

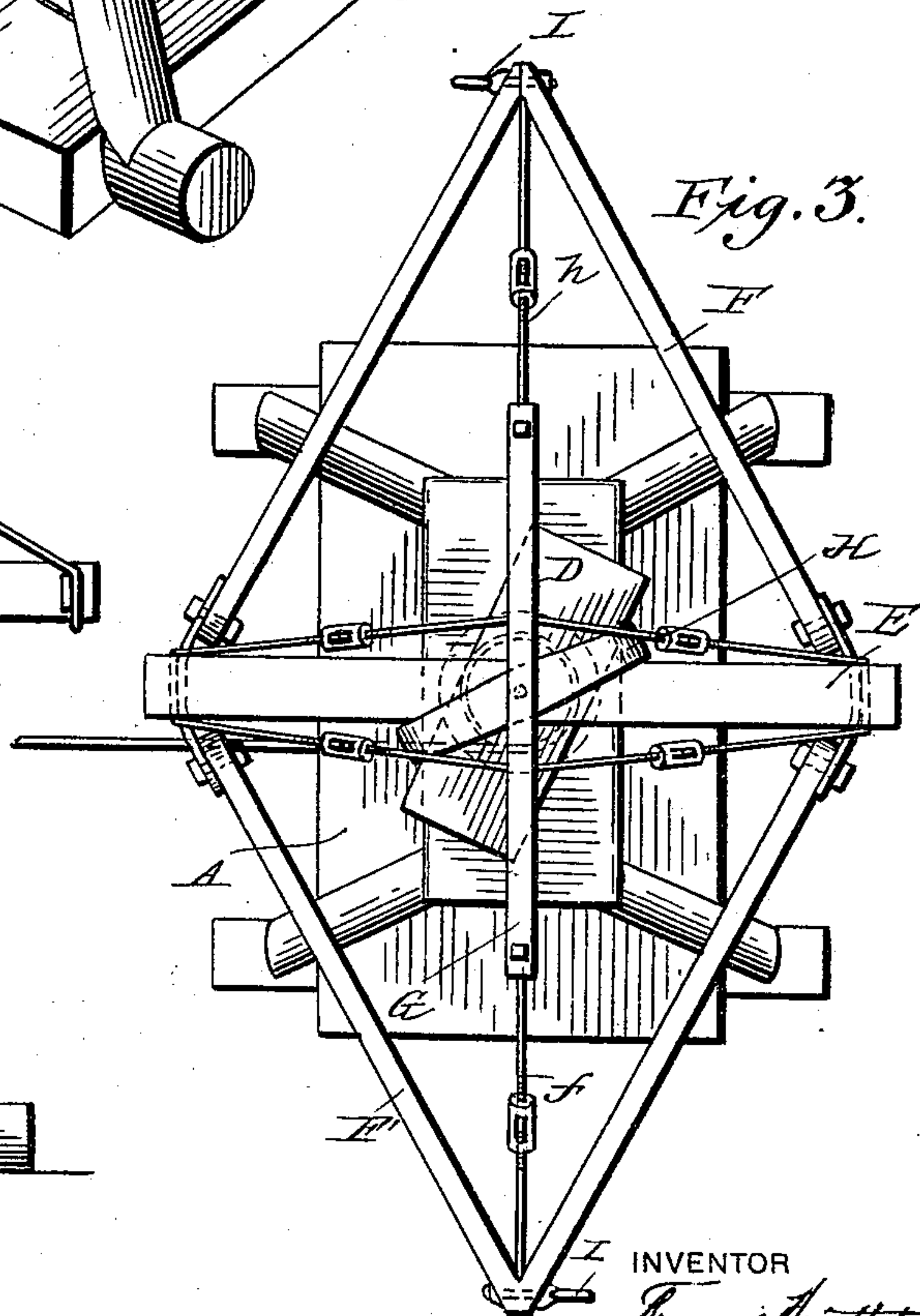
