

No. 755,809.

PATENTED MAR. 29, 1904.

C. STOLFIRE.
STACK CLIMBER.

APPLICATION FILED JULY 24, 1903.

NO MODEL.

Fig. 1

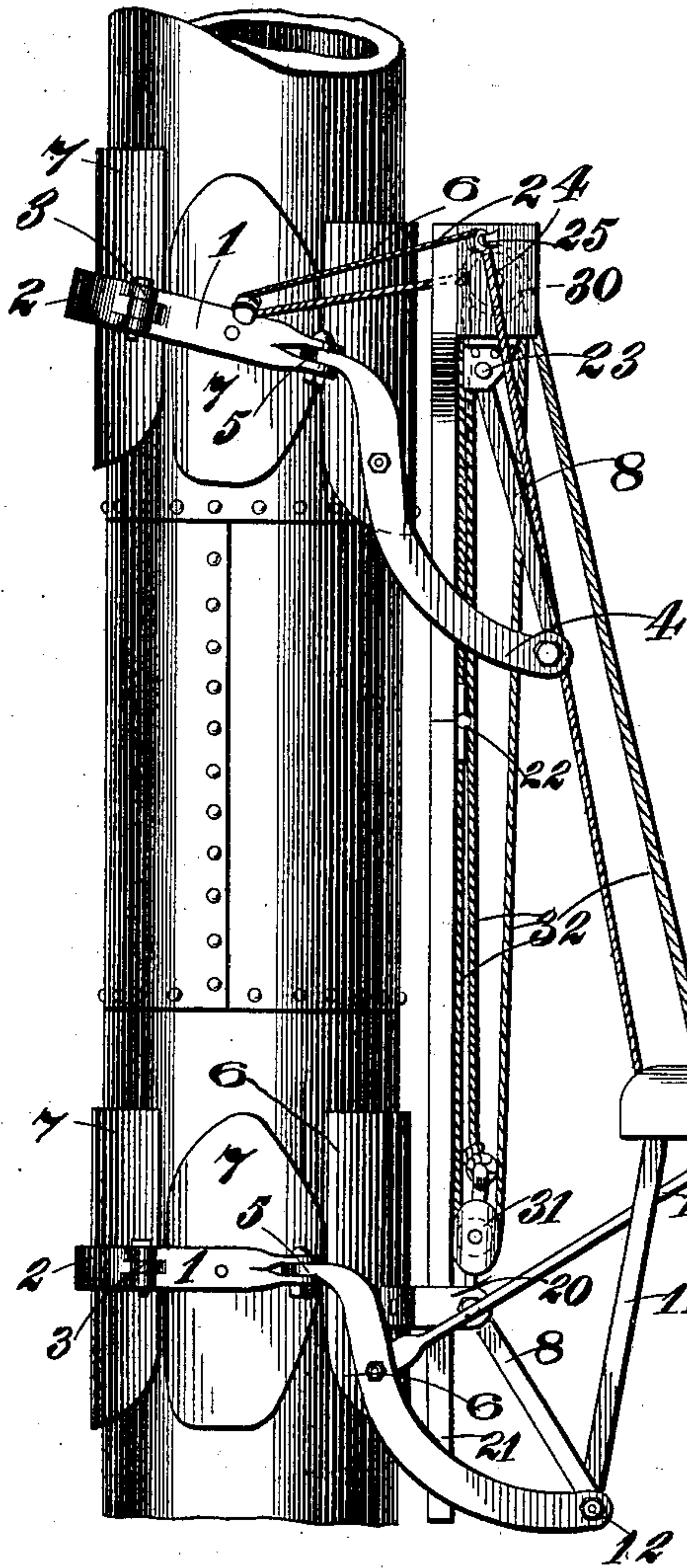


Fig. 3

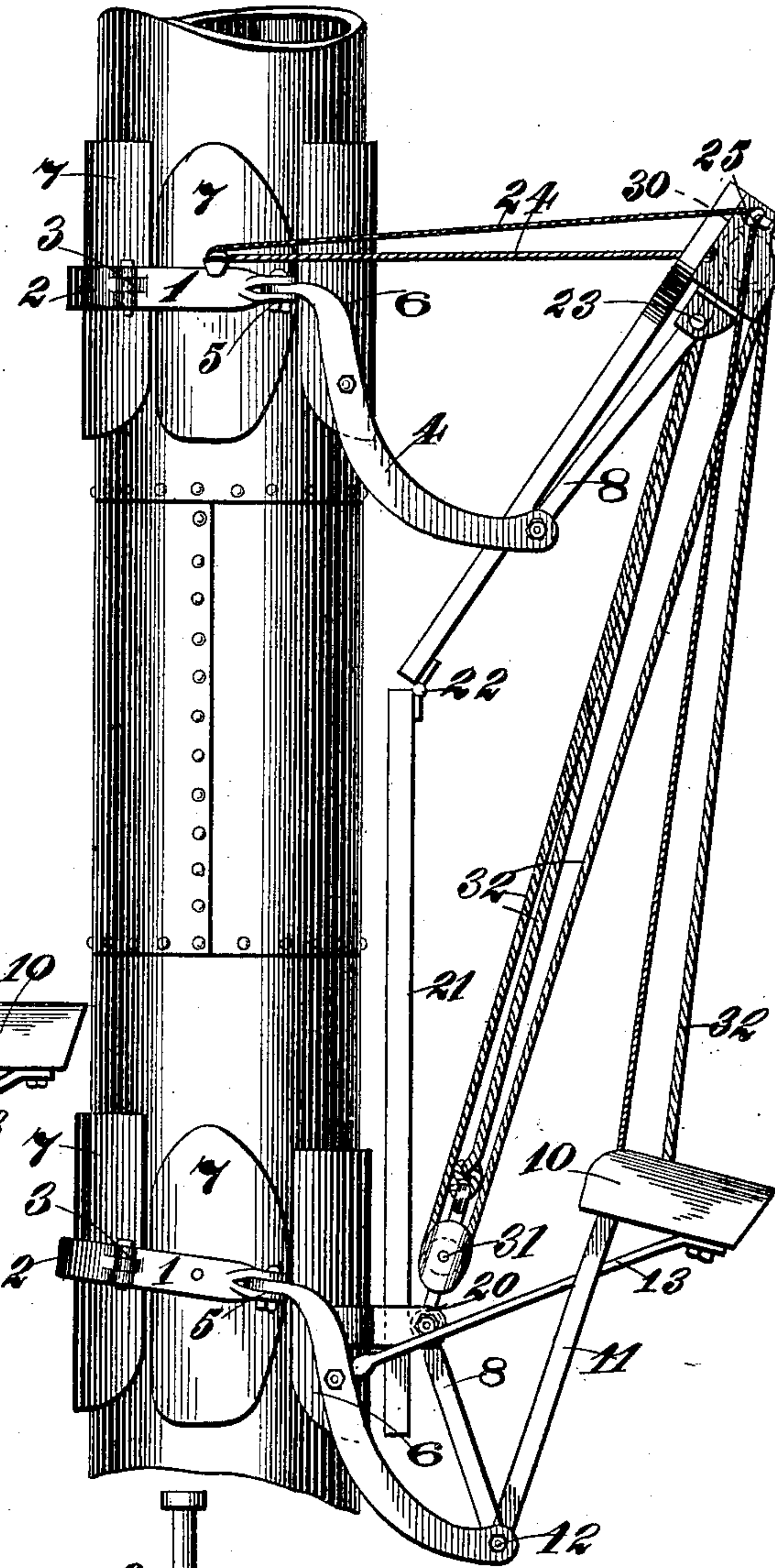
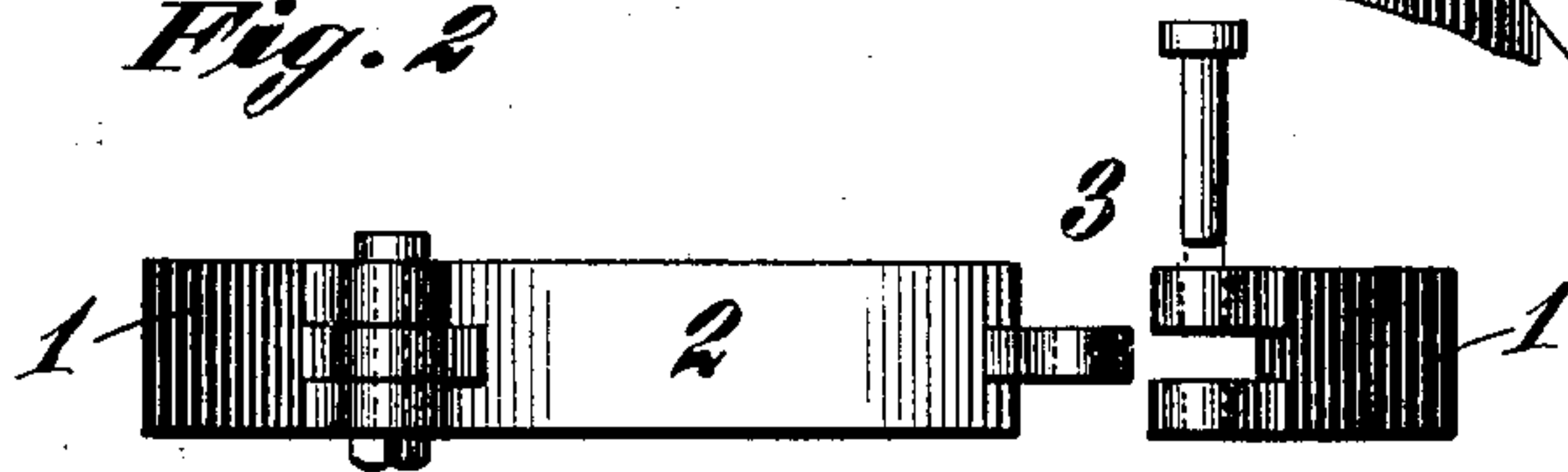


