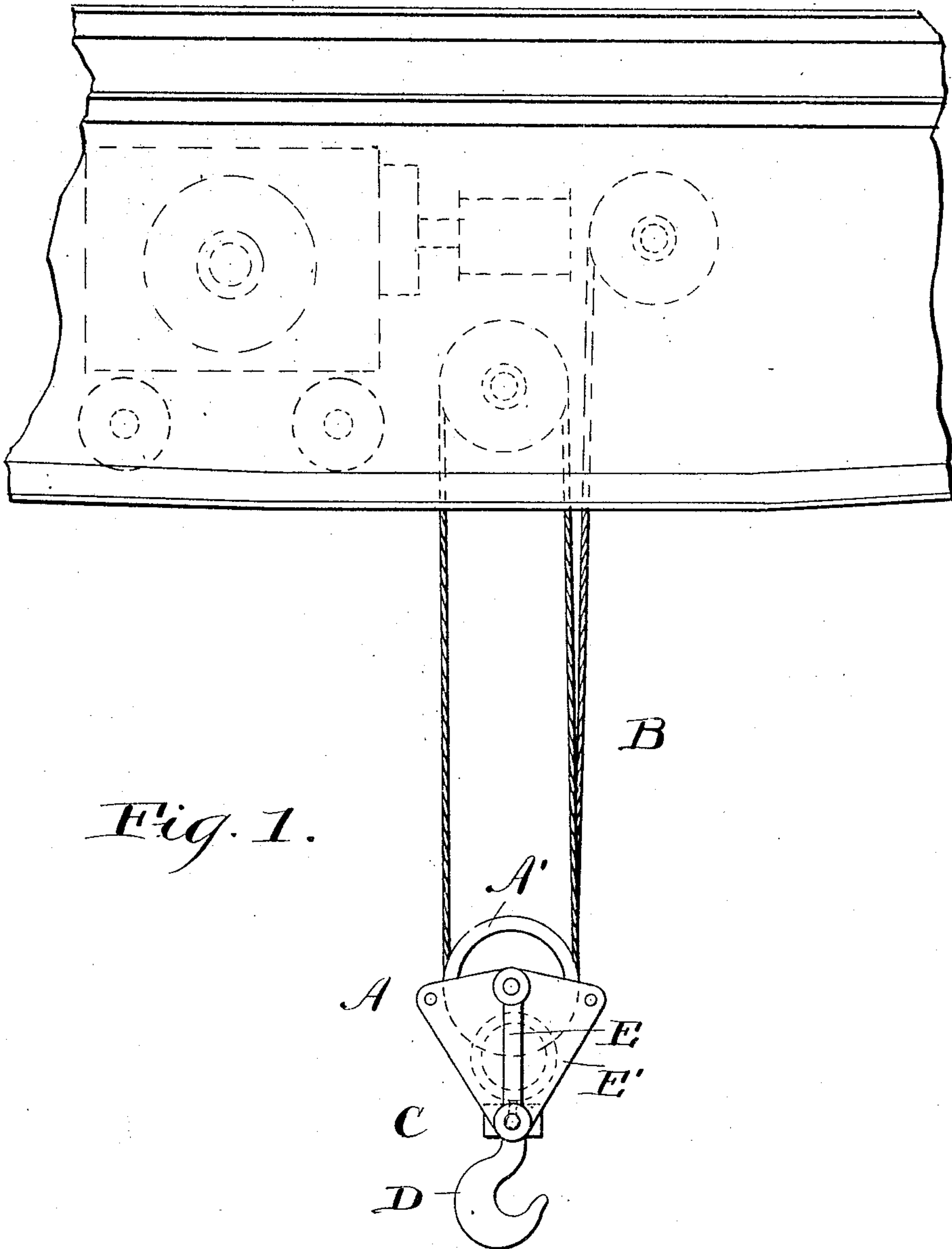


W. G. STEPHAN.
HOIST BLOCK.
APPLICATION FILED AUG. 7, 1908.

912,434.

Patented Feb. 16, 1909.
2 SHEETS—SHEET 1.



