

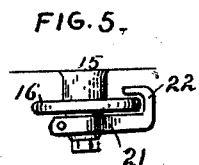
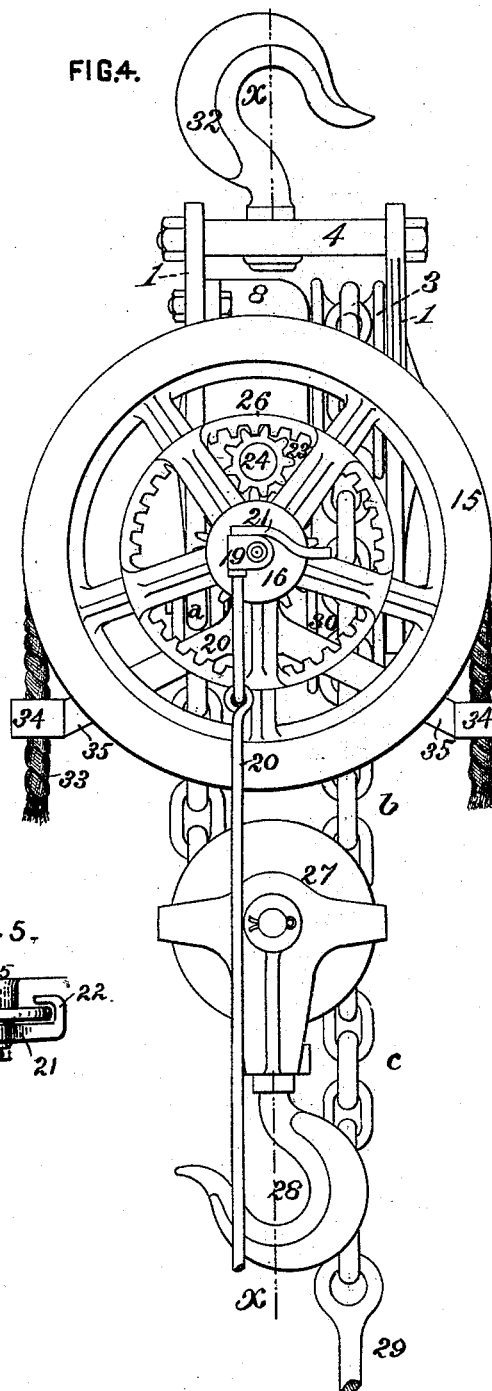
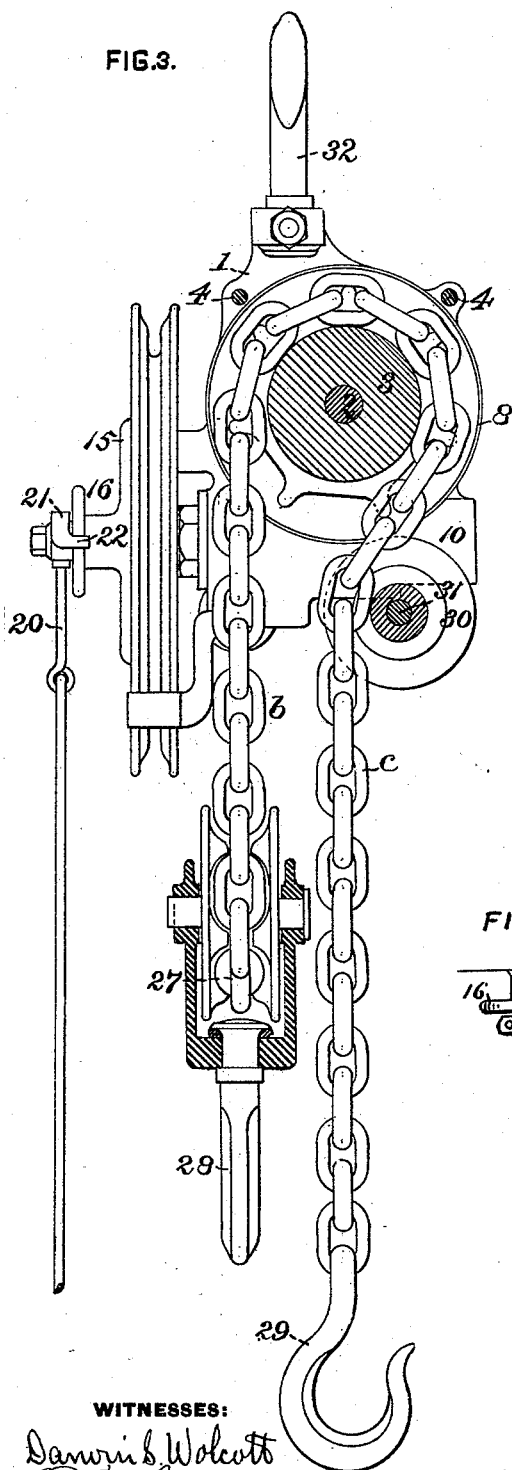
(No Model.)

