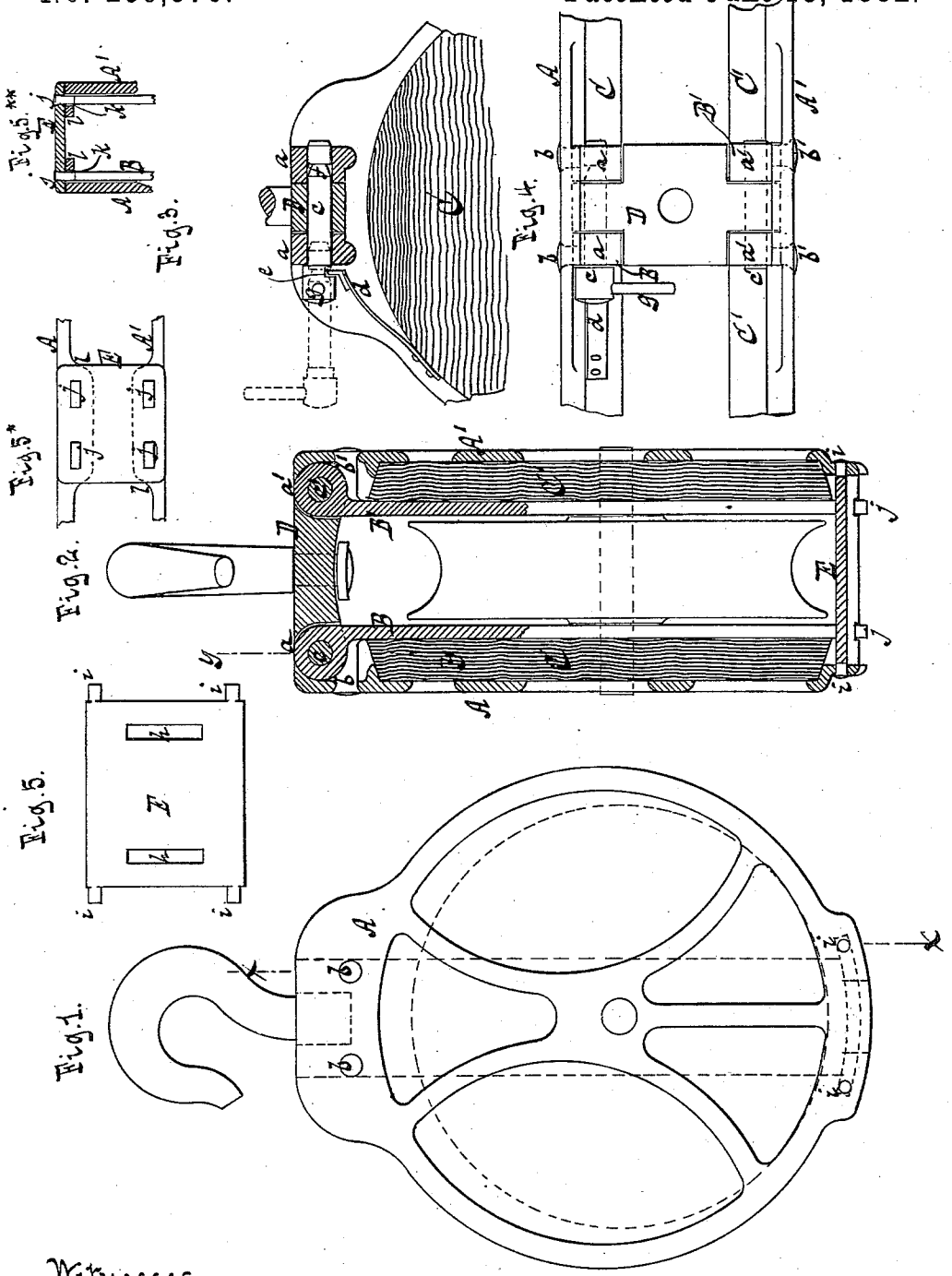
(No Model.) 2 Sheets—Sheet 1.

J. W. NORCROSS.

SHACKLE BLOCK.

No. 259,576. Patented June 13, 1882.



Witnesses
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William Miller

Inventor
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(No Model.) 2 Sheets—Sheet 2.

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Fig. 8.

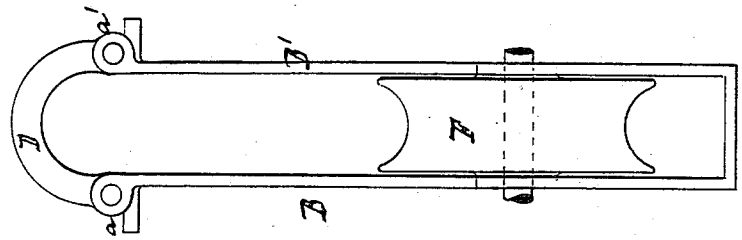


Fig. 7.