Witnesses
E. B. Gilchrist
N. L. Bresnan

Inventor
Walter G. Stephan
By Thurston Woodward
His Attorneys

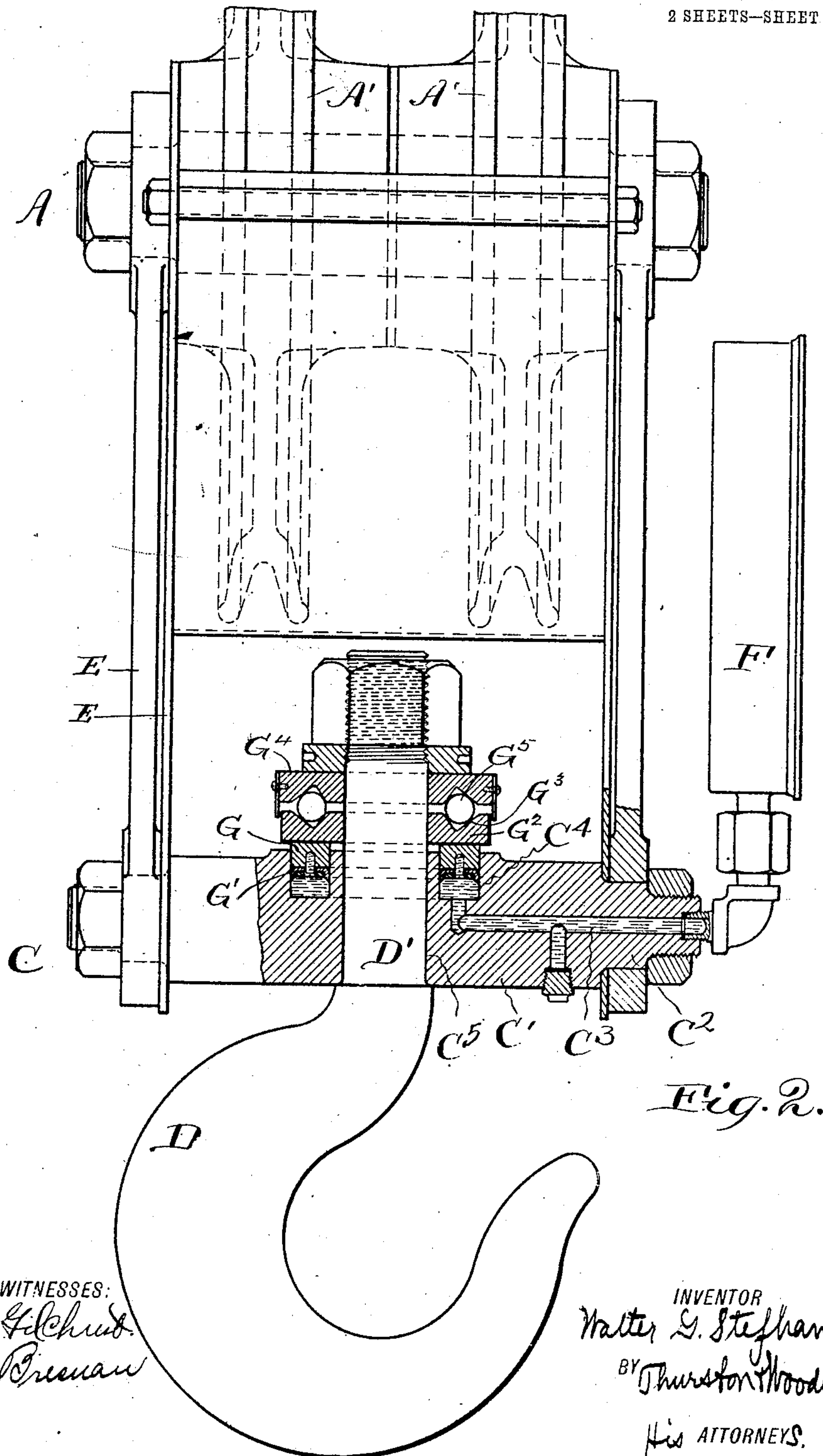
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N. L. Brennan

INVENTOR

Walter G. Stephan

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UNITED STATES PATENT OFFICE.

WALTER G. STEPHAN, OF CLEVELAND, OHIO.

. HOIST-BLOCK.

No. 912,434.

Specification of Letters Patent.

Patented Feb. 16, 1909.

Application filed August 7, 1908. Serial No. 447,370.

To all whom it may concern:

Be it known that I, WALTER G. STEPHAN, a citizen of the United States, residing at Cleveland, in the county of Cuyahoga and State of Ohio, have invented a certain new and useful Improvement in Hoist-Blocks, of which the following is a full, clear, and exact description.

