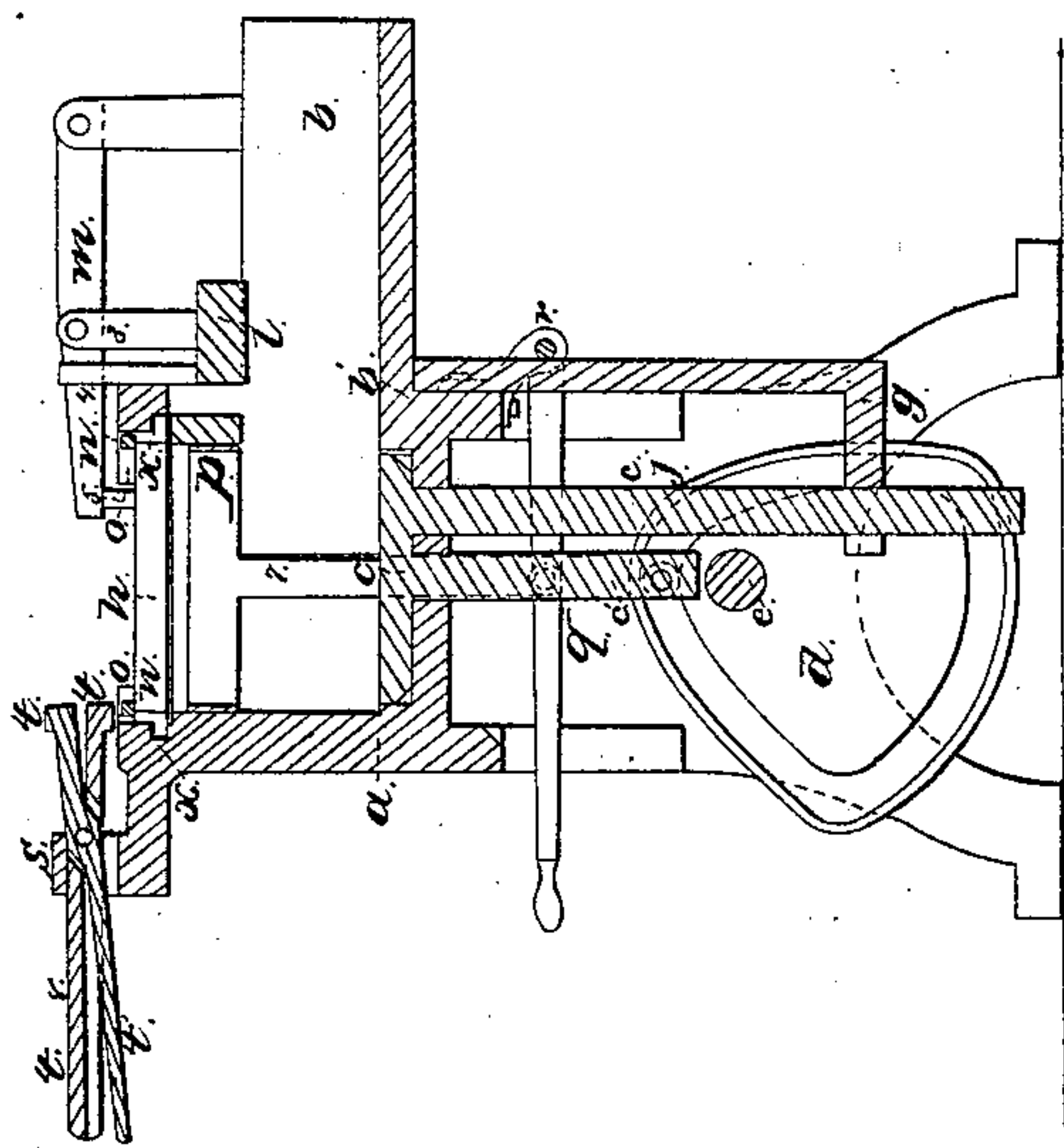


Fig. 2.

