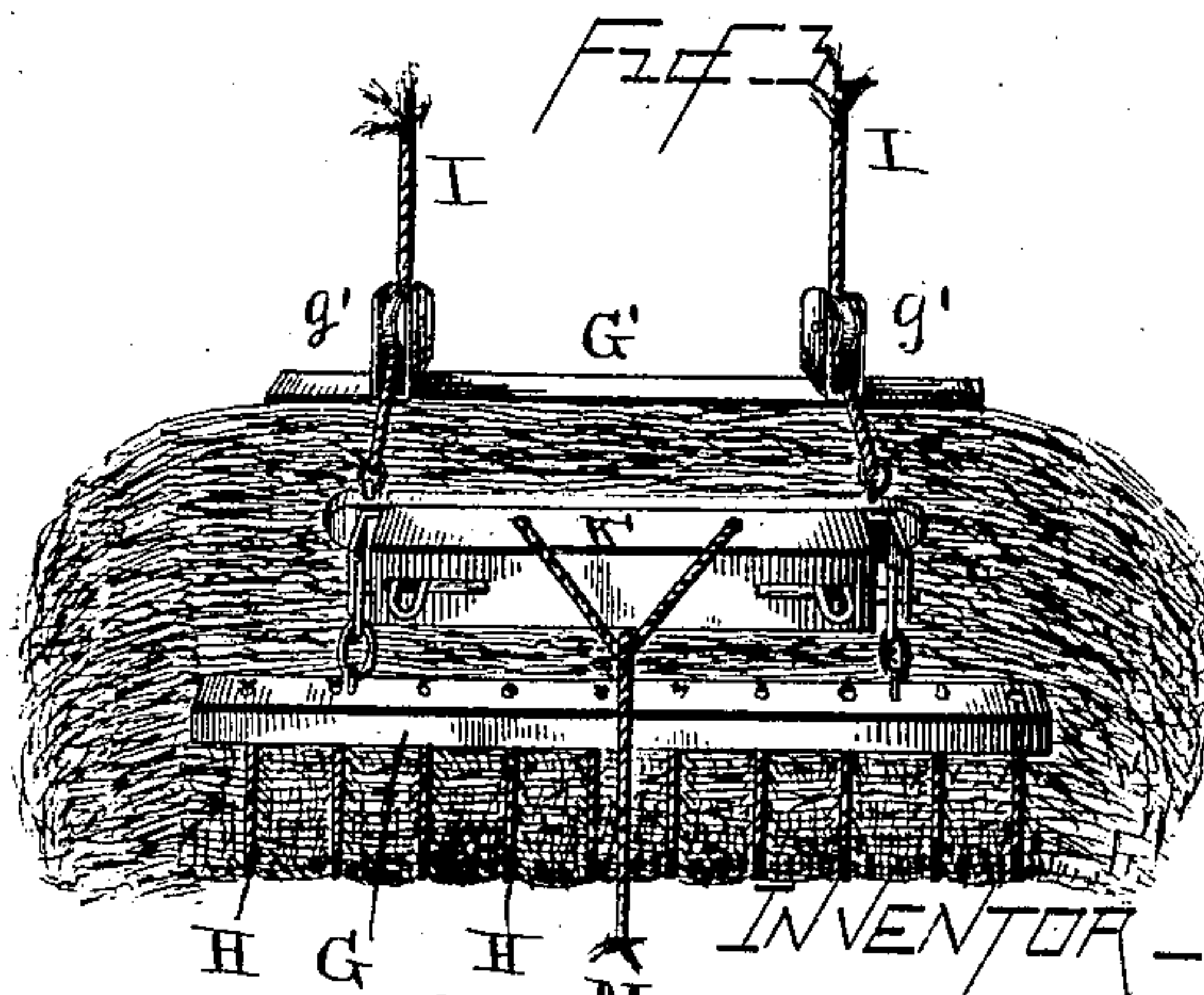