The object of the present invention is to provide an improvement in hoist blocks.

The invention is more particularly directed to the embodiment of the block with a pressure gage permanently in position on the block, whereby the weight of the load hoisted may be at all times ascertained.

One of the purposes of my invention has been to eliminate the use of the ordinary hydrostatic weighing appliances commonly provided with means for attaching them to the hook of the hoist block and used only at such intervals as may be necessary. These separate appliances cannot be kept on the hoist block continually in most cases, since the amount of head room occupied by the entire hoisting apparatus when these weighing appliances are added, is too great to permit of their use at times other than required by absolute necessity. The elimination of these extra attachable and detachable weighing devices is further desired for the reason that since they cannot be kept on the hoist block all of the time, they are in the way when not in use, it being practically impossible to induce the workmen to store them properly. There is further an increased chance of accident always present when an additional part is used.

By having a block constructed so that it itself is provided with a pressure gage always in position, safety of the hoisting apparatus is greatly increased so that it is always possible for the operator to determine at a glance when the danger limit is being reached on the hook, and further, by having the blocks about an establishment constructed in this manner, so that the load carried by any block may be determined, no matter if it be suddenly or casually brought into use to assist other blocks in sustaining the load, (a sort of use which would in practical work absolutely preclude the chance of an additional weighing machine being hooked on to the block), it will be possible to determine the actual load sustained by all of the blocks without guessing or estimating how the load may be divided between them.

The above and other objects it will be seen are obtained by the structure of hoist block described in the following specification with reference to the accompanying drawings in which;

Figure 1 is an elevation showing a hoist block embodying my invention swinging from a traveling crane. Fig. 2 is an enlarged vertical section of the block.

The block illustrated comprises an upper head A carrying sheaves A' around which is reeved the hoisting cable B. The lower head C of the block on which the hook D swings is connected with the upper head by suitable straps E and end plates E'. This lower head comprises a trunnion bar C', with a central perforation C⁵ therethrough for the stem D' of the hoist hook, having cylindrical ends C² rotatably mounted in said straps and plates so as to be freely oscillatable. This bar has a central conduit or channel C³ leading from one end thereof to an annular well C⁴ about the perforation C⁵ at the central portion, the well and the channel being adapted to receive some suitable liquid for use with a pressure gage F which is connected with the end of the channel. An annular piston G with flexible packing G' on the lower face thereof is in said well and sustains a centrally perforated plate G² with a ball-race G³ on its upper face. A second plate G⁴ lies above this first named plate G² and has a ball-race G⁵ upon its lower face so that anti-friction bearings may be held between the two plates and thus permit them to rotate relative to each other. The stem of the hoist hook passes through the perforation in the trunnion bar, and the plate is locked in position by a pair of nuts or other suitable means. The hook so held is freely rotatable in the trunnion bar and the load carried by it is transmitted to the upper anti-friction plate so that it is free to rotate in either direction.

From the construction of parts described it will be seen that the block is not only strong, but the parts are simple in their character so that the block may be dismantled or assembled with great readiness.

The objects of invention enumerated above it will be seen are attained in this construction, since the hoist block is of the ordinary dimensions taking up no additional room and eliminating the additional detachable weighing machines with their numerous disadvantages.

Having thus described my invention, I claim:

1. Hoisting means comprising a block with sheaves mounted therein for receiving the hoisting cable, and a trunnion bar carrying a hook and means for indicating the load supported by the hook.
2. Hoisting means comprising a block with means for receiving the hoisting cable, and a bar trunnioned in the block, a hook yieldingly carried by the bar and means for indicating the weight supported by the hook.
3. A hoist block comprising means for receiving the hoisting cable, and a bar trunnioned in the block, a hook, a well in the trunnioned bar, a piston slidingly fitted in

said well, the hook being supported by the piston and a weight indicator connected with the well.

4. A hoist block comprising means for receiving the hoisting cable, a bar trunnioned in the block and perforated, a hook with a stem projecting through said perforation, a well adjacent to said perforation, a piston in the well and receiving the load of the hook, and a weight indicator connected with the well.

In testimony whereof, I hereunto affix my signature in the presence of two witnesses.

WALTER G. STEPHAN.

Witnesses:

J. M. WOODWARD,
H. R. SULLIVAN.