2 Sheets—Sheet 2.

J. T. HAMBAY.
HOISTING BLOCK.

No. 419,852.

Patented Jan. 21, 1890.



WITNESSES:

Danville Wolcott
F. E. Gaither

INVENTOR,

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Att'y.

UNITED STATES PATENT OFFICE.

JAMES T. HAMBAY, OF WILKINSBURG, ASSIGNOR TO THE JACKSON MANUFACTURING COMPANY, OF HARRISBURG, PENNSYLVANIA.

HOISTING-BLOCK.

SPECIFICATION forming part of Letters Patent No. 419,852, dated January 21, 1890.

Application filed July 5, 1889. Serial No. 316,593. (No model.)

To all whom it may concern:

Be it known that I, JAMES T. HAMBAY, a citizen of the United States, residing at Wilkinsburg, in the county of Allegheny and State of Pennsylvania, have invented or discovered certain new and useful Improvements in Hoisting-Blocks, of which improvements the following is a specification.

The invention described herein relates to certain improvements in the hoisting-tackle described and shown in Letters Patent No. 385,856, granted to me July 10, 1888; and it is the object of this invention to provide for further variations in the lifting speed and capacity of the tackle, the speed being proportioned to the load to be raised, without any material variation of the speed of the driving mechanism.

In general terms, the invention consists in the construction and combination of mechanical devices or elements, all as more fully hereinafter described and claimed.

In the accompanying drawings, forming a part of this specification, Figure 1 is a sectional elevation of my improved apparatus, the plane of section being indicated by the line *x x*, Fig. 4. Fig. 2 is a similar view taken on the line *y y*, Fig. 1. Fig. 3 is a sectional view on the line *z z*, Fig. 1, the driving-wheel being shown in elevation. Fig. 4 is a side elevation of the apparatus, and Fig. 5 is a detailed view of the device employed for changing the speed of the sprocket-wheel.

In constructing my improved block the ends of the shaft 2 are mounted in bearings formed in the cheek or side plates 1, which are held in proper relation to each other by shouldered bolts 4, as shown in Figs. 2 and 4. On this shaft 2 are keyed the sprocket-wheel 3 and gear-wheel 5, the sprocket and gear wheels being provided on their adjacent sides with hubs 6 and 7, which are constructed on their adjacent ends with alternating projections and recesses, so that the gear and sprocket wheels are locked together. These interlocking hubs serve as a central support for the frame 8, the sides of said frame projecting outwardly over the gear-wheel and resting at its edges upon a ledge 9, formed on the inner

face of one of the side or cheek plates and bolted thereto, as shown in Figs. 2 and 4.

In a tubular portion 10, formed in the lower side of the frame 8, is arranged the power-shaft 11, provided with a screw or worm 12, arranged to engage the gear-wheel 5, said shaft being supported at one end by a bearing formed in the tubular portion and on the opposite side of the threaded portion by a bearing formed in a block 13, screwing into the tubular portion 10, as shown in Fig. 1.