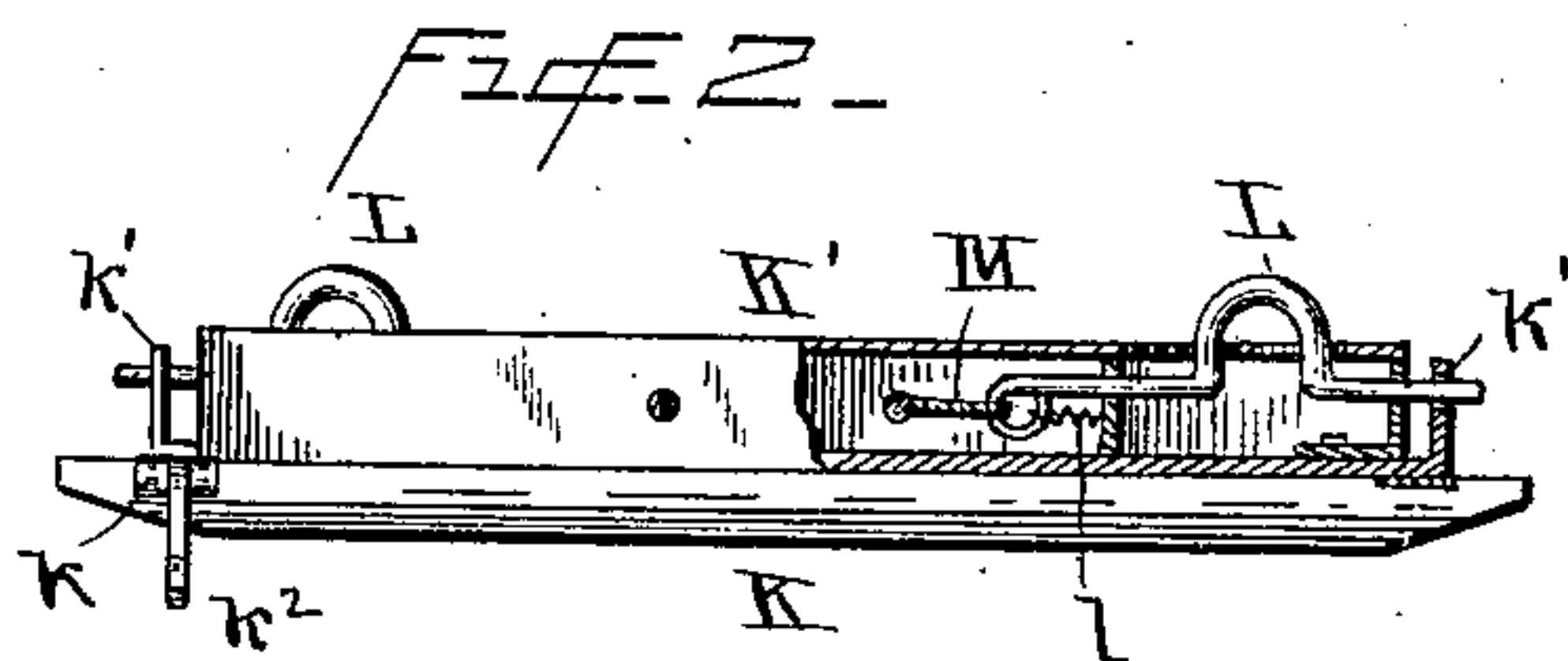