Fig. 2



WITNESSES:

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CHARLES STOOLFIRE, OF COYLE, OKLAHOMA TERRITORY.

STACK-CLIMBER.

SPECIFICATION forming part of Letters Patent No. 755,809, dated March 29, 1904.

Application filed July 24, 1903. Serial No. 166,875. (No model.)

To all whom it may concern:

Be it known that I, CHARLES STOOLFIRE, a citizen of the United States, and a resident of Coyle, Logan county, Oklahoma Territory, have invented certain new and useful Improvements in Stack-Climbers; and my preferred manner of carrying out the invention is set forth in the following full, clear, and exact description, terminating with claims particularly specifying the novelty.

The present invention is a scaffold adapted more particularly for use on poles or stacks, which latter are sometimes tall pipes of sheet-iron.

The object of the invention is to construct a scaffold which may be applied to such a pole or stack so that the operator can take his seat and climb the stack and descend at will, as when it is desired to paint or repair the pole or stack.

The invention consists in the construction described below, and illustrated in the accompanying drawings, wherein—

Figure I is a side elevation of this scaffold in use. Fig. II is a detail of one of the clutches. Fig. III is a side elevation with the upper section of the pole swung outward.

The principal parts of this scaffold are two clutches of like construction, a pole connecting them, elevating means, and a seat. The clutches are substantially alike. Each comprises a band 1, passing in rear of the stack, where it has a movable section 2, pivoted to the band at one end and latched at the other, as at 3, and two bent levers 4, pivoted at their upper ends to the extremities of the band, as at 5, and pivoted just below said points 5 to wear-plates 6, adapted to press against the front side of the stack. Other wear-plates 7 may be interposed between the band and the stack to prevent denting the latter. At the lower extremities of the levers are pivoted bars 8, which converge upward for the purpose described below. A seat 10 is mounted on supports 11, rising from the lower pivots 12 of the lower clutch, and braces 13 lead obliquely from the seat to the intermediate pivots of this clutch. Thus it will be seen that the weight of the operator on the seat presses the lower end of the levers of the lower

clutch downward and inward, turning around said intermediate pivots as a center and pressing the wear-plate 6 inward or rearward, while drawing the band 1 and the wear-plate 7 forward, so that the weight of the operator causes the clutch to cant slightly and bite or engage the stack.

Extending loosely through a guide 20, connected with the wear-plate 6 of the lower clutch, is a pole 21, which rises between the levers 4 of the upper clutch and is preferably hinged, as at 22, midway of its length. The bars 8 of the lower clutch rise from the pivots 12 to said guide 20, while the bars 8 of the upper clutch rise from the lower pivots and are pivoted at 23 to the pole. Hence the latter is connected with the upper clutch, but slides through the guide of the lower. It is withdrawn from the latter and preferably folded on its hinge when the device is to be stored. In use the upper section of the pole often swings outward, as seen in Fig. III, and 24 is a latch-rope leading from the upper band 1 over pulleys 25, connected with the upper end of the pole, and downward past the operator. Drawing on this rope swings the upper section of the pole inward and at the same time raises the upper band 1, as seen in this figure.

The elevating means as herein illustrated consist of a block and tackle. 30 designates a double block attached to the upper end of the pole, preferably within a casing rigidly secured thereto, as shown. 31 designates a single block attached to the guide 20, and 32 is the rope which leads from the upper end of the block 31 over one pulley in the block 30, down under the pulley in the block 31, over the remaining pulley in the block 30, and down to within reach of the operator.