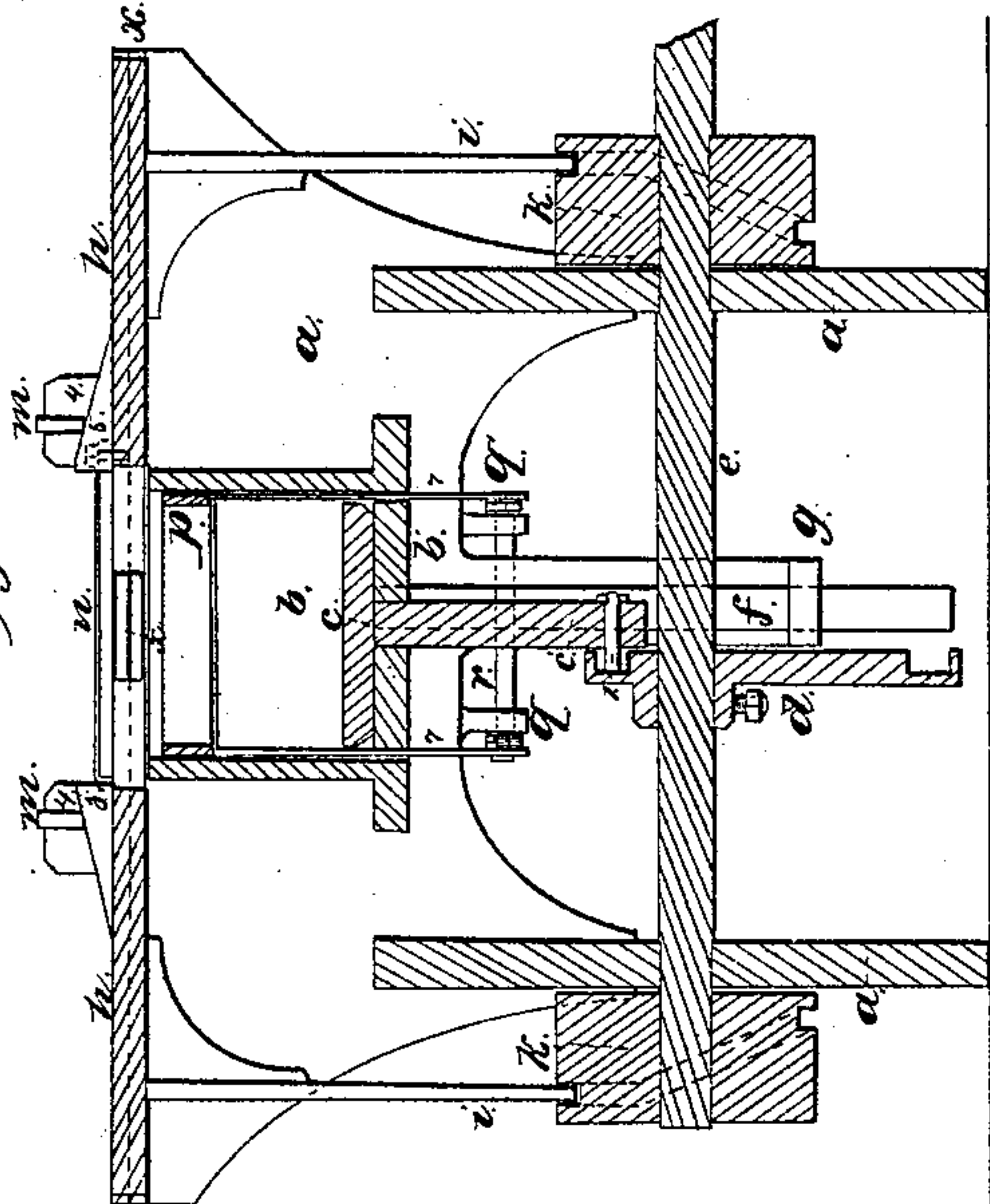