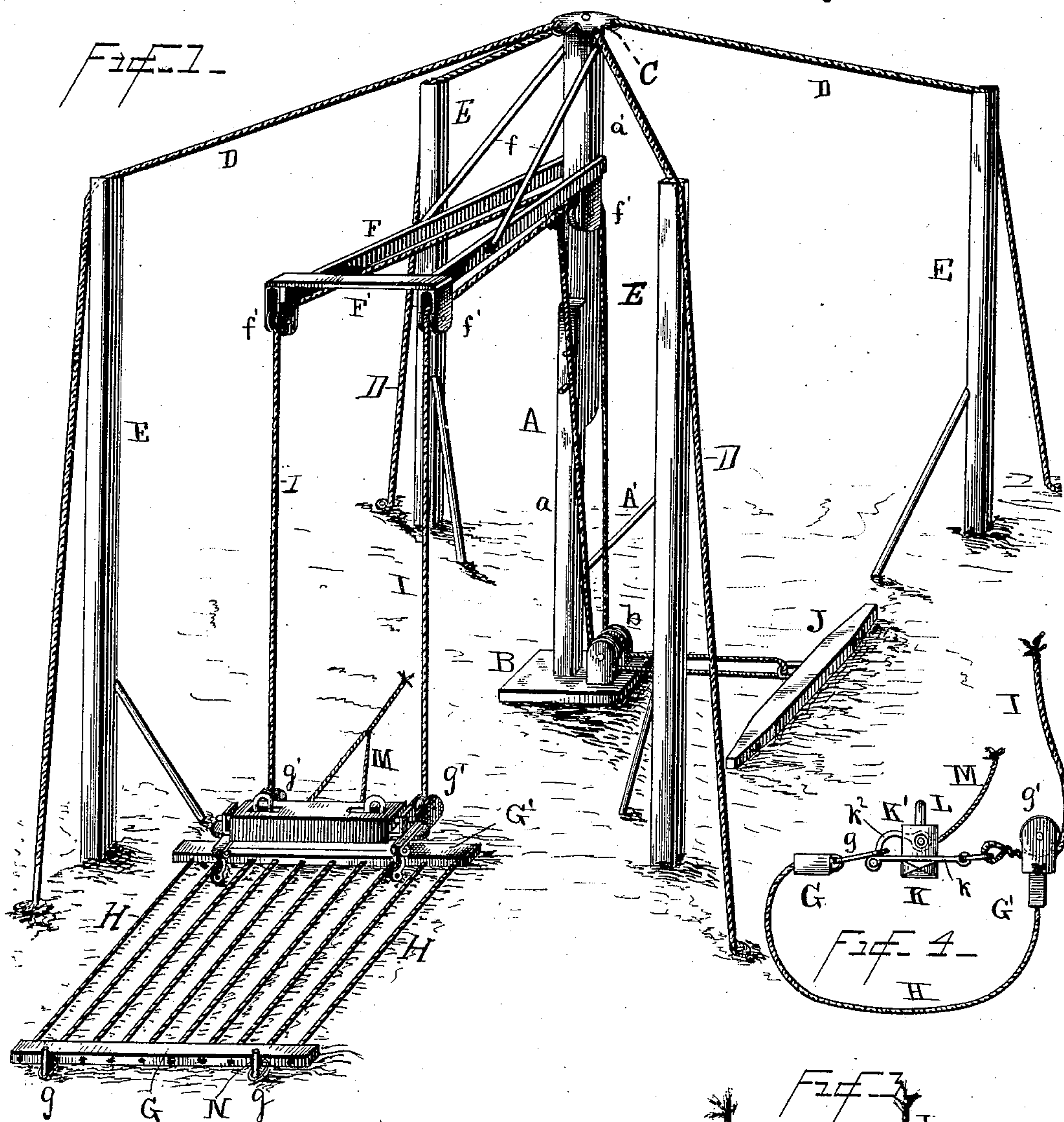