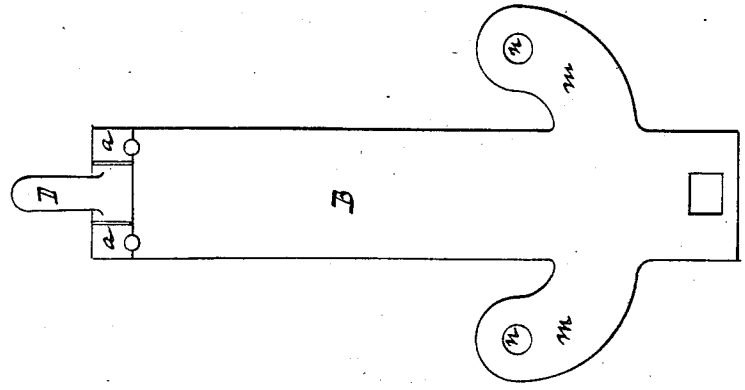
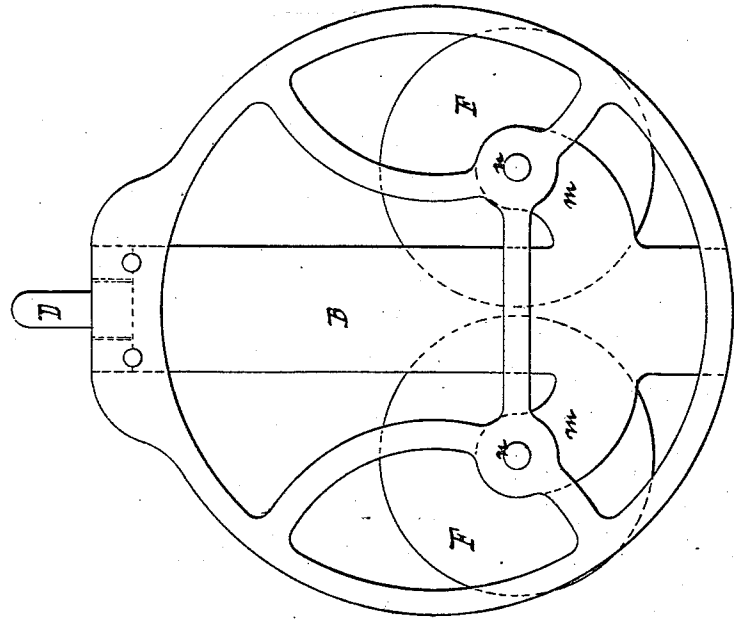


Fig. 6.



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UNITED STATES PATENT OFFICE.

JOSEPH W. NORCROSS, OF LOCKPORT, NEW YORK.

SHACKLE-BLOCK.

SPECIFICATION forming part of Letters Patent No. 259,576, dated June 13, 1882.

Application filed December 3, 1881. (No model.)

To all whom it may concern:

Be it known that I, JOSEPH W. NORCROSS, a citizen of the United States, residing at Lockport, in the county of Niagara and State of New York, have invented new and useful Improvements in Shackle-Blocks, of which the following is a specification.

This invention consists in the combination, in a shackle-block, of a metallic frame which is provided with suitable eyes, and a shackle which is connected to said eyes at one end by a stationary pin and at the other end by a movable pin. With the movable pin is further combined a locking device which prevents said pin from working out accidentally. This locking device is also so constructed that the movable pin, when drawn out so as to release the shackle, is retained in position, so as to prevent it being lost. If two sheaves are to be used between the same frames or cheeks, the inner metallic straps of the frames are provided with arms to form bearings for the axles of said sheaves.

This invention is illustrated in the accompanying drawings, in which Figure 1 represents a side view of my shackle-block with a single sheave. Fig. 2 is a transverse section of the same in the plane *x x*, Fig. 1. Fig. 3 is a vertical section in the plane *y y*, Fig. 2. Fig. 4 is an end view of the block. Fig. 5 is a detached plan view of the connecting-plate. Figs. 5* and 5** are modifications of the same. Fig. 6 is a face view of the shackle-block with two sheaves. Fig. 7 is a face view of the inside strap. Fig. 8 is a side view of the inside strap.

Similar letters indicate corresponding parts.

In the drawings, the letters A A′ designate the outside metallic frames of my block, and the letters B B′ the inside metallic straps. C C′ are the wooden cheeks.