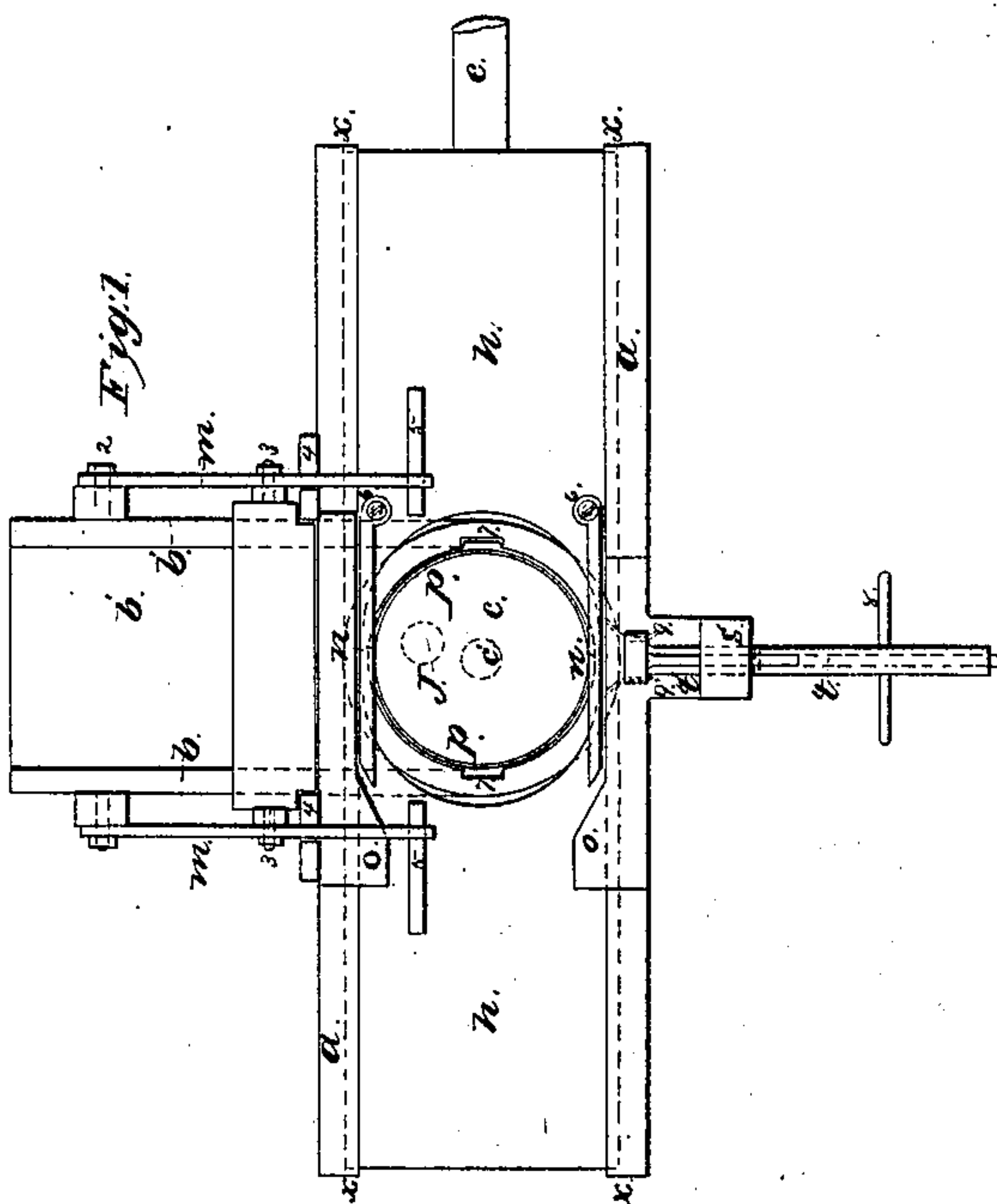