(No Model.)

J. G. ARCHER.  
HAY SLING.

No. 407,316.

Patented July 23, 1889.



WITNESSES—

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# UNITED STATES PATENT OFFICE.

JAMES GARDNER ARCHER, OF BROOKFIELD, MISSOURI.

## HAY-SLING.

SPECIFICATION forming part of Letters Patent No. 407,316, dated July 23, 1889.

Application filed November 30, 1888. Serial No. 292,177. (No model.)

*To all whom it may concern:*

Be it known that I, JAMES GARDNER ARCHER, a citizen of the United States, residing at Brookfield, in the county of Linn and State of Missouri, have invented certain new and useful Improvements in Slings for Hay-Stackers; and I do declare the following to be a full, clear, and exact description of the invention, such as will enable others skilled in the art to which it appertains to make and use the same, reference being had to the accompanying drawings, and to the letters and figures of reference marked thereon, which form a part of this specification.

My invention relates to devices used in stacking hay; and it consists of an improved sling or hammock for holding the hay, and also of certain combinations and arrangement of elements, as hereinafter set forth, and particularly pointed out in the claims.

In the drawings, Figure 1 is a perspective view of the apparatus ready to receive the hay. Fig. 2 is a side elevation of the casing for the spring-bolts, partly broken away. Fig. 3 shows a load of hay ready for hoisting, and Fig. 4 is an end view of the sling without the hay.

The center post A is preferably made in two parts  $a a'$ , hinged together, so that they can be folded for transportation. The foot of the post is stepped in a socket in the plate B, and its head is provided with a pintle adapted to turn in the plate C, from which run guy-ropes D, stretched over posts E, set up at suitable distances from the center post.

Near the top of the center post are attached two arms F, which extend, preferably, at right angles with the post and diverging slightly, so that their outer ends stand considerably apart. The arms are supported by rods  $f$ , running from the top of the center post to the outer end of the arms, which are united by a cross-bar  $F'$ . At the inner and outer end of each arm F is a pulley  $f'$ , and on the socket-plate B, or on the center post near its foot, is a double pulley  $b$ . The center post and arms constitute a derrick or crane for hoisting the hay; but this forms no part of the present invention.

The sling or hammock comprises two bars  $G G'$ , united by cords or wires H. The bar G is provided with two rings or links  $g$  near its

ends. Fastened to the bar  $G'$  are two pulleys  $g'$ . Two ropes I, attached to a bar J run through the double pulley  $b$  and over the pulleys  $f'$  down to the pulleys  $g'$ . Their ends are attached to straps  $k$ , fastened to the ends of a bar K. On this bar is a casing  $K'$ , in which are contained two spring-bolts L, normally pressed outward by the springs  $l$ . The bolts project through the ends of the casing and through holes formed in standards  $k'$  adjacent to ends of the casing. Hinged to the end of each strap  $k$  is a curved hook  $k^2$ , in the end of which is an eye. The hook is so arranged with reference to the casing  $K'$  that it can be turned down in to the space between the casing and the standard  $k'$ , with its eye in line with the bolt L, so as to be engaged thereby, as shown in Figs. 2 and 4. The inner ends of the bolts L are attached to cords M, which lead out through suitable openings in the casing. By means of these cords the bolts can be retracted when it is desired to release the hooks  $k^2$ .

The method of using my invention is as follows: The sling or hammock is spread out flat on the ground, as shown in Fig. 1, with the links  $g$  dropped over stakes N, driven in the earth to prevent the sling from being displaced. The hay is then raked upon it, and when a sufficient quantity has been gathered the bar G is brought up near the bar K, and the links  $g$  are passed over the hooks  $k^2$ , which are then turned down and locked by the bolts L. Power is then applied to the bar J either by hand or preferably by attaching a horse to it, and a tension is put upon the ropes I. This draws the bars G and K toward the bars  $G'$  and gathers the hay up into a tight bundle, as shown in Fig. 3. When the bundle has been hoisted to the arms F, the derrick can be turned by means of the handle  $A'$ , so as to bring the hay over any desired spot, and then a sharp pull on the cords M will withdraw the bolts and release the bar G, thereby allowing the hay to fall.

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

1. A sling for a hay-stacker, consisting of the bars  $G G'$ , united by the cords H, the pulleys  $g'$ , attached to the bar  $G'$ , the ropes I, passing through the pulleys, and means for

detachably securing the ends of the ropes to the bar G, substantially as set forth.

2. The combination, with the bar G, having the links  $g$ , of the bar  $G'$ , having the pulleys  $g'$ , the cords H, uniting the bars, the bar  
5 K, having the hooks  $k^2$ , and carrying spring-bolts adapted to engage with the hooks, and the ropes I, passing through the pulleys  $g'$ , and

attached to the bar K, substantially as set forth.

In testimony whereof I affix my signature in presence of two witnesses.

JAMES GARDNER ARCHER.

Witnesses:

W. H. BROWNLEE,  
JAMES TOVEY.