(No Model.) 2 Sheets—Sheet 1.

A. M. CLARK.

PULLEY BLOCK AND TACKLE.

No. 276,561. Patented May 1, 1883.

Fig. 1.

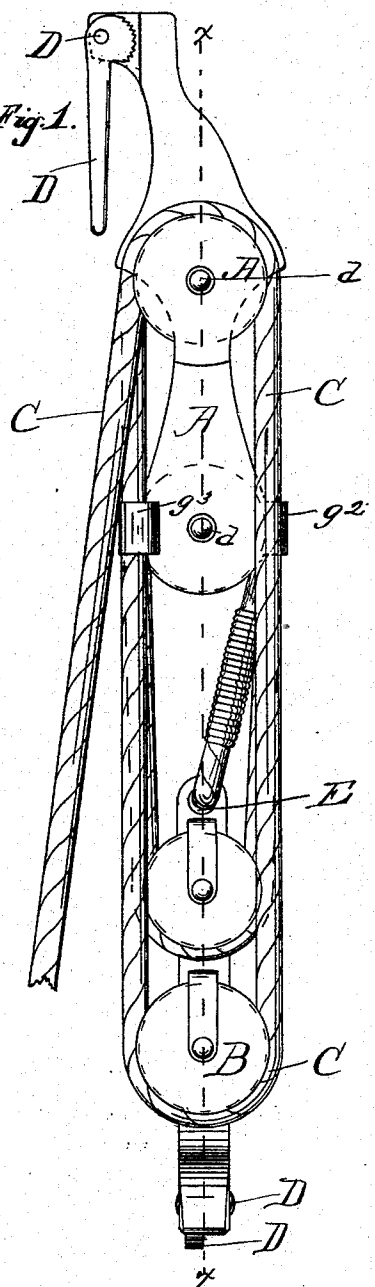


Fig. 2.

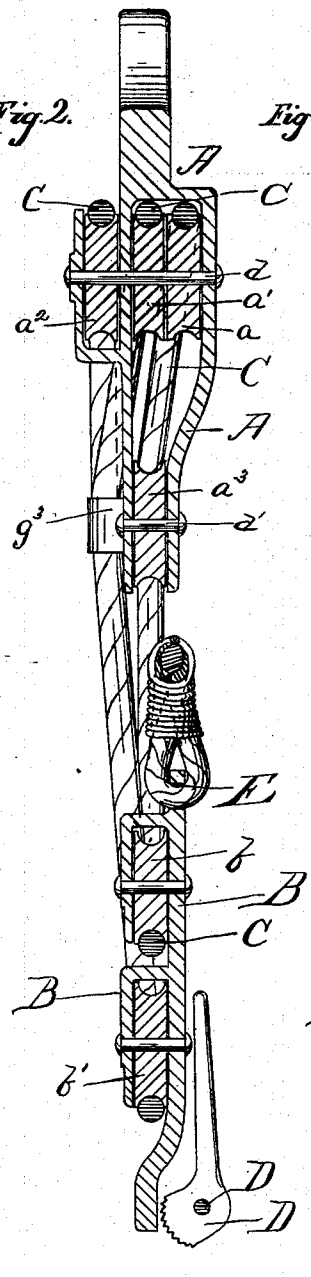
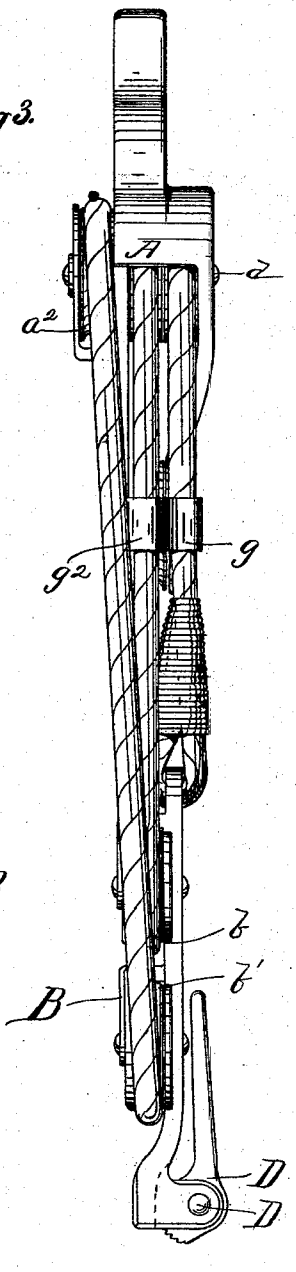


Fig. 3.



