G. D. Melotte,

Grapple,

No. 70,239, Patented Oct. 29, 1867.

Fig. 1.

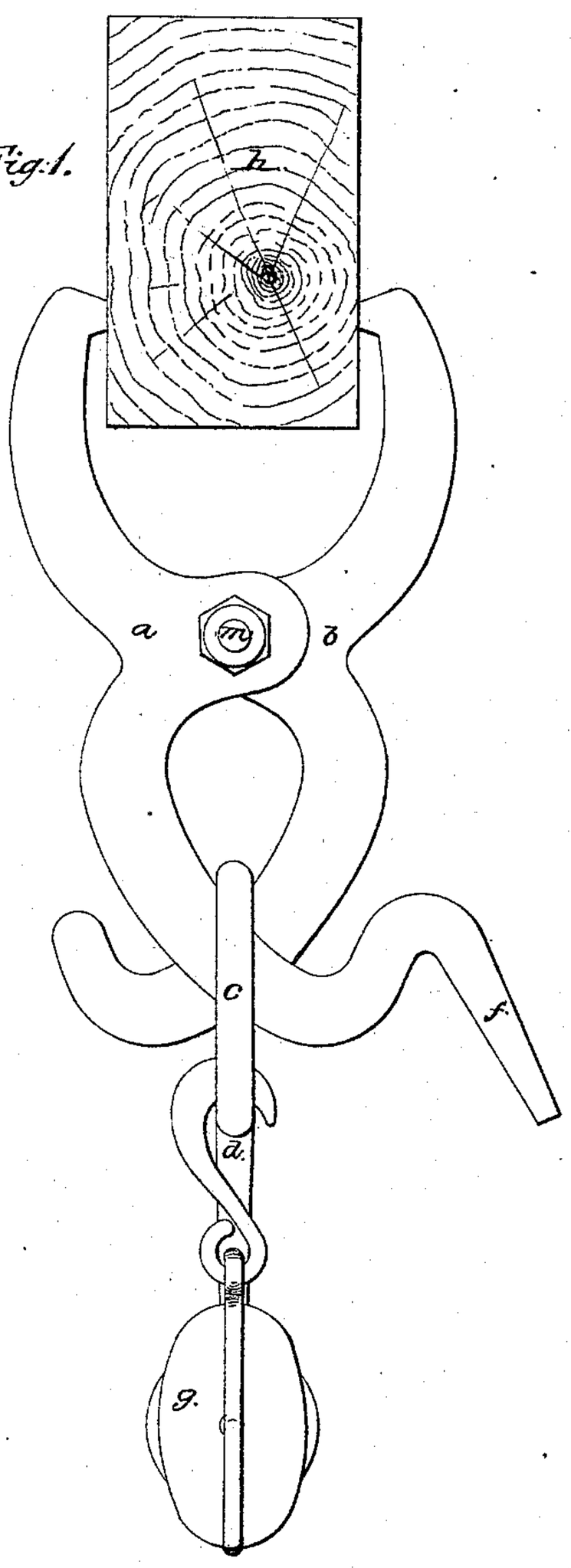



Fig. 2.

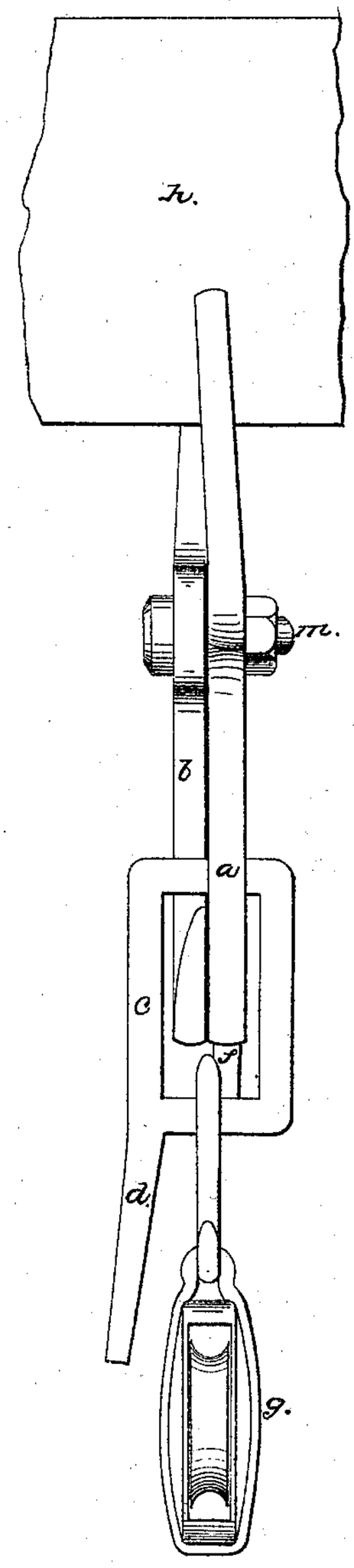
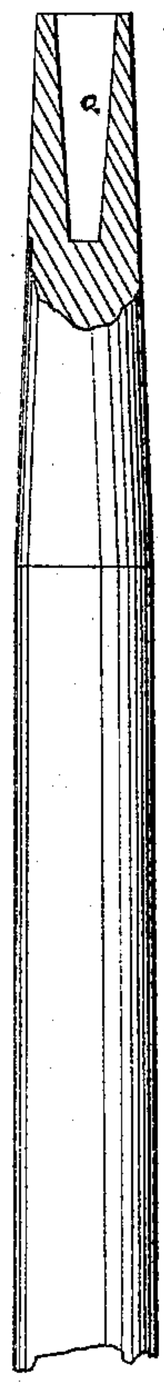



Fig. 3.




