

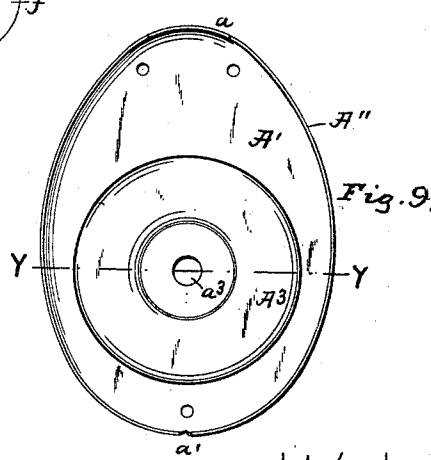
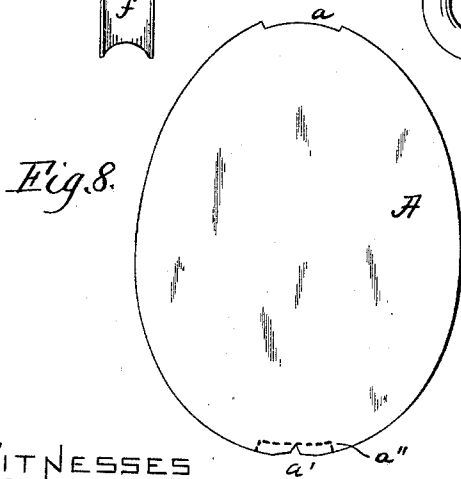
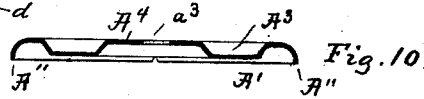
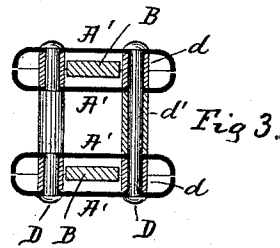
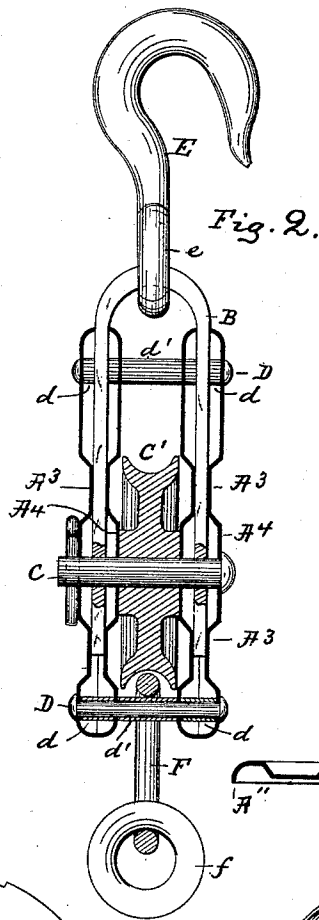
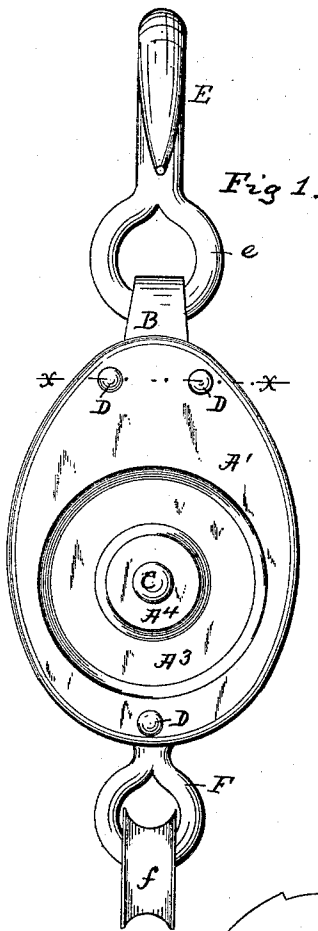
(No Model.)

2 Sheets—Sheet 1.

H. LOUD.
PULLEY BLOCK.

No. 475,692.

Patented May 24, 1892.