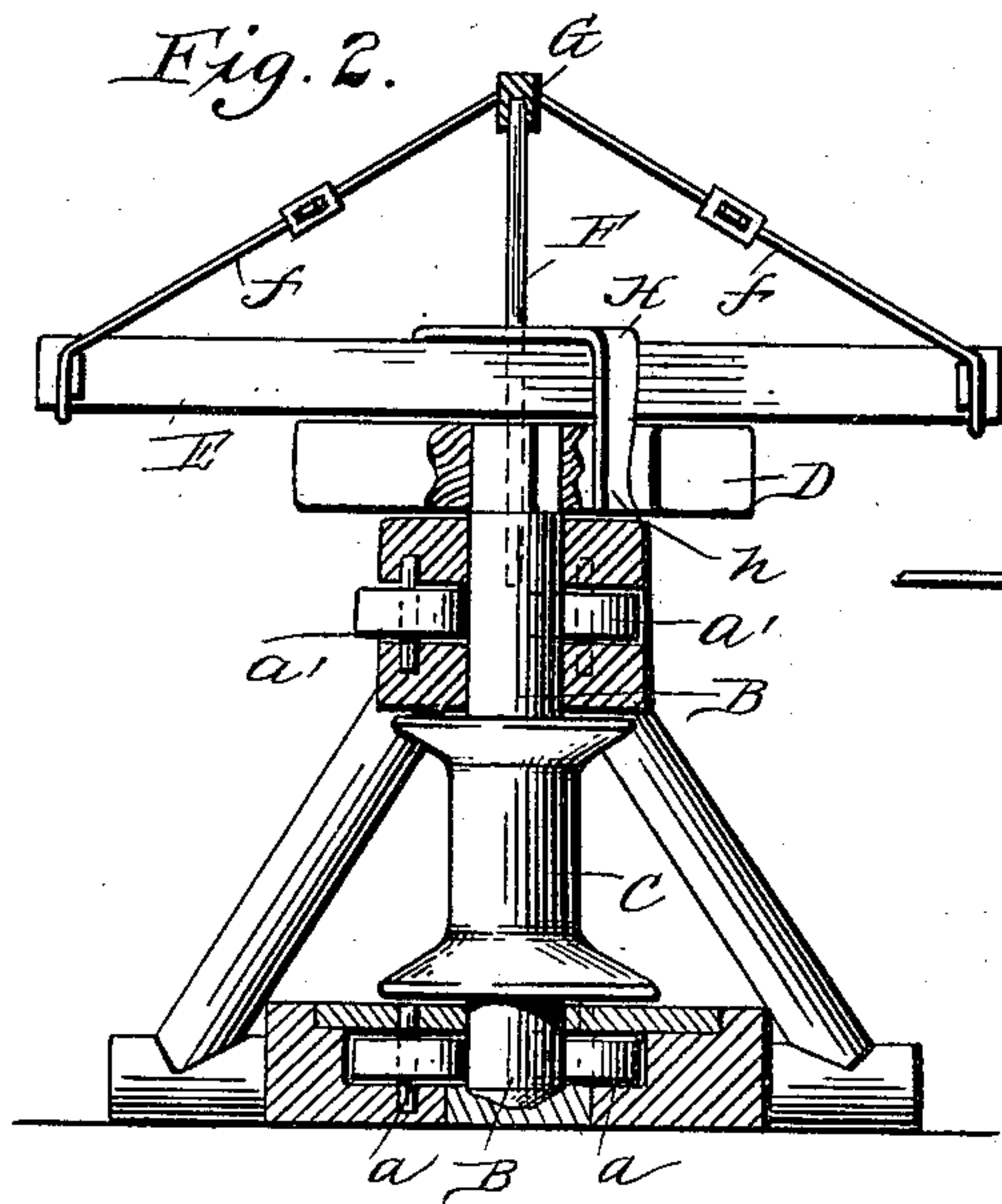
