No. 610,318. Patented Sept. 6, 1898.

# G. A. BIDWELL.

## HOISTING APPARATUS.

(Application filed Oct. 12, 1897.)

(No Model.)

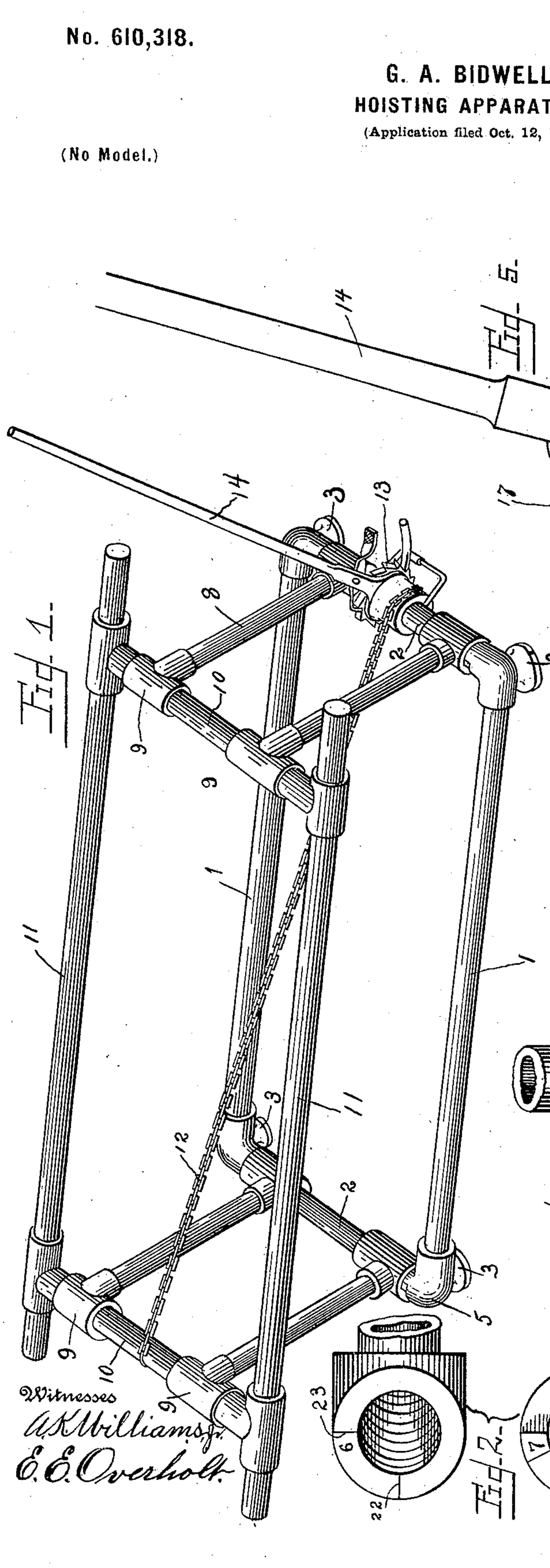

Fig. 1.

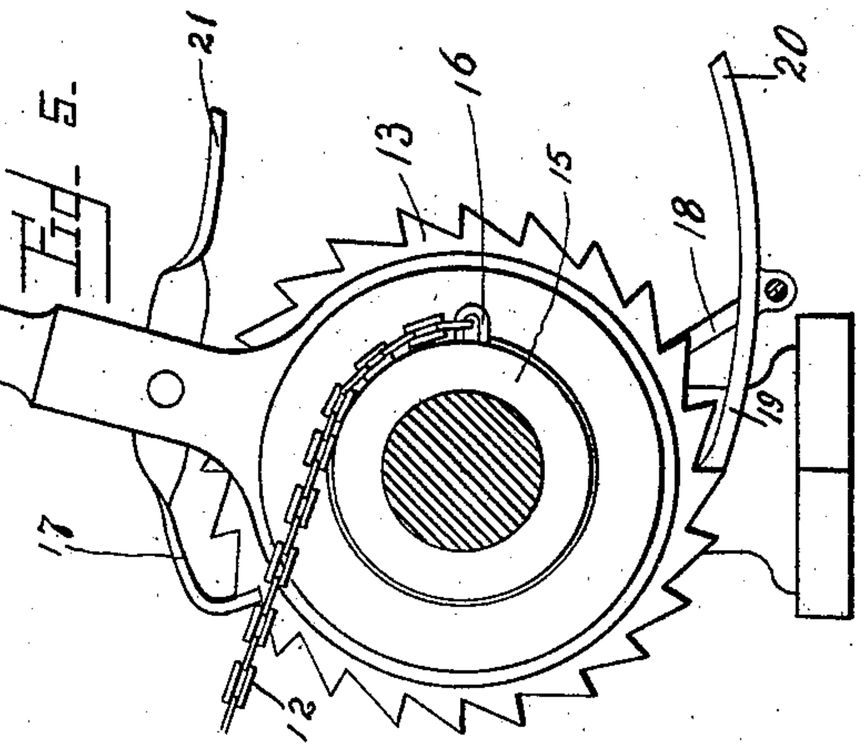

Fig. 5.