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(No Model.) 2 Sheets—Sheet 2.

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Fig. 4.

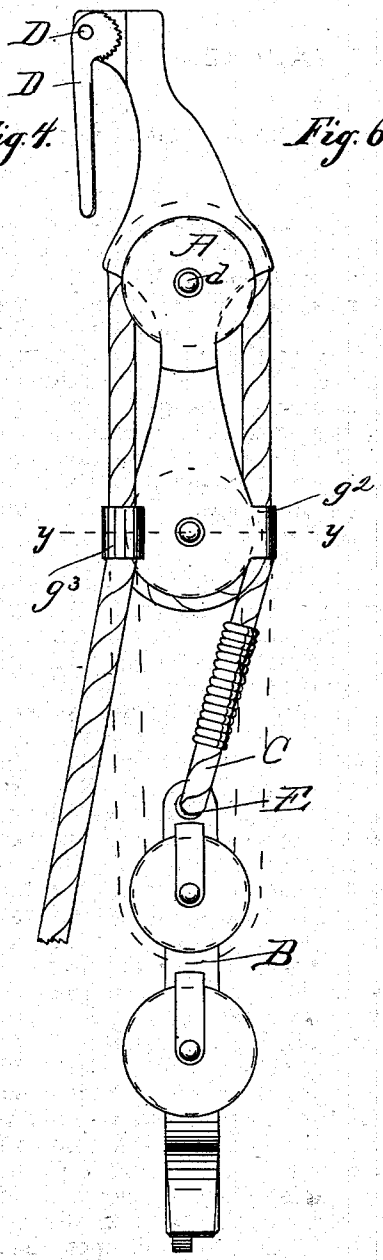


Fig. 6.

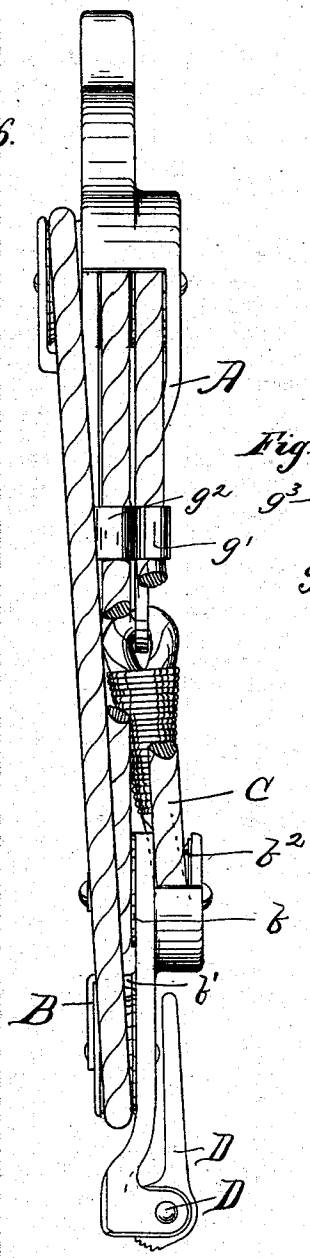
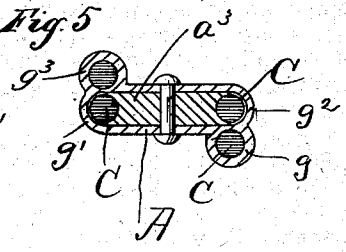


Fig. 5



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UNITED STATES PATENT OFFICE.

ALBERT M. CLARK, OF MARSHALLTOWN, IOWA, ASSIGNOR TO HIMSELF, AND CHARLES F. FOGG AND JOSEPH B. SHUTE, BOTH OF CHICAGO, ILL.

PULLEY BLOCK AND TACKLE.

SPECIFICATION forming part of Letters Patent No. 276,561, dated May 1, 1883.

Application filed January 13, 1883. (No model.)

To all whom it may concern:

Be it known that I, ALBERT M. CLARK, a citizen of the United States, residing in Marshalltown, in the county of Marshall and State of Iowa, have invented a new and useful Improvement in Pulley Blocks and Tackle, of which the following is a specification.

The object of my invention is to provide a compound pulley and tackle, which may be used either as a single, double, triple, or quadruple pulley, as may be desired, and is designed more especially to be used for a telegraph-wire splicer, though it is applicable to many other purposes where a compound multiple pulley may be desired to be used.