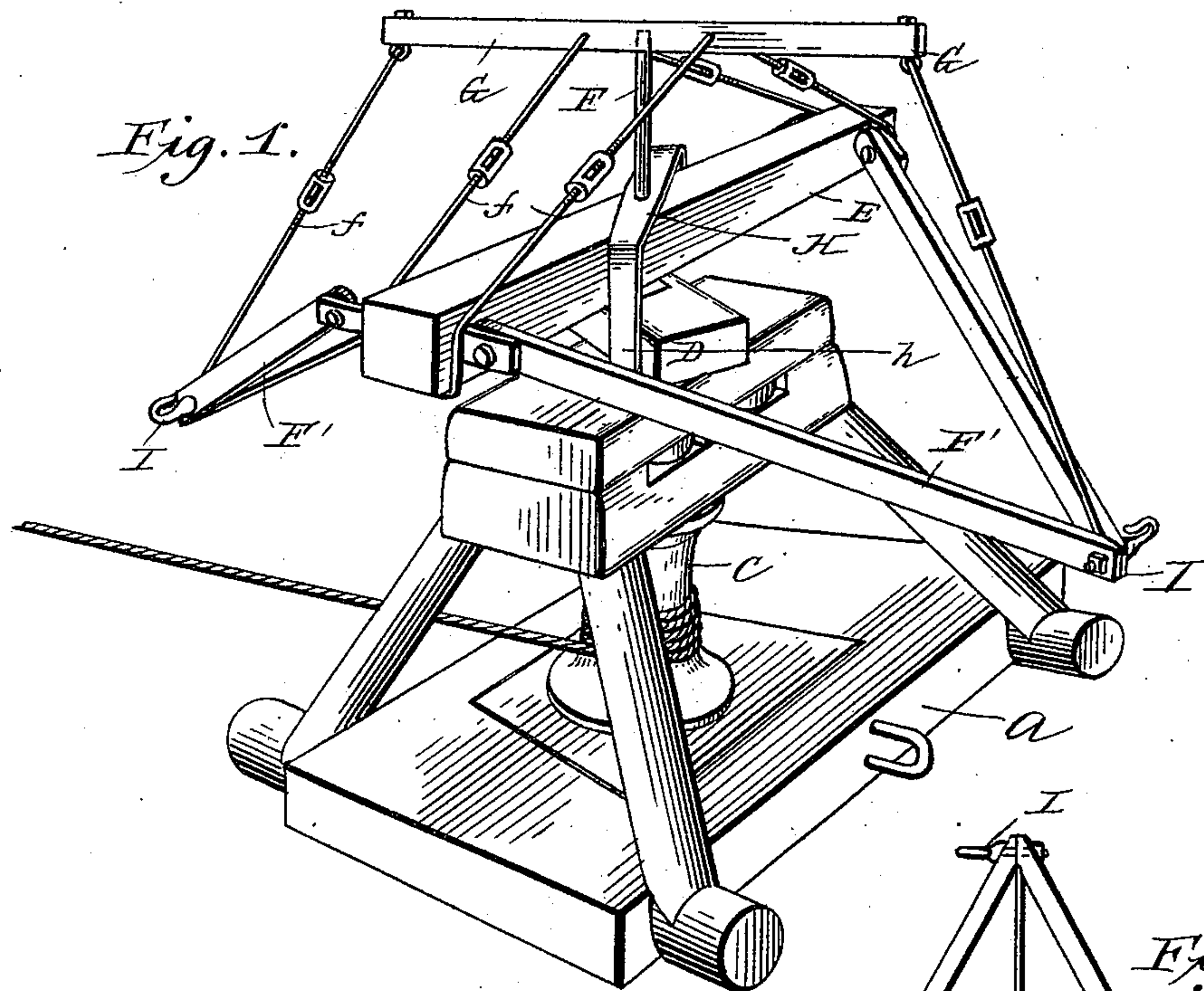
No. 613,998.

