S. B. DEXTER.

Grapples.

No. 137,130. Patented March 25, 1873.

Fig. 1.

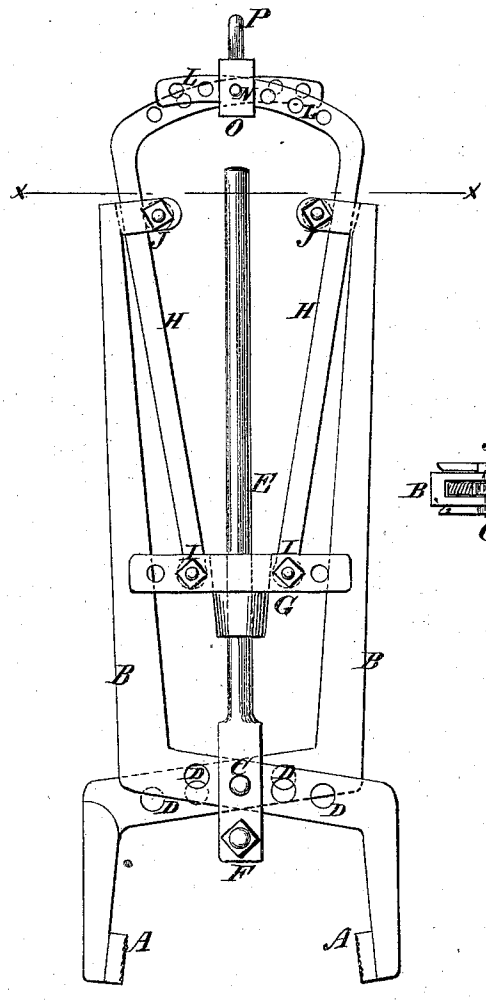


Fig. 2.

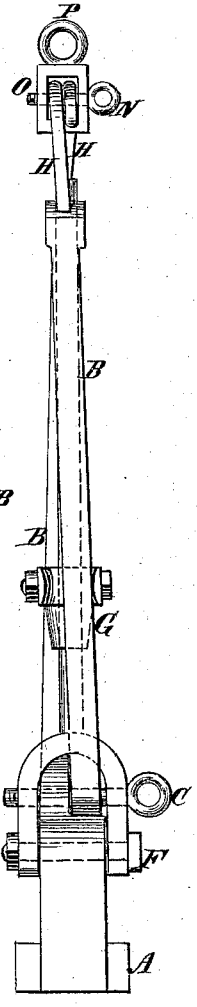
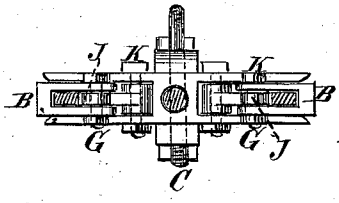


Fig. 3.



Witnesses:

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UNITED STATES PATENT OFFICE.

SIMON B. DEXTER, OF MASON CITY, IOWA.

IMPROVEMENT IN GRAPPLES.

Specification forming part of Letters Patent No. **137,130**, dated March 25, 1873.

To all whom it may concern:

Be it known that I, SIMON B. DEXTER, of Mason City, in the county of Cerro Gordo and State of Iowa, have invented a new and useful Improvement in Grappling-Tools, of which the following is a specification:

The object of this invention is to provide convenient and suitable means for raising or turning stones and other heavy bodies for building or other purposes by means of derricks or cranes; and it consists in an adjustable grappling implement constructed as hereinafter set forth and described.

In the accompanying drawing, Figure 1 represents a side view of my improved grappling-tool. Fig. 2 is an edge view. Fig. 3 is a cross-section looking down from the line *y y* of Fig. 1.

Similar letters of reference indicate corresponding parts.

A A are the two grappling-jaws. B B are the shanks or levers of these jaws connected together by the fulcrum-pin C. By means of the holes D in each of the levers B, and the fulcrum-pin C, the jaws may be adjusted to the size of the stone or other object, as may be required. E is a vertical guide-bar, the lower end of which is forked, and incloses the two levers B B. The fulcrum-pin C passes through the fork and through the levers, as seen in the drawing. F is a bolt which passes through the fork below the levers. G is a cross-head which slides on the guide-bar E, the ends of which are slotted so as to receive and guide the levers. H H represent inclined sliding bars, the lower ends of which are attached to the cross-head G by means of eyes and the bolts I I. The upper ends of the levers B B are turned inward or toward each other, and forked to receive the bars H H, in which forks the bars are confined by the rollers J J and bolts K K. From the forks the bars H H are curved upward and inward, and lap past each other, and are provided each with a series of holes, L, by means of which and the bolt or pin N the bars H H (and consequently the ends of the levers B B) may be spread further apart or brought nearer together. O is a connecting-block, through which the curved ends of the bars H H and pin N pass. P is an eye in the top of this block O, by means of which the grappling-tool is operated.

It will be seen that the bars H H incline from the vertical guide-bar E, and together form a wedge-shape slide or an inclined plane for each of the levers B B, the inclination being made adjustable by means of the holes L and pin N.

In drawing upward upon the block O the inner sides of the inclined bars bear against the rollers J J so that these bars work with but little friction in the forks of the levers B B.

By spreading the inclined bars H H the action of the grapple is made quicker and the jaws are given a broader and more sudden movement in each direction.

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

1. A grappling-tool consisting of the adjustable levers B B having jaws A A, guide-bar E, and adjustable slides H H, arranged to operate substantially as and for the purposes described.

2. In combination with the inclined slide-bars H H and levers B B, the rollers J J, substantially as and for the purposes described.

SIMON B. DEXTER.

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