WITNESSES
Dwight H. Fay.
Geo. J. Peizer.

INVENTOR
Herbert Loud
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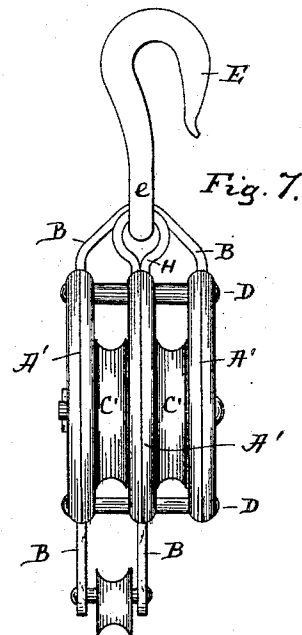
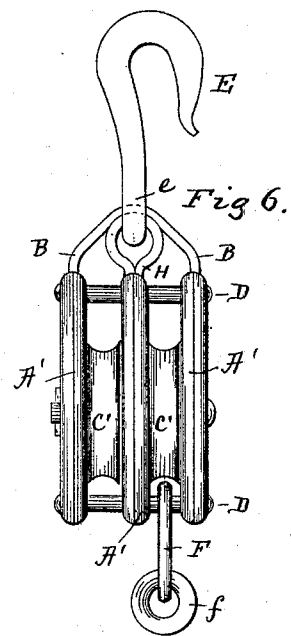
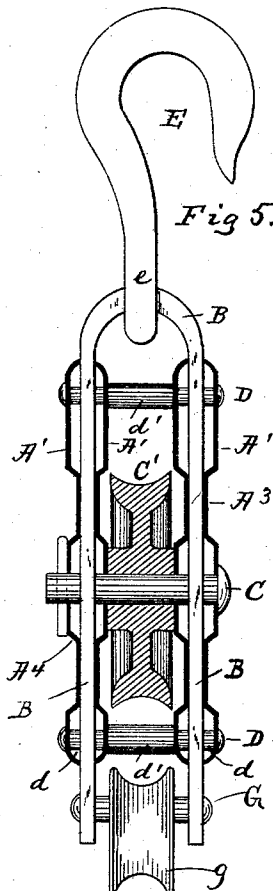
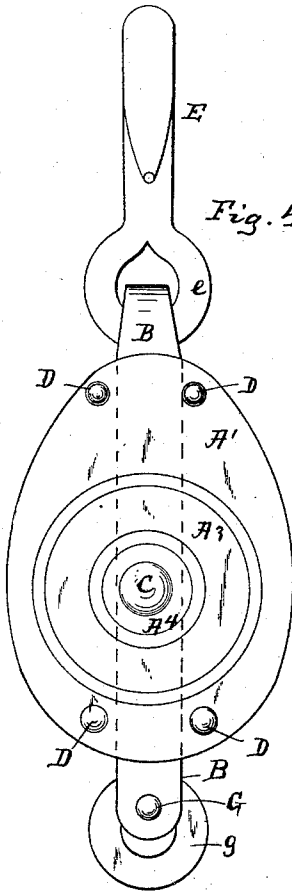
(No Model.)

2 Sheets—Sheet 2.

H. LOUD.
PULLEY BLOCK.

No. 475,692.

Patented May 24, 1892.



WITNESSES

Swing A. Gay.

Geo. S. Peper.

INVENTOR

Herbert Loud

by Wm. Andrew, his
ATTY

UNITED STATES PATENT OFFICE.

HERBERT LOUD, OF EVERETT, MASSACHUSETTS.

PULLEY-BLOCK.

SPECIFICATION forming part of Letters Patent No. 475,692, dated May 24, 1892.

Application filed March 8, 1892. Serial No. 424,161. (No model.)

To all whom it may concern:

Be it known that I, HERBERT LOUD, a citizen of the United States, and a resident of Everett, in the county of Middlesex and State of Massachusetts, have invented new and useful Improvements in Pulley-Blocks, of which the following, taken in connection with the accompanying drawings, is a specification.