Patented Nov. 8, 1898.

T. HUNTBATCH.
CAPSTAN.

(Application filed Aug. 24, 1898.)

(No Model.)



WITNESSES

Claverance.
Stewart Rice.

INVENTOR

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UNITED STATES PATENT OFFICE.

THOMAS HUNTBATCH, OF HAMPTON, IOWA.

CAPSTAN.

SPECIFICATION forming part of Letters Patent No. 613,998, dated November 8, 1898.

Application filed August 24, 1898. Serial No. 689,415. (No model.)

To all whom it may concern:

Be it known that I, THOMAS HUNTBATCH, a citizen of the United States, residing at Hampton, in the county of Franklin and State of Iowa, have invented certain new and useful Improvements in Capstans; and I do hereby 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.

My invention relates to improvements in capstans, and particularly to those designed for use in pulling stumps, though of course it could be used for pulling any other load—as, for instance, in moving houses and the like.

The invention consists of certain novel constructions, combinations, and arrangements of parts, as will be hereinafter described and specifically claimed, the construction being such that a great leverage is secured and the load to be drawn is thereby much more readily moved, the construction and arrangement also being such that in the event of the tension on the rope becoming so great as to break the same the sweeps will not be thrown against the horse's heels, as sometimes occurs in other constructions when such accidents take place.

In the accompanying drawings, Figure 1 is a perspective view of my improved capstan. Fig. 2 is a vertical section through the same, and Fig. 3 is a top plan view thereof.

A in the drawings represents the frame of the machine, which may be of any suitable construction. In this frame are provided near its lower end antifriction-rollers *a a*, and near its top are also provided other antifriction-rollers *a' a'*. A shaft B extends vertically through the frame A and has a reduced metal end which has a seat in a metal bearing-plate in the lower part of the frame and bears against the antifriction-rollers *a a* and *a' a'*, so as to have a free movement thereon. The shaft carries near its lower end a winding-drum C and at its upper end is preferably squared to receive a head D, which latter is rigidly secured to the said vertical shaft B and moves therewith. A power-beam E rests on top of the head of the capstan and is connected therewith and has free movement thereon by means of a vertically-ar-

ranged rod F, which extends into the vertical shaft B. Triangular-shaped sweeps *F' F'* are secured to the outer ends of the power-beam E and are supported at the proper height by means of stay-rods *f*, which extend from the outer ends of the power-beam to a sweep-stay G, to which they are secured. The sweep-stay is supported at the proper height by means of the iron rod F. The stay-rods *f* are provided with turnbuckles *f²*, for tightening them, and serve as tie-rods and securely brace and form a secure support for the sweeps. The sweeps are secured to the power-beam by bolts or in any other suitable manner.

H represents what I term a "capstan-driver," and consists, preferably, of an approximately U-shaped member constructed of iron, which is vertically and laterally movably secured to the power-beam by means of an iron rod F, which passes through the same. The depending arms *h h* of the driver engage the head of the capstan D on opposite sides and when the sweeps are operated from left to right move it so as to wind up the rope or cable on the drum and draw the load. In the event of the rope or cable breaking or slipping the sweeps will turn in the opposite direction—that is, from right to left—at least a half-revolution before the capstan-driver will be engaged by the power-beam and cause it to engage the capstan-head and revolve the said head and drum in a reverse direction, which free play of the sweep will prevent the same from coming in contact with the heels of the horses, which would most likely injure or frighten the animals. I regard this as an important feature of my invention. It will also be observed that, by reason of the manner in which the capstan-driver H is constructed and arranged on the rod F and power-beam E, when it is desired to wind the cable upon or from off the drum without turning the sweep-stay it can be readily accomplished by simply sliding the capstan-driver H upon the vertical rod F and turning it so that the lower ends of the pendent arms *h h* will rest on the power-beam, whereby the power-beam will be disengaged from the capstan-head and the cable can be readily manipulated without regard to the power-beam and sweeps and horses attached thereto. The horses are at-

attached to the sweeps at the points marked I I, which points, being on opposite sides of the power-beam and a considerable distance therefrom, enables not only two teams to be employed, but also secures a great leverage and enables a very heavy load to be drawn.