On the power-shaft are mounted the pinion 14 and grooved driving-wheel 15, the former being arranged in a recess formed in the driving-wheel, as shown in Fig. 1, both the pinion and driving-wheel being held in position longitudinally of the shaft by a collar 16 keyed thereto. The pinion and wheel are locked to the shaft as against independent rotation by a key 17, passing through a slot in the shaft and engaging grooves formed in the hubs of the pinion and driving-wheel. This key is made of such a width that it may be shifted into engagement with either the pinion or driving-wheel, but not both at the same time. This movement of the key 17 is effected by a rod 18, arranged in a longitudinal opening in the shaft 11 and connected to the key at its inner end, its outer end being provided with a sleeve 19, surrounding the rod 18 and claspings the bar 20, which is provided with an arm 21. The free end of the arm 21 is provided with a hook 22, which engages the edge of the collar 16, said collar serving as a fulcrum for the arm when moved back and forth by the rotation of the rod 20, for the purpose of shifting the key 17, as hereinbefore stated. The pinion 14 intermeshes with an idler-pinion 23, loosely mounted on a stud 24, screwing into an internally-threaded socket 25, formed on the frame 8, as shown in Fig. 1. This idler-pinion 23 also engages with gear-teeth 26, formed on the outer wall of the recess in the driving-wheel 15, as shown in Figs. 1 and 4. The diameters of the pinions 14 and 23 and the toothed rim 26 are preferably so proportioned that one revolution of the wheel 26 will effect two or more revolutions of the pinion 14 and of the shaft 11.

ley provided with a hook, a chain connected at one end to one of the side plates of the frame of the block and so arranged around the idler and sprocket-wheel that the idler will hang
5 in a plane approximately tangential to the sprocket-wheel, a guide-pulley for properly directing the line of pull of the free end of the chain, and a supporting-hook connected to the block in such relation to the load-lines

as to maintain the block in proper position, so substantially as set forth.

In testimony whereof I have hereunto set my hand.

JAMES T. HAMBAY.

Witnesses:

W. B. CORWIN,
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(No Model.)

M. E. HANOVER.
FASTENING DEVICE FOR PACKAGES.

No. 419,853.

Patented Jan. 21, 1890.

Fig. 1.

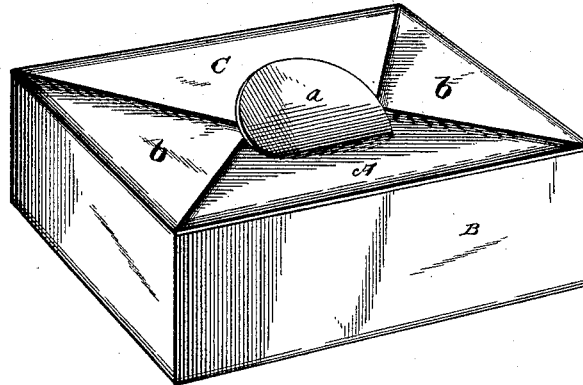


Fig. 2.

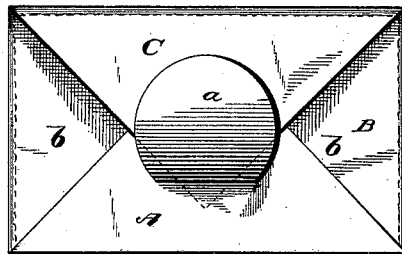


Fig. 3.

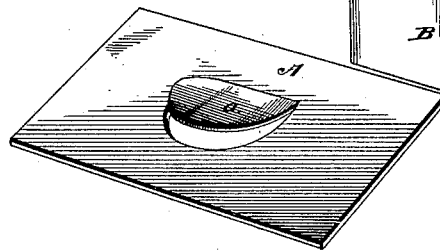
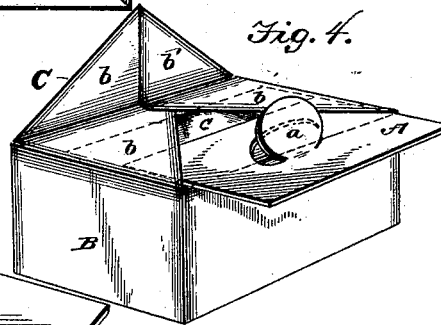


Fig. 4.



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