The invention consists essentially in a pair of blocks, the upper one of which has four sheaves—three at one end of its shell or frame and one at the other end—and the lower one of which blocks is provided with two open sheaves—one at each end of its shell or frame; and the arrangement of the pulleys and line is such that the sheave at the lower end of the upper block may, when the apparatus is arranged for use as a single pulley, carry the bight of the line, which is carried by one of the open sheaves of the lower block when the apparatus is arranged as a double pulley or one of greater power; and one of the three sheaves at one end of the upper block is an open sheave, so that when it is desired to arrange the apparatus as a triple pulley or still further increase the power it may also receive the bight of the line, in conjunction with an open sheave on the lower block. Each of the blocks is provided with an eccentric grip, for grasping the ends of the wires which are to be spliced together. By this means telegraph and other wires may be very easily and quickly drawn together and spliced, as the apparatus may be used as a single or double pulley when the tension on the wire is slack, and, as the tension becomes greater, the power may be readily increased by simply passing the bight of the line around the open sheaves on the two blocks. A sufficient number of the sheaves are closed or provided with guards, so as to keep the line in place thereon, in connection with the eyes or guides for the line, with which I also provide the shells or frames of each block.

In the accompanying drawings, which form part of this specification, and in which similar letters of reference indicate like parts wherever the same are used, Figure 1 is a side elevation of a device embodying my invention. Fig. 2 is a section on line $x\,x$ of Fig. 1. Fig. 3 is an edge view. Fig. 4 is a side view, showing the device arranged as a single pulley. Fig. 5 is a cross-section on line $y\,y$ of Fig. 4, and Fig. 6 shows a modification wherein the apparatus is arranged as a quadruple pulley.

In the drawings, A and B represent the shells or frames of the two blocks, and C is the line. The shell A is provided with three sheaves, a a' a^2, suitably mounted at one end, preferably on the same pin, d, and parallel to each other, and a sheave, a^3, near its other end, mounted on the pin d'. The other shell, B, is provided with two sheaves, $b\,b'$—one near each end—suitably journaled on the pins d^2 d^3. Each block is also provided with an eccentric gripper, D, pivoted thereto at D′, for the purpose of holding the wire. The fixed end of the line is secured to the lower block by means of a suitable hole or opening, E, therein. The line passes first through a guide or eye, g, at the lower end of the shell A, thence around the sheave a, thence through the eye g', thence around the open sheave b, thence through the eye g^2, thence over the sheave a', thence through the eye g^3, thence around the open sheave b', and thence around the open sheave a^2 on the shell A. When the line is thus arranged, as shown in Figs. 1, 2, and 3, it becomes, as will be seen, a triple pulley. To change it to a double pulley, as shown in dotted lines in Fig. 4, the line is cast off from the open sheaves a^2 and b', and to further change it to a single pulley, as shown in Fig. 4, the bight of the line is lifted off the open sheave b, which bight then falls upon the sheave a^3 at the lower end of the shell A.

In Fig. 6 I have shown a modification, whereby my multiple pulley is arranged as a quadruple pulley by simply adding another sheave, b^2, to the upper end of the lower shell, B, and passing the fixed end of the line around said sheave and securing it to the upper shell, A, instead of to the shell B, as shown in the other figures.

Of course it will be understood that when the apparatus is to be used for other purposes than a wire-splicer, then the gripping device or cam D will be omitted and other suitable means for attaching the blocks to the work or thing to be drawn or lifted substituted in their place.

It should be observed, also, that the apparatus may be changed from a single pulley, as shown in Fig. 4, to a double pulley by passing the free end of the line around one of the open sheaves on the block B, and thence around the open sheave a^2 on the block A, instead of removing the bight of the line from the sheave a^3 and looping it over the sheave b on the block B, as before indicated.

If it should be desired to still further increase the power, this may be done by increasing the number of the sheaves on each of the blocks without departing from the essential principle of my invention.

I claim—

1. The multiple pulley consisting in the combination of a line and a pair of blocks, one of which is provided with one or more open sheaves, and the other of which blocks is provided with two or more sheaves at one end of its shell, and also a sheave at the other end of the same, adapted to receive the bight of the line from the open sheave of the opposite block, so that the power of the pulley may be changed as may be desired, substantially as specified.

2. The combination, with the line C, of the shell A, provided at one end with closed sheaves $a\ a'$ and open sheave a^2 at one end thereof, and open sheave a^3 at the other end of said shell, and shell B, provided with sheaves b and b', arranged, substantially as specified, so that the bight of the line may be changed from the sheaves of one shell to the other, each of said shells being provided with a wire-gripper, D, substantially as specified.

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