On the inside straps, near one end of the same, are formed eyes *a a′* and rivets *b b′*. The eyes *a a′* serve to make the connection with the shackle D, and the rivets *b b′* extend through holes in the outside frames, A A′, as shown in Fig. 2. The shackle D is connected to the eyes *a′* by a stationary pin, *c′*, and to the eyes *a* by a movable pin, *c*, so that when this pin *c* is drawn out the shackle can be opened and the rope can be conveniently introduced or removed.

In order to prevent the pin *c* from dropping out accidentally, a suitable locking device is connected with the same; and the locking device shown in the drawings consists of a spring-latch, *d*, which, when the pin *c* is pushed in, engages with a notch, *e*, in the head of said pin. When the pin is turned round the latch becomes disengaged from the notch *e*, and then the pin can be drawn out. Near the front end of said pin is a circular groove, *f*, and if the pin is drawn to the position shown in dotted lines in Fig. 3 the spring-latch engages with the groove *f* and retains it in position while the shackle is being opened. For the purpose of turning the pin *c*, I secure in its head a bar, *g*, and by these means the shackle can be opened and closed at night, as well as in day-time, and all danger of losing the pin *c* is avoided.

The shackle D can be made in the form of a plate to receive a swivel-hook, as shown in Figs. 2 and 4, or it can be made in the form of a curved bar, as shown in Fig. 8, to be attached to a hook.

The breech ends of the inside straps and outside frames are connected by a metallic plate, E, Figs. 2 and 5, which is provided with holes *h h* and with rivets *i i*, the holes *h h* being intended to engage with rivets *j j*, projecting from the inside straps, B B′, and the rivets *i i* being intended to engage with holes in the outside straps, as shown in Figs. 1 and 2.

If the block is constructed without wooden cheeks, the connecting-plate E is made without the rivets *i i*, and the connection is made as shown in Figs. 5* and 5**, the rivets *j j*, which project from the inside straps, B B′, being made to pass through holes *k* in flanges *l*, formed on the outside straps, A A′, and then through the holes *h h* in the connecting-plate.

If my snatch-block is to be made with two sheaves, F F, as shown in Fig. 6, I provide the inside straps, B B′, with arms *m m*, which are provided with holes *n n* to form the bearings for the axles of the sheaves. These inside straps are provided with eyes *a a′* to make the connection with the shackle D, as already described.

The block may be constructed with or without wooden cheeks, and the connection at the breech end may be made in any known manner, or by means of the connecting-plate E, above described.

I do not here claim the manner of connecting the inner and outer metal frames as illustrated in Figs. 5* and 5**, and hereinbefore described in detail, as such will form the subject-matter of a separate application for Letters Patent.

What I claim as new, and desire to secure by Letters Patent, is—

1. The combination, in a snatch or pulley block, of the fixed metallic frame, provided at its upper end with eyes, the fixed pin, the shackle having one end secured to the fixed pin, on which said shackle can swing vertically, and the sliding pin arranged to connect the other end of the shackle with the fixed metallic frame, substantially as described.

2. The combination, in a snatch or pulley block, of the fixed metallic frame, provided with eyes at its upper end, the fixed pin, the shackle having one end secured to the fixed pin, on which said shackle can swing vertically, the sliding pin arranged to connect the other end of the shackle with the fixed metallic frame, and a locking device for confining the sliding pin in position when drawn out to permit the shackle to swing, substantially as described.

3. The combination, substantially as hereinbefore described, of the metallic frame, the eyes formed on said metallic frame, the shackle connected at one end to said eyes by a stationary pin and at the opposite end by a movable pin, the notches formed in the movable pin, and the spring-latch, constructed to engage with said notches, and to retain said pin when it is pushed in, and also when it is drawn out sufficiently far to release the shackle.

4. In a pulley-block, the combination, with the two sets of inner and outer metallic frames, provided at their lower ends respectively with outwardly-projecting rivets *j* and transverse apertures, and at their upper ends with means for their suspension, of the wooden cheek-pieces interposed between the respective inner and outer metal frames, and the bottom plate, E, provided at its opposite edges with projecting rivets *i*, and within such edges with openings *h* for connecting with the rivets and apertures of the metal frames to secure them upon the wooden cheek-pieces, substantially as described.

5. The combination, substantially as hereinbefore described, of the inside straps, B B′, the outside frames, A A′, the arms extending from the inside straps, the holes formed in said straps, and the two sheaves, the axles of which have their bearings in said holes.

In testimony whereof I have hereunto set my hand and seal in the presence of two subscribing witnesses.

JOSEPH W. NORCROSS. [L. S.]

Witnesses:
W. HAUFF,
E. F. KASTENHUBER.