This invention relates to improvements in pulley-blocks having sheet-metal cheek-pieces for the purpose of rendering the block very light, strong, and durable, and it is carried out as follows, reference being had to the accompanying drawings, wherein—

Figure 1 represents a side elevation of my improved pulley-block. Fig. 2 represents a central longitudinal section of the same. Fig. 3 represents a cross-section on the line X X, shown in Fig. 1. Fig. 4 represents a side elevation of a modification of the improved pulley-block, and Fig. 5 represents a front elevation of Fig. 4. Fig. 6 represents a front view of a double or multiple block made in accordance with my invention, and Fig. 7 represents a similar view of a modified form of such double or multiple pulley-block. Fig. 8 represents a side elevation of the sheet-metal blank from which the cheek-pieces are made. Fig. 9 represents an inside view of such blank after being pressed to its desired shape, and Fig. 10 represents a vertical section on the line Y Y, shown in Fig. 9.

Similar letters refer to similar parts wherever they occur on the different parts of the drawings.

In making the improved block I first punch or stamp out a metal blank A, as shown in Fig. 8, which is preferably made of sheet-steel and has a cut-away portion *a* at its upper end to form a space for receiving the bow-strap. I prefer to make a cut-away portion *a'* at the lower end of said blank, as shown in Fig. 8, to enable the edge or periphery of the blank to be turned over, and when the block is made with a bow-strap projecting below the cheek-piece, as represented in Figs. 4, 5, and 7, I make a cut-away portion *a''* at the lower end of the blank A, as shown by dotted lines in Fig. 8. The blank A is afterward pressed cold between suitable male and fe-

male dies by which one-half of the cheek-piece *A'* is produced, as shown in Figs. 9 and 10. Such molded cheek-piece is made with an inwardly-projecting lip *A''* on its periphery for the purpose of increasing the strength of said cheek-piece and to form a hollow space between the two parts of said cheek-pieces when put together for receiving the bow-strap B. (Shown in Figs. 1, 2, 4, 5, 6, and 7.)

In practice I prefer to make each molded cheek-piece part with an annular depression *A³*, as shown, for the purpose of increasing the strength and rigidity of the structure, each such depression being arranged around the perforation *a³*, through which the sheave-spindle C passes.

C' is the sheave, as usual, loosely journaled upon the spindle C. Each molded cheek-piece portion is preferably made with an outwardly-depressed blister *A⁴*, arranged in the center of the annular depression *A³*, as shown in the drawings, which also serves for imparting strength and rigidity to the cheek-piece, besides serving as an extended bearing for the sheave-spindle C, and further serves on the insides of the cheek-pieces as bearing-surfaces against the ends of the hub of the sheave C', as shown in Fig. 2.

The molded sheet-metal cheek-pieces are put together in pairs, with the turned-over edges of the lips *A''* abutting each other, and each such pair of cheek-pieces are firmly secured together at a proper distance apart by means of rivets D, passing through perforations in the molded sheet-metal cheek-pieces and metal pipes *d d*, located between the two parts of each cheek-piece, and metal pipes *d'*, located between the insides of the complete cheek-pieces, as shown in Figs. 1, 2, and 3. By placing such metal pipes *d d* and *d'* between each half of the cheek-pieces and between the two cheek-pieces the rivets D may be hammered up solid without bending or defacing the molded cheek-pieces, on account of said pipes serving as solid metal supports throughout the whole lengths of said rivets.

If so desired, the middle pipe *d'* may be dispensed with and a corresponding enlargement made on the rivet D to form shoulders for holding the cheek-pieces at the desired dis-

tance apart, although in practice I prefer to use annular sleeves or pipes *d'*, as shown.

The bow-strap B is of the usual U-shaped form and inserted in the cut-away portions *a* 5 *a* between such half part of the cheek-pieces, as shown in Fig. 2, and has perforations in its lower end through which the sheave-spindle C is inserted, as is common in pulley-blocks having metal U-shaped bow-straps.

10 E is a loose swinging hook, having an eye *e*, through which the arched portion of the bow-strap B passes freely, as shown in the drawings.

