No. 780,280. PATENTED JAN. 17, 1905.

H. GILLEY.

SHEAVE BLOCK.

APPLICATION FILED JUNE 18, 1904.

Fig. 1.

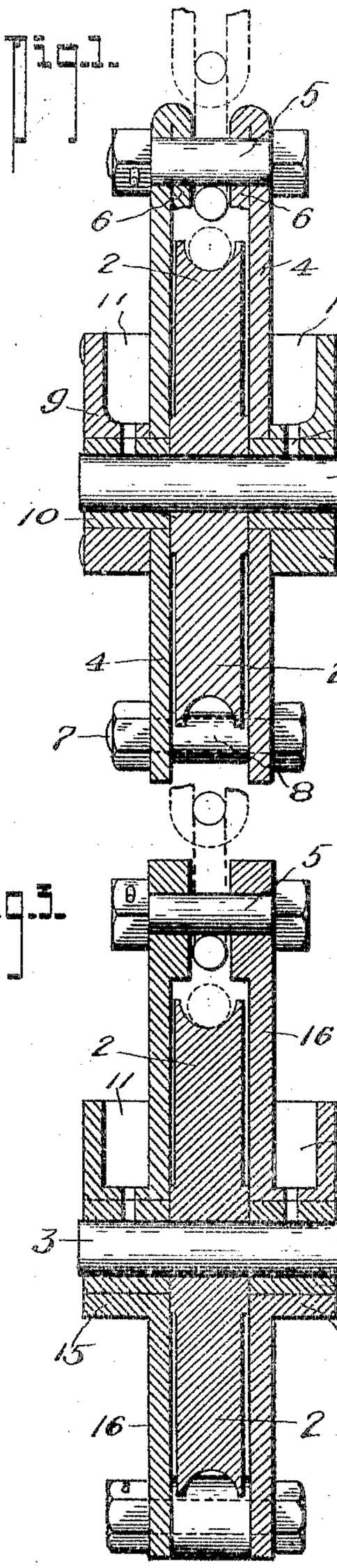

Fig. 2.

