Dixon & Heath,

Grapple.

No. 69,326. Patented Oct. 1, 1867.

Fig. 1.

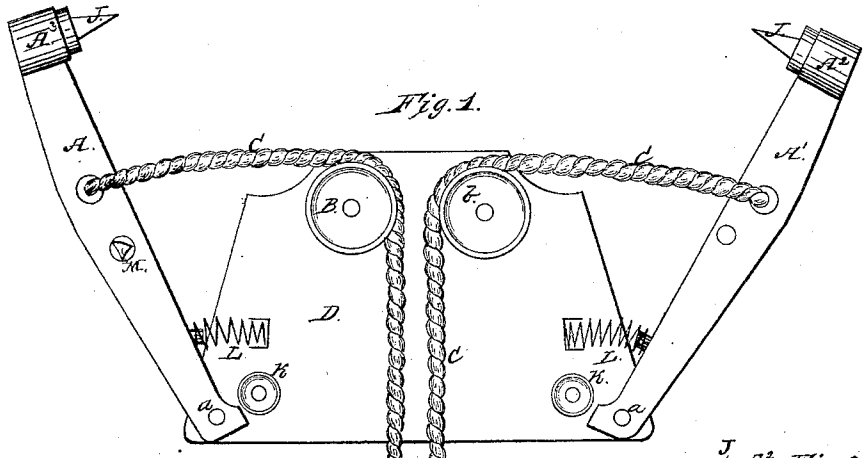


Fig. 3.

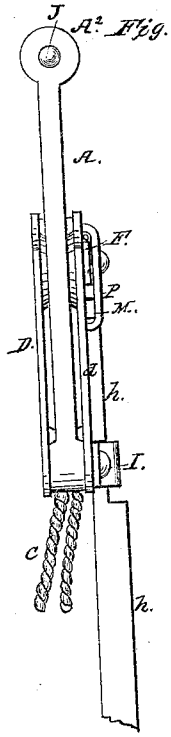
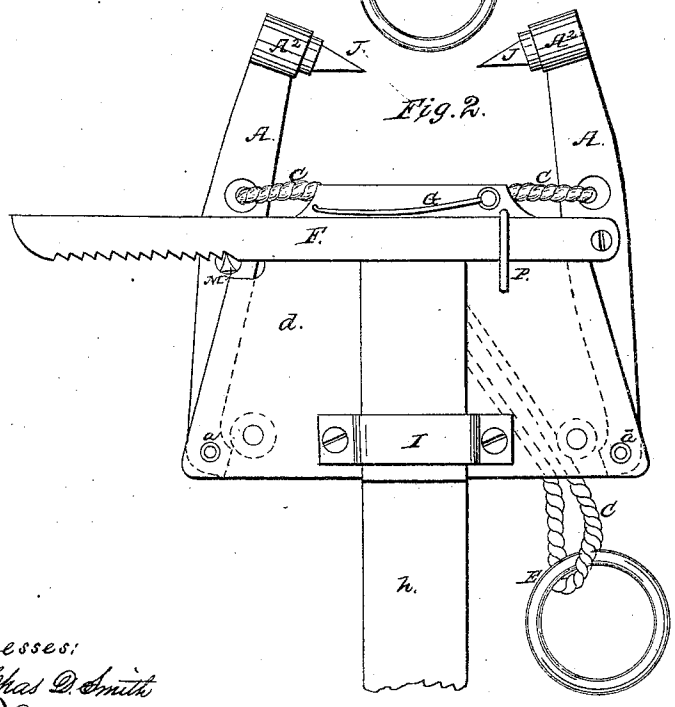


Fig. 2.



Witnesses:
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AM. PHOTO-LITHO. CO. N.Y. (OSBORNE'S PROCESS)

UNITED STATES PATENT OFFICE.

WILLIAM DIXON AND LUMAN HEATH, OF ADAMS, NEW YORK, ASSIGNORS TO THEMSELVES AND T. P. SAUNDERS, OF SAME PLACE.

IMPROVED CLUTCH FOR SUSPENDING HAY-FORKS.

Specification forming part of Letters Patent No. **69,326**, dated October 1, 1867.