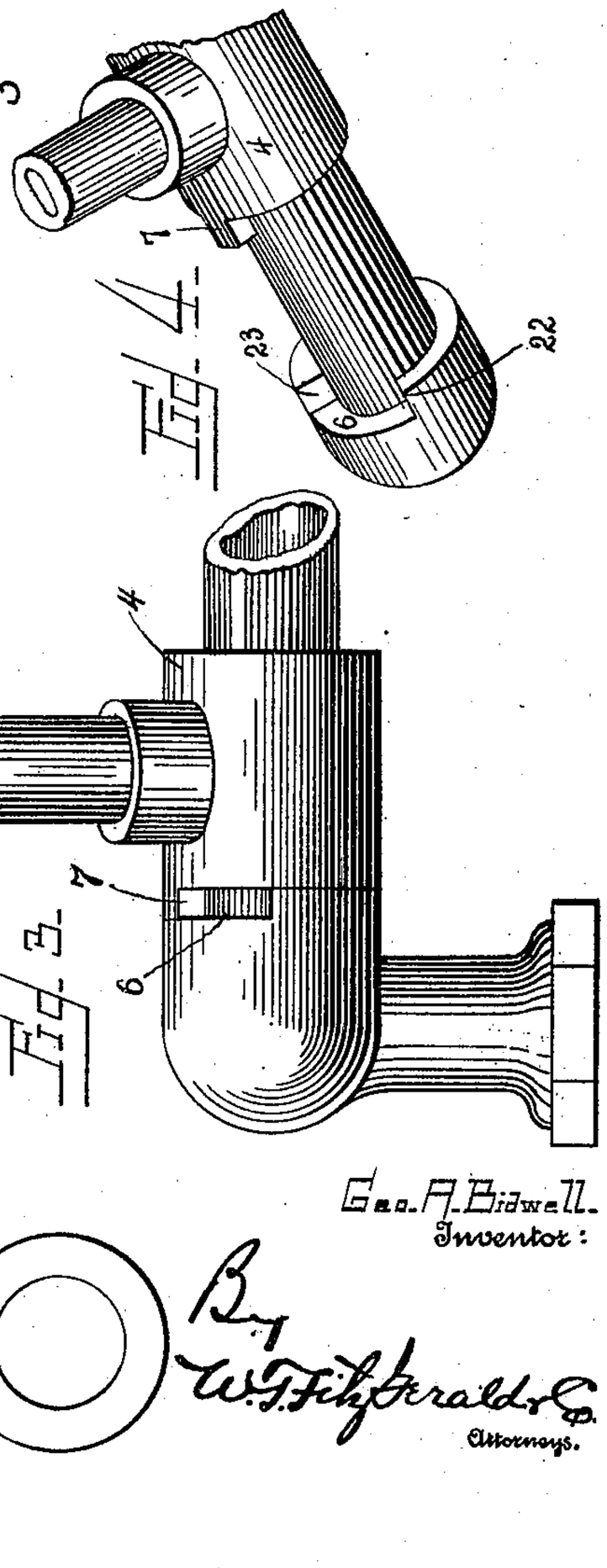

Fig. 4.



Fig. 3.



Fig. 2.

Witnesses
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# UNITED STATES PATENT OFFICE.

GEORGE A. BIDWELL, OF PITTSFIELD, MASSACHUSETTS.

## HOISTING APPARATUS.

SPECIFICATION forming part of Letters Patent No. 610,318, dated September 6, 1898.

Application filed October 12, 1897. Serial No. 654,920. (No model.)

*To all whom it may concern:*

Be it known that I, GEORGE A. BIDWELL, a citizen of the United States, residing at Pittsfield, in the county of Berkshire and State of Massachusetts, have invented certain new and useful Improvements in Hoisting Apparatus; and I do hereby declare the following to be a full, clear, and exact description of the invention, such as will enable others skilled in the art to which it appertains to make and use the same.

My invention appertains to what may be termed a "portable" hoisting apparatus, which while especially adapted for raising an entire wagon or other form of vehicle so that all of the wheels thereof will be lifted simultaneously from the ground, yet it will be fully reliable and efficient for raising any kind of load—as, for instance, for lifting a stove, piano, or other heavy object—bodily upward, so that the same may be easily loaded upon or unloaded from the door or truck, as the case may be.

The object therefore of my invention may be stated, among others, to be to provide a strong and easily-operated device of the character specified which may be readily moved from place to place by the person using it.

In the accompanying drawings, Figure 1 is a perspective view of my invention complete, showing the upper portion of the frame in an elevated or extended position. Fig. 2 is a detail of the contacting-faces of the stop mechanism. Fig. 3 is a side view of the stop mechanism assembled in its operative position. Fig. 4 is a perspective detail showing parts of the stop mechanism separated. Fig. 5 is an enlarged detail view of the operating-lever and the ratchet and pawl used in coöperation therewith.

Briefly stated, my invention consists in providing a framework which is so constructed that it may be folded or collapsed, thus bringing the supporting-platform downward in nearly the same plane occupied by the supporting-base, and, further, in certain devices for raising the supporting part of the frame and securing the same in an adjusted position.