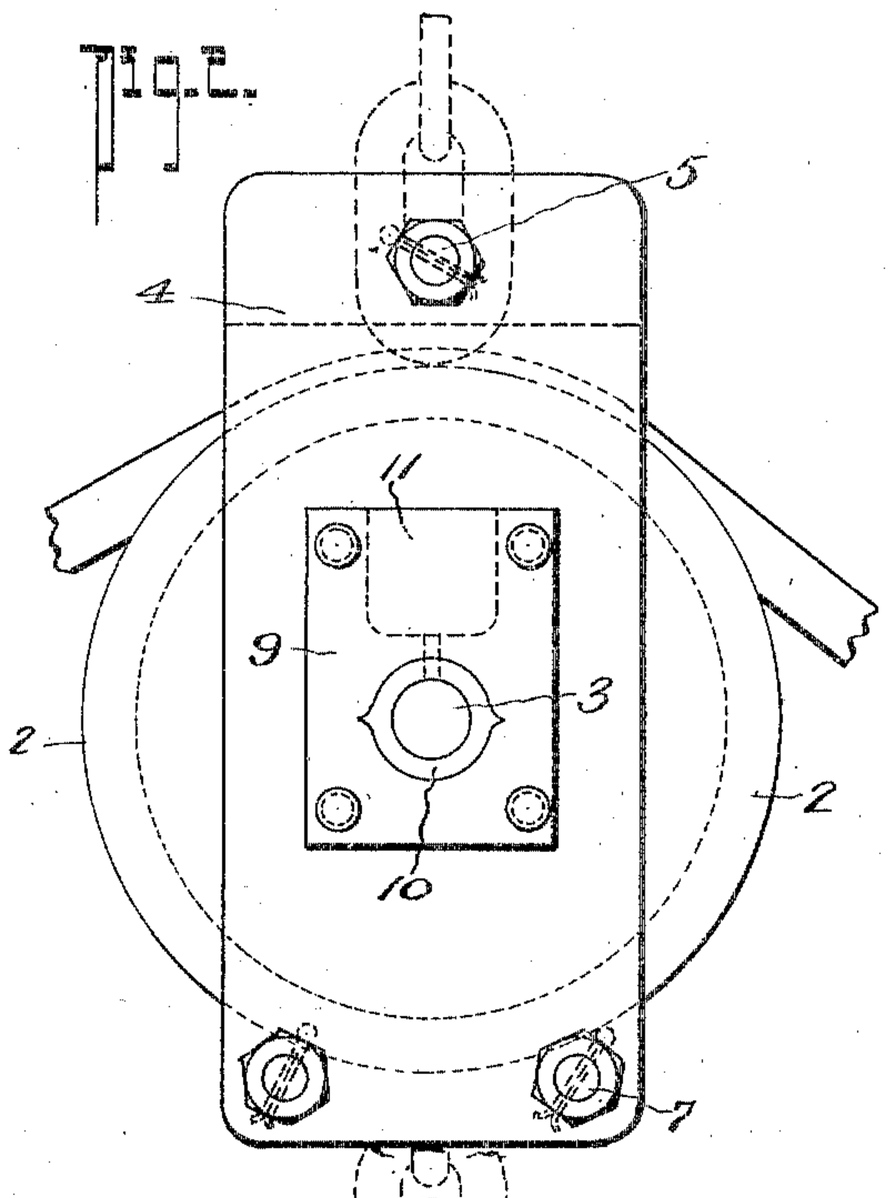

Fig. 3.

Fig. 4.

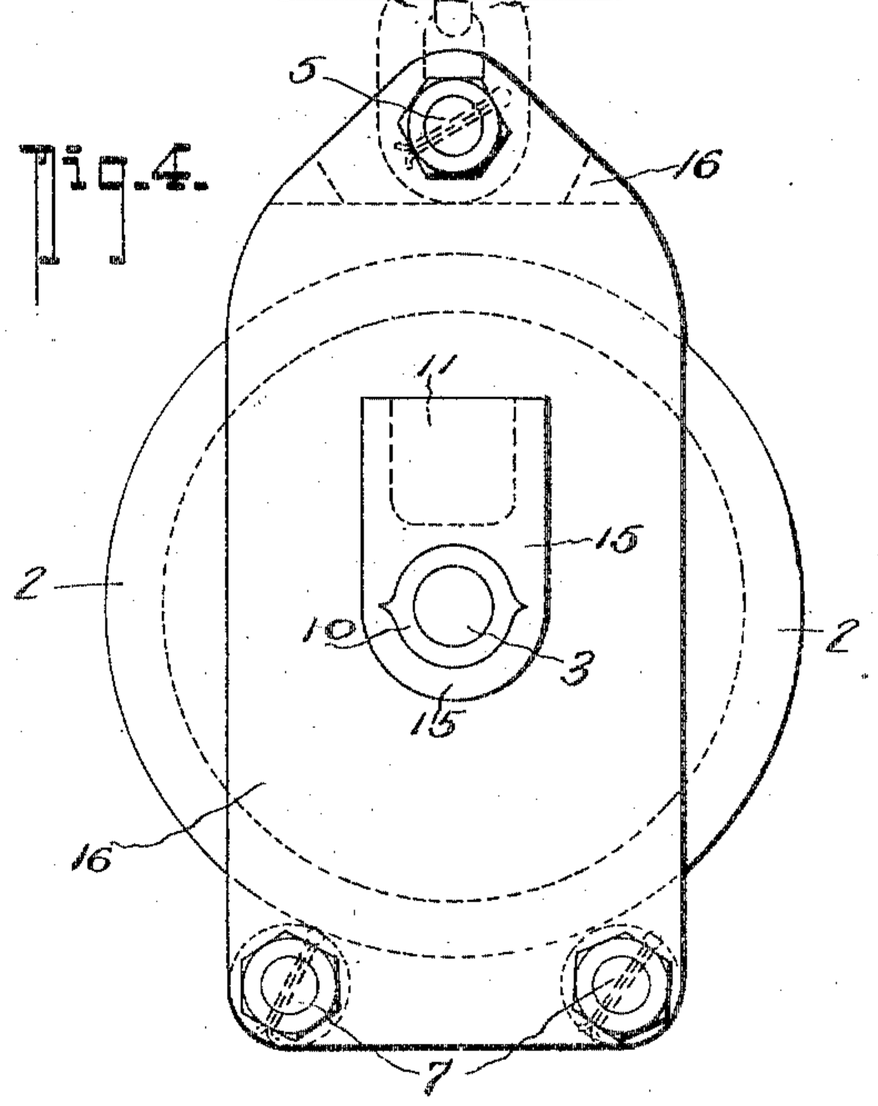

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PHOTO-LITHOGRAPHED BY SACHETT & WILHELMS LITHO. & PTG. CO. NEW YORK.