In operation the parts are assembled and the bands latched loosely around the stack. The operator takes his seat, which cants the lower clutch and causes it to bite the stack. He then grasps the pole 21 and pushes upward on it as far as possible, so that the parts assume the position shown in Fig. III. He then grasps the latch-rope and pulls upon it, which swings in the upper section of the pole and draws the band of the upper clutch upward on the stack. Finally, he grasps the

rope 32 and pulls upon it. The first effect of this operation is to slip the pole slightly downward, and through the bars 8 this cants the upper clutch and causes it to bite the stack.

5 The next effect (since the upper clutch cannot farther descend) is to cause the guide 20 to rise. As this guide is connected with the intermediate pivot of the lower clutch, the latter therefore loosens its bite upon the stack, 10 and continued pulling on the rope 32 raises the lower clutch and the operator himself. This motion can be repeated to climb the stack or can be reversed to descend. When the operator desires to move around the stack, he 15 proceeds as follows: Starting with the lower clutch engaged, as above described, he raises the pole 21 until the upper clutch is free and then deflects it to the right or the left for a partial rotation, and in subsequently raising the 20 lower clutch and himself his weight causes him to swing in under the upper block 30.

The parts are preferably of metal, excepting the blocks, the ropes, the seat proper, and possibly the wear-plates, although these may 25 also be of metal. The size, proportion, shape, and exact details are to be left to the discretion of the manufacturer.

What is claimed as new is—

1. A stack-climber comprising two clutches, 30 a pole connected with one and sliding through the other, a scaffold connected with the latter clutch, and elevating means connecting the two clutches for raising the lowermost when the uppermost bites the stack.

35 2. A stack-climber comprising two clutches adapted when canted to bite the stack and each having canting-levers, a pole connected with the upper levers and sliding through the guide in the lower, a scaffold mounted on the lower 40 levers and elevating means connecting the upper end of the pole with said guide.

3. A stack-climber comprising two clutches, each consisting of a band encircling the stack, 45 levers pivoted to its ends, and a wear-plate connected with an intermediate pivot in the levers; elevating means connecting the lower ends of the upper levers with the intermediate pivot of the lower levers whereby the lower 50 clutch may be raised when the upper clutch bites the stack; and means for lifting the lower ends of the upper levers whereby the upper clutch may be raised when the lower clutch bites the stack.

4. A stack-climber comprising two clutches, 55 each consisting of a band encircling the stack,

levers pivoted to its ends, and a wear-plate connected with an intermediate pivot in the levers; elevating means connecting the lower ends of the upper levers with the intermediate pivot of the lower levers whereby the 60 lower clutch may be raised when the upper clutch bites the stack; means for lifting the lower ends of the upper levers whereby the upper clutch may be raised when the lower clutch bites the stack; and a scaffold mounted 65 on supports from the lower ends of the lower levers and braced from their intermediate pivots.

5. A stack-climber comprising two clutches, levers in each whereby it is adapted to bite 70 the stack, a scaffold-support from the lower ends of the lower levers, a pole sliding through a guide in the lower clutch and connected with the lower ends of the levers of the upper clutch, and a block and tackle connecting the 75 upper end of the pole with said guide.

6. A stack-climber comprising two clutches, levers in each whereby it is adapted to bite the stack, a scaffold-support from the lower 80 ends of the lower levers, a pole sliding through a guide in the lower clutch and hinged between its extremities, said pole being connected with the lower ends of the levers of the upper clutch, a block and tackle connecting the upper end 85 of the pole with said guide, and a latch-rope leading from the scaffold over pulleys at the upper end of the pole and outward to the band of the upper clutch for the purpose set forth.

7. In a stack-climber, the combination with two clutches each comprising a band passing 90 in rear of the stack, a movable section therein for the purpose set forth, a wear-plate in front of the stack, a pair of levers pivoted at their upper ends to the extremities of the band, and intermediate pivots in said levers connecting 95 them with the wear-plates; of a guide attached to the intermediate pivot of the lower clutch, a pole sliding through this guide and passing between the upper levers, bars pivotally connecting the upper end of the pole with the 100 lower ends of the upper levers, and elevating means connecting the upper end of the pole with said guide.

In testimony whereof I have hereunto subscribed my signature this 3d day of July, A. D. 105 1903.

CHARLES STOOLFIRE.

Witnesses:

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