Fig. 1.



Witnesses:
Lemuel W. Sewell
Chas. H. Smith.

Inventor:
W. L. Williams

UNITED STATES PATENT OFFICE.

WILLIAM L. WILLIAMS, OF NEW YORK, N. Y., ASSIGNOR TO HIMSELF AND THOMAS J. O'CONNOR, OF SAME PLACE.

MACHINE FOR BUNDLING KINDLING-WOOD.

Specification forming part of Letters Patent No. 26,147, dated November 15, 1859; Reissued October 4, 1870, No. 4,142.

To all whom it may concern:

Be it known that I, WILLIAM L. WILLIAMS, of the city and State of New York, have invented, made, and applied to use certain
5 new and useful Improvements in Machinery for Bundling Kindling-Wood; and I do hereby declare that the following is a full, clear, and exact description of the construction and operation of the same, reference being
10 had to the annexed drawing, making part of this specification, wherein—

Figure 1, is a plan of my said machine, Fig. 2, is a longitudinal section, and Fig. 3, is a cross section.

15 Similar marks of reference denote the same parts.

My said invention relates to a simple and cheap mechanism by which kindling wood can be retained in small bundles, while having a string or wire passed around it, said
20 mechanism being actuated partially or entirely by hand.

In the drawing *a*, is a framework of suitable character on one side of which is a
25 trough *b*, into and through which the kindling wood is passed, the same having been sawed in lengths and split by suitable machinery to the desired size, and the pieces standing vertical in said trough and being
30 forced along therein so as to occupy the concave or rounded end of the trough *b*. In the bottom *b'* of the trough I introduce a circular follower *c*, that is so fitted that it can be raised up and down by hand or otherwise.
35 I have shown this follower as guided by a pin or slide *f*, and being moved by a cam *d* on a shaft *e*, rotated by hand or otherwise and acting on a roller 1, on the slide *c'*. It will be seen that the wood being pressed
40 along in the trough over the follower *c*, if said follower is lifted a bundle of wood of a circular form will be lifted through the ring *p*, and can be tied or wired by hand above said ring; it however sometimes occurs
45 that the pieces of wood from their width may rest at the bottom on the follower *c*, and a portion of their top end be beneath the ring *p*, and thus obstruct the follower, I therefore construct a circular ring or knife
50 *p*, with slings 7, 7, attached to suitable levers (*q*, *q'*, on a short shaft *r*,) so that said ring knife can be drawn down and split out or separate on one half or its whole circumference, a bundle of from the mass of split

kindling wood in the trough *b*, and said
55 bundle upon being lifted by the follower *c*, or the ring in its ascent can receive a string or wire to retain it.

In order that the bundle of wood may be consolidated, I make use of two slides *h*, *h*,
60 having semicircular ends and set to move in grooves *x*, *x*, on the inner faces of the frame *a*, *a*, and these are brought with compressing force against the sides of the bundle by
grooved cams *k*, *k*, acting on the standards
65 *i*, *i*, or by other suitable mechanism.

n, *n*, are compressing levers set on a fulcrum 6, on one slide *h*, and acted on by inclines *o*, *o*, on the other slide so that the
70 bundle receives a sidewise compression from these levers at right angles to that given by the slides *h*, *h*, themselves; while thus compressed the bundle is secured by a string or wire.

The wire made use of has to be annealed
75 so as to be capable of twisting. The operator passes the wire around the bundle by hand or suitable mechanism, and places the ends within the grooves formed in the rotating pincers *t*, *t'*, which pincers are formed
80 of two jaws that can be opened or shut, and can be turned around in the supporting standard *t*. It will now be evident that the ends of the wire being entered into the
grooves at 9, 9, Fig. 1, between the jaws
85 *t*, *t'*, and firmly clamped, that the operation of rotating the jaws *t*, *t'*, (by the handle 8 or otherwise) tightens the wire by crossing it in the act of twisting and secures the
bundle very firmly. As the wood passes
90 along in the trough *b*, there sometimes are pieces projecting slightly above the others so that they would not pass under the ring
p. I therefore provide a weight *l*, attached by slings 3, 3, to levers *m*, *m*, fulcrumed at
95 2, 2, and guided by jaws 4, 4, said levers and the weight *l*, being raised at the time of feeding the wood along by inclines 5, 5, on the slides *h*, *h*, and as the bundle is compressed the weight *l*, drops onto the wood in
100 trough *b*, and brings the ends to a level, ready for being pressed forward in forming the next bundle.

Having thus described my said invention, what I claim and desire to secure by Letters Patent is—

1. The follower *c*, acting to lift a bundle of wood through a ring or opening and sep-

arate the same from the mass of split kindling wood in the trough (b) substantially as specified.

2. I claim the ring separator or knife *p*,
5 arranged substantially as set forth and acting to split or separate from the mass of kindling wood, a bundle as described and shown.

3. I claim the combination of the following lower *c*, and ring separator or knife *p*, in the manner and for the purposes set forth.

4. I claim two (or more) slides *h*, *h*, with curved ends, acting against and on opposite sides of a bundle of kindling wood to compress the same previous to being secured by a wire or string as and for the purposes specified.

5. I claim the compressing levers *n*, *n*, in

combination with the slides *h*, *h*, to act in compressing the bundle of wood as set forth. 20

6. I claim the twisting jaws or pincers *t*, *t'*, fitted to receive the wire in the manner specified so that the act of revolving said jaws to twist the wire shall first draw the wire tight as set forth. 25

7. I claim the weight *l*, hung on the levers *m*, *m*, and acting to bring the ends of the wood level as set forth.

In witness whereof I have hereunto set my signature this thirtieth day of September 1859. 30

W. L. WILLIAMS.

Witnesses:

LEMUEL W. SERRELL,

CHAS H. SMITH.