No. 780,280. Patented January 17, 1905.

UNITED STATES PATENT OFFICE.

HERBERT GILLEY, OF NEW WESTMINSTER, CANADA.

SHEAVE-BLOCK.

SPECIFICATION forming part of Letters Patent No. 780,280, dated January 17, 1905.

Application filed June 18, 1904. Serial No. 213,126.

To all whom it may concern:

Be it known that I, HERBERT GILLEY, a citizen of the Dominion of Canada, residing at New Westminster, in the Province of British Columbia, Canada, have invented a new and useful Improvement in Sheave-Blocks, of which the following is a specification.

This invention relates to an improved sheave-block designed to support the wire rope of a log-haul, in which work a block is exposed to very severe duty not only in the rough usage to which it is generally subjected, but also in the wear to which the groove of the sheave itself is exposed from the wire rope and in the long-sustained friction which its axle-bearing has to endure. These conditions render the use of an ordinary pulley-sheave prohibitory, as they are not designed for long-sustained or heavy work and wear out rapidly, and my improvements have been directed to adapting the design of the block to the use of material which will stand the rough treatment and to the provision of the sheave-bearings in the side frames of the block instead of, as customary, allowing the sheave to run on a pin fixed in the side frames, by which change a greater bearing-surface is provided and means for efficient lubrication may be introduced which otherwise would not be attainable. In the development of this construction I am enabled to cast a sheave of white iron having a chilled groove on an axle of rolled steel, which forms a comparatively cheap combination of two materials eminently fitted to the character of the wear the parts are required to endure and which could not otherwise be obtained readily owing to the difficulty of machining the hard cast-iron. The construction by which I attain these results is fully set forth in the following specification, and illustrated in the drawings which accompany it.

Figure 1 is a vertical section through the pulley-frames and pulley; Fig. 2, a side elevation of the same, and Figs. 3 and 4 similar views of an alternative construction in which the design is modified to suit the requirements of the use of cast-steel for the sheave-frames.

In the drawings the sheave or pulley is represented by 2 and is of white iron cast on a chill, with the axle 3, of rolled steel, in place, due care being taken to insure that the position of the axle is maintained true to the periphery of the sheave. In the design illustrated in Figs. 1 and 2 the side frames 4 are made of wrought iron or steel plate. The upper ends, through which the bolt 5 is passed, which connects the link or shackle by which the sheave-block is suspended to a post or convenient, tree are folded inward, as shown at 6, to better support the pin, and at the opposite or lower end the sides 4 are secured together by bolts 7, short sleeves 8 being provided as distance-pieces. On the outer side of each side plate toward the middle, bearing-blocks 9, of cast-iron, are riveted, and a hole large enough to allow an ample babbitt bearing 10 for the axle of the sheave is provided through the side plates 4 and the blocks 9. On the upper inner side of each bearing-block a recess 11 is cored, so that when the block is riveted to the plate an oil-box is formed communicating with the bearing by an oil-hole 12. In use the oil-box may be filled with waste, which will retain the oil and prevent it running too freely through the bearing, and with this provision a simple, comparatively cheap, and thoroughly efficient sheave-block is provided for log-hauling purposes adapted to the heavy work required from such without the continuous attention for oiling and renewal which those in common use require.

The modification shown in Figs. 3 and 4 is merely the adaptation of the same principles to the use of cast-steel or similar material. The bearing-boxes 15, with the oil-boxes 11 and the distance-pieces, &c., are cast in one with the side plates 16 and the conformation of the parts varied to suit such adaptation.

Having now particularly described my invention, I declare that what I claim as new, and desire to be protected in by Letters Patent, is—

1. A sheave-block having a grooved sheave with an axle-pin fixed therein; side plates of approximately rectangular form folded over inwardly at the upper ends to receive a pin for connecting the plates and suspending the block, means for connecting the plates at the lower end, and babbitted bearings secured on

the side plates having oil-boxes on their upper sides.

2. A sheave-block having a chilled-groove sheave cast on its axle-pin, side plates having babbitted bearings provided at their upper sides with oil-boxes and means for securing the plates together at the required distance apart and for suspending the block.

In testimony whereof I have signed my name to this specification in the presence of two subscribing witnesses.

HERBERT GILLEY.

In presence of—
ELLICE WEBBER,
ROWLAND BRITTAIN.