In practice I prefer to terminate the ends 15 of the bow-strap B just sufficiently below the sheave-spindle C to allow the latter to have its bearings therein, and when so constructing the block I provide its lower end with one rivet only, on which is loosely pivoted or connected a becket-link F, (shown in Figs. 1 and 20 2,) having a thimble *f* for attaching one end of the rope. I wish to state, however, that I do not desire to confine myself to the use of the short bow-strap, as above mentioned, as 25 the same may be made long enough to pass through the lower end of the cheek-pieces and below the latter, where it is connected by a rivet or bolt G, having a thimble *g* upon it, as fully shown in Figs. 4 and 5.

30 The invention is equally well adapted for double or multiple blocks, as represented in Figs. 6 and 7, in which the bow-straps B are made to pass through the outer cheek-pieces as well as the middle cheek-piece, which gives 35 extra support for the pin, and either made to terminate just below the sheave-spindle or made to pass entirely through and below the lower end of the cheek-pieces, as shown, respectively, in Figs. 6 and 7. In said figures, 40 H is the middle strap, passing through the middle cheek-piece and having an eye in its upper end, to which the eye of the loose or swinging hook E is connected, as is common in multiple or double blocks.

45 By the construction above described I am able to produce an all-metal block that is stronger and even lighter than a wooden block, and one that can be put together at a less expense than others now in use. The inner and 50 outer edges of the cheek portions being turned over and rounded permits the easy handling of the block and also prevents the chafing or wearing of the ropes.

The manner of securing the divided cheek- 55 pieces together and at proper distances apart by means of rivets and intermediate metal pipes makes a very strong and rigid connection without causing any lateral compression on the molded cheek-pieces, and thus serves 60 to unite and hold the parts together in the strongest and most compact form.

The improved construction of the pulley-block shown may be adapted to any purpose 65 provided with any of the usual attachments

for connecting the same to ropes or chains without departing from the spirit of my invention.

It is obvious that my invention is applicable to various types of pulley-blocks, such 70 as snatch-blocks and the like.

Having thus fully described the nature, construction, and operation of my invention, I wish to secure by Letters Patent and claim—

1. A pulley-block having cheek-pieces composed each of a pair of molded sheet-metal 75 plates, longitudinally abutting and secured together, substantially as and for the purpose set forth.

2. A pulley-block having cheek-pieces composed each of a pair of molded sheet-metal 80 plates, longitudinally abutting and secured together, as described, combined with a bow strap or straps, sheave, and sheave-spindle, substantially as and for the purposes set forth. 85

3. A pulley-block having cheek-pieces composed each of a pair of molded sheet-metal plates, longitudinally abutting, combined with 90 rivets and intermediate divider-pipes for securing said cheek-piece parts together and to the opposite cheek-piece of the block, substantially as and for the purpose set forth.

4. A pulley-block having cheek-pieces composed each of a pair of molded sheet-metal 95 plates having rounded or turned-over peripheral abutting edges and means for securing said cheek-pieces together at a proper distance apart, substantially as specified.

5. A pulley-block having cheek-pieces composed each of a pair of molded sheet-metal 100 plates having rounded or turned-over peripheral abutting edges and having annular depressions concentric to the sheave-spindle perforations, substantially as and for the purpose set forth. 105

6. A pulley-block having cheek-pieces composed each of a pair of molded sheet-metal plates secured together, combined with a 110 metal bow strap or straps having a loose or swinging hook attached to it and a sheave mounted on a spindle journaled in said cheek-pieces, substantially as and for the purpose set forth.

7. A pulley-block having cheek-pieces composed each of a pair of molded sheet-metal 115 plates secured together, combined with a metal bow-strap having a loose or swinging hook attached to it, a sheave mounted on a spindle journaled in said cheek-pieces, and a becket-link and thimble connected to the 120 lower end of the pulley-block, substantially as and for the purpose set forth.

In testimony whereof I have signed my name to this specification, in the presence of two subscribing witnesses, on this 19th day of 125 February, A. D. 1892.

HERBERT LOUD.

Witnesses:

ALBAN ANDRÉN,
ALICE A. PERKINS.