The machine may be mounted on traction-wheels, so that it can be readily moved from place to place.

The machine is very simple in its construction and operation and from practical tests has been found very efficient for the purposes intended.

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

1. In a capstan, the combination with a suitable supporting-frame, of a vertical shaft a winding-drum and a head, a power-beam movable horizontally on the said head, and a pivoted, horizontally-swinging capstan-driver carried by the said power-beam and adapted to be automatically brought into engagement by the power-beam with the capstan-head to revolve it in one direction and to be again automatically brought into engagement by the power-beam with the said head to revolve it in the opposite direction in the event of the cable breaking or slipping, a partial revolution of the power-beam in the reverse direction being permitted during the changing of the engaging positions, substantially as described.

2. In a capstan, the combination with a suitable supporting-frame, of a vertical shaft a winding-drum and a head, a power-beam movable horizontally on the said head, sweeps attached to the power-beam and extending from the same in opposite directions, and a capstan-driver carried by the said power-beam and adapted to be automatically brought into engagement with the capstan-head to revolve it in one direction and to be again automatically brought into engagement with the said head to revolve it in the opposite direction in the event of the cable breaking or slipping, a partial revolution of the power-beam in the reverse direction being permitted during the changing of the engaging positions, substantially as described.

3. In a capstan, the combination with a suitable supporting-frame, of a vertical shaft a winding-drum and a head, a power-beam movable horizontally on the said head, triangular sweeps attached to the power-beam and extending from the same in opposite directions, a capstan-driver carried by the said power-beam, the said capstan-driver comprising an approximately U-shaped member, the depending arms of which engage the capstan-head on its opposite sides but which are adapted to be turned automatically to engage the opposite ends of the capstan-head in the event

of the cable breaking or slipping, a partial revolution of the power-beam in the reverse direction being permitted during the changing of the engaging positions of the arms, substantially as described.

4. In a capstan, the combination with a suitable supporting-frame, of a vertical shaft a winding-drum and a head, a power-beam movable horizontally on the said head, triangular sweeps attached to the power-beam and extending from the same in opposite directions, a capstan-driver carried by the said power-beam, the arms of which engage opposite sides of the capstan-head, a sweep-stay supported above the power-beam by means of a vertical rod, and stay-rods connecting the sweeps with the sweep-stay for supporting and regulating the former, substantially as described.

5. In a capstan, the combination of a suitable supporting-frame, antifriction-rollers carried by said frame, a vertical shaft a winding-drum and a head said shaft having a bearing contact with said rollers, a power-beam movable horizontally on the said head, triangular sweeps attached to the power-beam and extending from the same in opposite directions, a capstan-driver carried by the said power-beam, the arms of which engage opposite sides of the capstan-head and a sweep-stay supported above the power-beam by means of a vertical rod which extends through the capstan-driver, the power-beam and into the vertical shaft, the said rods connecting the sweeps with the sweep-stay for supporting and regulating the former, substantially as described.

6. In a capstan, the combination with a suitable supporting-frame, of a vertical shaft a head, a winding-drum, a power-beam movable horizontally and independently of said shaft, and a centrally-pivoted vertically-movable capstan-driver which engages opposite sides and ends of the head of the vertical shaft, which driver is adapted to be disengaged from the power-beam, and the head of the vertical shaft, substantially as described.

7. In a capstan, the combination with a suitable supporting-frame, of a vertical shaft a winding-drum, and a head, a power-beam movable horizontally and independently of said shaft, a vertically-movable capstan-driver having depending arms which are adapted to engage the head of the vertical shaft, when in a lowered position and to be raised so as not to engage said head or be engaged by the power-beam, substantially as described.

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

THOMAS HUNTBATCH.

Witnesses:

MINNIE AUSTIN,
JAMES THOMPSON.