For convenience of designating the several elements involved in my invention figures of reference will be employed.

In carrying out my invention I provide the base or supporting-frame, consisting of the side sections 1 and the end sections 2, suitably connected to the side sections in any rigid manner, while at each corner of the frame thus provided I attach the supporting standards or legs 3.

Near each end of the end sections 2 I rotatably mount thereon the collars 4, designed to lie closely in contact with the inner ends of the corner-sections 5, each of said corner-sections being cut away upon its upper sides to form the recess 6, designed to receive the projecting lug or stem 7, formed integral with the collar 4 or otherwise attached thereto, the object being to prevent said collar from rotating more than one-quarter around the end sections 2, the purpose of which will be hereinafter fully apparent.

Permanently attached to each of the collars 4 are the movable standards 8, the upper ends of which are each preferably provided with the T-shaped head 9, having an aperture of sufficient diameter to receive the end sections 10 of the upper or platform section, upon which the object to be raised is placed, said platform being formed by said end sections 10 and the side sections 11, suitably and rigidly connected together.

It will be understood that the end sections 10 are to pass loosely through the apertures formed in the heads 9, the object being to permit the standards 8 to be brought substantially into a horizontal position, and thus lower the upper or supporting platform formed by the end sections 10 and the side sections 11, as above described.

In order that the standards 8 may be brought upward into nearly a vertical position, I provide the hoisting apparatus, consisting of the chain 12, the ratchet 13, and the controlling-lever 14 and suitable pawls or detents to hold said ratchet in an adjusted position. It will be seen that the chain 12 is connected at one end to one of the end sections 10 and passes thence to the end sections 2 upon the opposite end of the hoisting appa-

ratus, where it is wound around the spool or barrel 15, the latter being rigidly attached to the ratchet 13 or integrally formed therewith, said chain being permanently attached to said barrel by the staple 16 or otherwise.

The lower end of the lever 14 loosely encircles the barrel 15 and is provided with the actuating pawl or detent 17, while upon the framework, at a suitable point thereon, I attach the bracket 18, upon which is mounted the anchoring pawl or detent 19, the purpose of which is to hold the ratchet 13 and its accompanying barrel in a wound or adjusted position until the detent 19 is disengaged, which may be accomplished by a light pressure, as by the foot, upon the free end 20 of said detent.

The pawl 17 is so disposed that it will cooperate with the detent 19 and aid the latter in holding the ratchet 13 in a wound or adjusted position. In like manner the detent 17 is provided with the pedal or handle 21, by means of which the pawl or detent may be readily disengaged.

It will be understood that my improved hoisting apparatus may be made of any suitable material, though it is thought that more satisfactory results would be obtained from the use of tubular sections, as such sections combine both strength and lightness.

The operation of my improved hoisting apparatus is as follows: The apparatus is placed in the initial position by disengaging the detents 17 and 19, when the chain 12 will become unwound, permitting the platform-section to drop downward into contact with the base-section, when the object to be raised may be easily placed thereon.

After the object to be raised has been placed in position the lever 14 is manipulated so as to rotate the ratchet 13, each rotation or partial rotation thereof being secured and held by said detents. After the object has been raised to the desired height, as for the purpose of loading it upon a carrying-truck or readily entering it in an elevated doorway, further reciprocation of the lever 14 is omitted, when the object may be readily moved into the desired position. If it is desired to raise an entire vehicle so that the wheels thereof may be removed for any purpose, my improved hoisting apparatus is placed under the vehicle after the platform-section thereof has been sufficiently depressed or collapsed, when a proper manipulation of the lever 14 will bring the vehicle into the desired position, as will be readily understood.

By the construction set forth it will be seen that when the standards 8 approach a true vertical position the stop 7 will come in contact with the shoulder 22, formed by the recess 6, and thus prevent the framework from falling over in an opposite direction from which it was raised, while the shoulder 23 upon the opposite end of said recess will prevent a total collapse of the frame, as will be readily apparent.

Believing that the construction, advantages, and operation of my improved hoisting apparatus will be made fully apparent from the foregoing specification and the drawings, I will dispense with further reference to the details thereof.

Having thus fully described my invention, what I claim as new, and desire to secure by Letters Patent, is—

1. A rectangular hoisting apparatus consisting of a base and an elevating-platform and end posts connecting said base and platform, all composed of tubes, right-angled collars at the corners of the base into which fit the base-tubes, said collars being provided with supporting-legs, and means carried by the base to limit the upward movement of the platform, all arranged as set forth.

2. A rectangular hoisting apparatus, composed of a tubular base having right-angled collars at its corners, a tubular platform, collars on the end tubes of the platform, vertical tubes fitting the collars on the end pieces and the right-angled collars and means to limit the upward movement of the platform, all arranged as set forth.

3. A rectangular hoisting apparatus consisting of a base an elevating-platform, collars at the corners of the base having limiting-stops, limiting-recesses in the base-corners in which the stop works, and means to operate the apparatus, all combined as set forth.

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

GEORGE A. BIDWELL.

Witnesses:

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