W. W. Hill,

Tackle Block.

No. 5,186. Patented July 10, 1847.

Fig. 1.

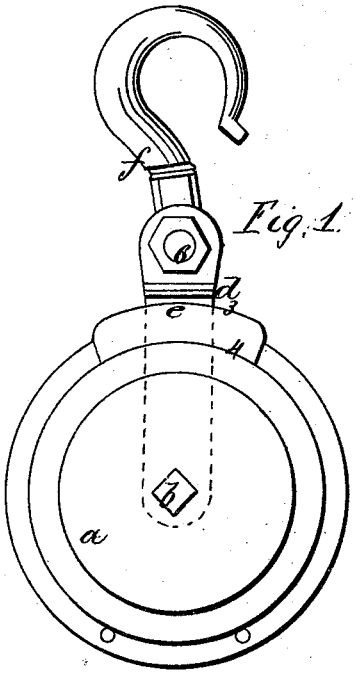


Fig. 2.

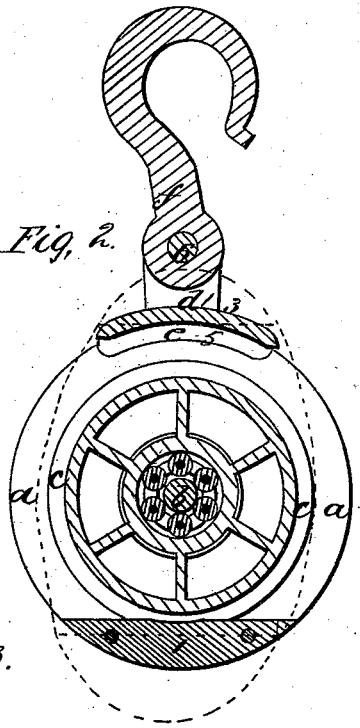


Fig. 4.

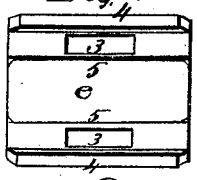
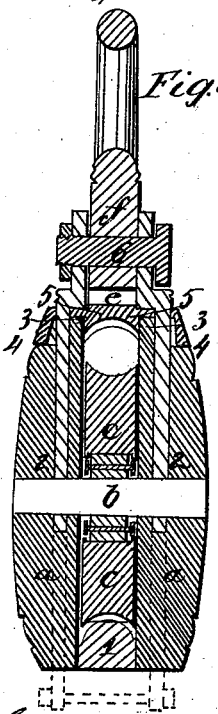


Fig. 3.



Witnesses,
Samuel Phillips
Joseph H. C. Hillman

Inventor,
William W. Hill

UNITED STATES PATENT OFFICE.

WILLIAM W. HILL, OF GREENPORT, NEW YORK.

SHIP'S BLOCK.

Specification of Letters Patent No. 5,186, dated July 10, 1847.

To all whom it may concern:

Be it known that I, WILLIAM W. HILL, of Greenport, Suffolk county, Long Island, in the State of New York, block-maker, have invented and made and applied to use certain new and useful Improvements in the Construction of Ship-Blocks, usually known as "Tackle-Blocks," such improvements consisting in forming the cheeks of the blocks round in a lathe, thereby saving labor, and in placing a metal head formed with a rising circular groove above the sheaves, thereby giving more diameter to the sheave, according to the length of the shell, and combined with a metal strap passing through mortises in the head into mortises in the cheeks to take the pin of the sheave, for which improvements I seek Letters Patent of the United States, and that the said improvements and the mode of constructing and using the same are fully and substantially set forth, and shown in the following description and in the drawing annexed to and making part hereof, wherein—

Figure 1, is a side view of a block, complete; Fig. 2, is a vertical sectional elevation, through the wider center of the block, at right angles to the pin; Fig. 3, is a cross section, through the narrow center, of the block, in the line of the pin, the same letters and numbers, as marks of reference, applying to the like parts, in each of the several figures.

a, *a*, are the cheeks, and 1, is the "arse" piece, forming the shell of the block, riveted together, as usual, but countersunk on the edges, so as to set the sheave lower in the center. The cheeks *a*, *a*, are shown as made by turning them in a lathe, so that each is circular in form, instead of irregularly elliptical.

b, is the pin carrying the sheave *c*, made with any usual bush, but shown as fitted with a roller bush.

e, is a metal head piece, formed as shown in the Figs. 1, 2, and 3, and detached in the Fig. 4. In these, 3, 3, are mortises corresponding with mortises in the cheeks *a*, *a*; 4, 4, are flanches, that overlie into corresponding rabbet in the cheeks *a*, *a*, and 5, 5, are the ribs of a concave groove, formed in a segment of a circle, whose highest part, inside, is above, or in line with, the outside wood shell, and the segmental line parallel to the curve of the sheave *c*.

d, *d'*, are a pair of sling straps, fitting into mortises 2, 2, in the cheeks *a*, *a*, through the mortises 3, 3, in the head piece *e*, to just below the pin *b*, with holes for the pin to pass through them and the sheave.

b, is a bolt and nut, going through the outer ends of the straps *d*, *d'*, and through the eye of a hook *f*, which completes the construction of the block.

It will be obvious, that by scoring the "arse" of the block, and making a corresponding indentation, in the metal head piece, a rope strap may be attached as in any common block, and the merely mechanical variations, needed to make a double, or threefold block, and, in any case, with, or without a becket, see Fig. 3, in this mode, will be equally plain, to every practical blockmaker.

By the mode of construction above described, the cheeks are formed with less labor, the sheave is larger, according to the length of the block, nearly in the proportion shown by the dotted elliptical lines, round the sheave, in Fig. 2, which show, very nearly, the proportionate length of an ordinary elliptical shell to the sheave within it; and the mode of constructing the metal head piece, at once secures the head of the block, and by admitting an increased proportionate size of the sheave, places the pull of the rope on a rolling lever, of increased radius, nearer to the point of support, or nearer to the weight to be moved; and the straps, housing within the mortises 2, 2, the rope is protected from the friction, and wear, that arises, when the straps are placed in grooves, on the inner faces of the cheeks, so that the rope passes in contact with the straps.

I do not claim to have invented blocks, in which the sheave is suspended by a pin, through metal straps, that are in contact with the rope, when in use; and having, fifteen years ago, made blocks, with straps fitted in, similar to those herein described, but without the metal head piece, or cap, and in elliptical shells, I do not, herein, claim such mode of fitting straps alone; nor do I claim to have invented the making block shells, in parts, that are riveted together; but

What I do claim as new, and of my own invention, and desire to secure by Letters Patent of the United States, is—

The forming the cheeks of the blocks cir-

cular, with rabbets to receive the flanches of a metal head piece, or cap, constructed with flanches to fit the rabbets, and with a concave segmental groove, whose highest part, inside, shall be above, or in line with, the top of the wood shell, thereby making a circular shell receive a larger sheave, than the ordinary elliptical shell, of the same length can usually do, and I claim the combination therewith, of metal straps passing through the metal head piece, and into mortises in the cheeks of the shell, instead of into grooves, on the inner faces of the cheeks, the straps having holes to receive the pin of the sheave; and such mode of forming, construction and combination, being substantially as herein described and shown.

In witness whereof, I have hereunto set my hand, at Greenport, this fifteenth of March, one thousand eight hundred and forty seven.

WILLIAM W. HILL.

Witnesses:
SAMUEL PHILLIPS,
JOSEPH H. SKILLMAN.