To all whom it may concern:

Be it known that we, WM. DIXON and LUMAN HEATH, both of Adams, in the county of Jefferson and State of New York, have invented a new and Improved Clutch for Suspending Hay-Forks, &c.; and we do hereby declare the following to be a full, clear, and exact description of the same, reference being had to the accompanying drawings, which are made part of this specification.

Figure 1 is a vertical section of our improved clutch. Fig. 2 is a side elevation thereof. Fig. 3 is an end view of the same.

Similar letters of reference indicate corresponding parts in the several figures.

The subject of this invention is a device which may be made fast to a beam, rafter, or other elevated support by a person standing below, and whose function is to sustain a hay-fork, weighing-scale, or other suspensory apparatus when in use.

In order that others skilled in the art to which our invention appertains may be enabled to fully understand and use the same, we will proceed to describe it in connection with the accompanying drawings.

A A′ represent a pair of metallic arms corresponding with each other as to size, shape, and function. The lower extremities of these arms are pivoted at *a a* to metallic plates D *d*, which are also of similar size and shape, and between which the space is sufficient for the arms to move toward or from each other. The free extremities of the metallic arms A A′ are formed with sockets A^2 A^2 for the reception of steel spurs J J, adapted to penetrate into the opposite sides of a beam, rafter, or other support.

C is a rope or other flexible connection, having its extremities attached respectively to the arms A A′ near the mid-length thereof. This rope plays upon journaled pulleys B *b*, situated between the plates D *d*, and when in use it is prevented from coming in contact with the lower ends of the arms A A′ by the smaller journaled pulleys *k k*.

E is a ring resting in the bight of rope C, and affording a means of attachment for a hay-fork tackle, a scale, or a hoisting, loading, weighing, or suspending apparatus of any kind.

F represents a notched latch or rack pivoted to the arm A′, and applied so as to engage with a catch, M, projecting from the arm A. The latch is held against the out surface of the plate *d* by the metallic loop P, which permits the requisite vertical movement of F upon its pivot to enable its engagement with and disengagement from the catch M.

G is a spring made fast at one end to the plate *d*, and bearing upon latch F, so as to give the latter a constant tendency to engage with the catch M.

L L are springs situated between the plate D *d* and acting to force the arms A A′ apart, as in Fig. 1.

I is a metallic strap or clasp screwed to *d*, and constituting a socket for the shouldered end of the staff *h*. The axial bolts of the arms A A′ and pulleys B *b* serve to fasten the plates D *d* together.

The mode of attaching the above-described clutch to an elevated support may be described as follows: The staff *h* is supposed to be long enough to raise the clutch to any desired height, and when the end of staff *h* is passed through I the extremity of *h* raises the latch F so as to disengage the same from the catch M and permit the arms A A′ to be spread open by the springs L, as represented in Fig. 1, in which position the arms are capable of receiving the largest beam or rafter between them. The clutch having been raised by the staff *h*, the arms A A′ are drawn forcibly together by means of a line running through and extending downward from the ring E. By this means the spurs J J are embedded in the opposite sides of the beam or rafter. The staff is then withdrawn from the clasp I, and the latch F is forced down upon the catch M and prevents the detachment of the spurs from the beam or support. The clutch thus readily secured in position affords a means of suspension as above described.

Our clutch may be employed to grapple and raise sunken substances and for other purposes.

Having described our invention, what we claim as new herein, and desire to secure by Letters Patent, is—

1. The combination of the arms A A′, spurs J J, stock or frame D *d*, pulleys B *b*, cord or

flexible connection C, and springs L L, substantially as and for the purpose specified.

2. The combination, with the above, of the the clasp I, staff *h*, latch or ratchet bar F, catch M, and spring G, arranged and operating in the manner and for the purpose set forth.

3. The combination of the arms A A′, pulleys B *b* K, stock D *d*, cord C, ring E, latch F, spring G, staff *h*, and clasp I, the whole constructed and operating in the manner and for the purpose explained.

To the above specification of our new and improved clutch for suspending hay-forks, &c., we have signed our hands this 15th day of June, 1867.

WILLIAM DIXON.
LUMAN HEATH.

Witnesses:
R. H. HUNTINGTON,
ALONZO MAXAM.