Witnesses:

D. P. Morgan

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# United States Patent Office.

GABRIEL D. MELOTTE, OF WATERTOWN, NEW YORK.

*Letters Patent No.* 70,239, *dated October* 29, 1867.

## IMPROVEMENT IN CLUTCH FOR HAY-FORKS.

The Schedule referred to in these Letters Patent and making part of the same.

TO ALL TO WHOM IT MAY CONCERN:

Be it known that I, GABRIEL D. MELOTTE, of Watertown, county of Jefferson, and State of New York, have invented a new and useful Improvement in Clutches, my improvement relating to the constructing of a clutch or gripe with which to connect, without the use of a ladder, a tackle-block, pulley and rope, or other mechanical device equivalent thereto, to the rafters or beams of a barn, to be employed, in connection with horse hay-forks, in pitching hay or straw into or from barns, or for lifting or haulling purposes; and I do hereby declare that the following is a full description of the construction and operation of the same, reference being had to the annexed drawings, making a part of this specification, in which—

Figure 1 is a plan,

Figure 2 an edge view, and

Figure 3 the elevating-pole or stale.

Like letters refer to like parts.

To more particularly designate the parts of the clutch, and define its operation, the parts lettered *a a b b* will be denominated the principal members, and the portions of such members which are above their pivotal point will be denominated the upper portions of such members, and those portions below said pivotal point the lower portions of said members. *a a b b* are the two members of the clutch, which are secured together by and turn upon the bolt *m*, which bolt is provided with a head and nut. The upper portions of the members *a a b b* terminate in sharpened points nearly at right angles with the upper portion of said members; such points serving the purpose of teeth to set into rafters or beams. *f f* is a shank, formed upon the lower end of the member *a a*. *c c* is a link embracing and enclosing the lower portions of *a a b b*, and to which is attached the tackle-block *g g*. The link is also provided with the shank *d d*. *h h* is a beam or rafter. *o* is the socket attached to the stale or pole, (fig. 3.)

I am aware that there are clutches and tongs which have an apparent similarity of construction with that shown in my improvement, but it will be clearly seen, by a comparison, that clutches, ice-tongs, for instance, are quite differently constructed from my improvement, and have a different movement when operated. In the ordinary construction the members are in the form of the letter S, and cross each other at their pivotal point, whereas in my construction the members resemble in form the letter E and the numeral 3, and do not cross at their pivotal point. When the clutch is formed of S's, and the lower portions of its members are moved towards each other, the upper portions of the members are brought together, and *vice versa;* whereas, with my construction, this movement is exactly reversed.

The point of difference thus set forth in construction and operation is that in which my principal improvement consists. The inner edges of the lower portions of the members *a a b b* form two curved inclined planes, and the outer edges of the same portions also form curved inclined planes. The members *a a b b* being free to move on the bolt or pivot *m*, the link *c* being drawn downwards, the lower portions of such members are moved outward and from each other, and the upper portions are moved inward and towards each other, thus performing the operation of clutching. The reverse of this operation is performed by forcing the link upwards, which draws the lower portions of the members together, and opens the upper portions of said members.

The operation of my improved clutch when used in connection with a hay-fork is as follows: The shank *f* is placed into the socket of the elevating-pole, (fig. 3,) and the clutch raised to a rafter or beam. The teeth of the clutch are then caught into such rafter or beam, and by pulling on the tackle-rope the teeth are forced into the rafter or beam, as shown in figs. 1 and 2, by the action of the link *c* on the inner inclined planes herein referred to, and the leverage of the lower portions of the members of the clutch. The clutch is thus firmly secured to a desired position, and is held to it by the pendent force or weight acting through the link *c c* upon the inclined planes, and the resultant leverage. When it is desired to remove the clutch, the shank *d d* is entered into the socket *o*, and the link *c c* is forced upward against the outer edges of the lower portion of the members *a a b b*, the consequent action of which upon the lower inclined planes, and the resultant leverage, reverse the movement of clutching, the teeth are forced out of the rafter or beam, and the clutch unloosed and taken down. When the clutch is to be used for hauling or lifting purposes the pole, (fig. 3,) and shanks *f* and *d* will be dispensed with.

Having thus described my improvement and its operation, what I claim as new, and desire to secure by Letters Patent of the United States, is—

1. The construction of a clutch composed of two members connected together by a bolt or pivot, upon which bolt or pivot said members are free to turn, in combination with the link *c*, as herein described, constructed and operated substantially as and for the purposes herein set forth.

2. The combination of the shank *d* with the link *c*, and the combination of the shank *f* with a member of a clutch, as and for the purposes specified.

3. The combination of a pole or stale and socket *o* with the shanks *d* and *f*.

In testimony whereof I have signed my name to this specification before two subscribing witnesses.

G. D. MELOTTE.

Witnesses:

J. P. MORGAN,

JNO. N. SIGOURNEY.