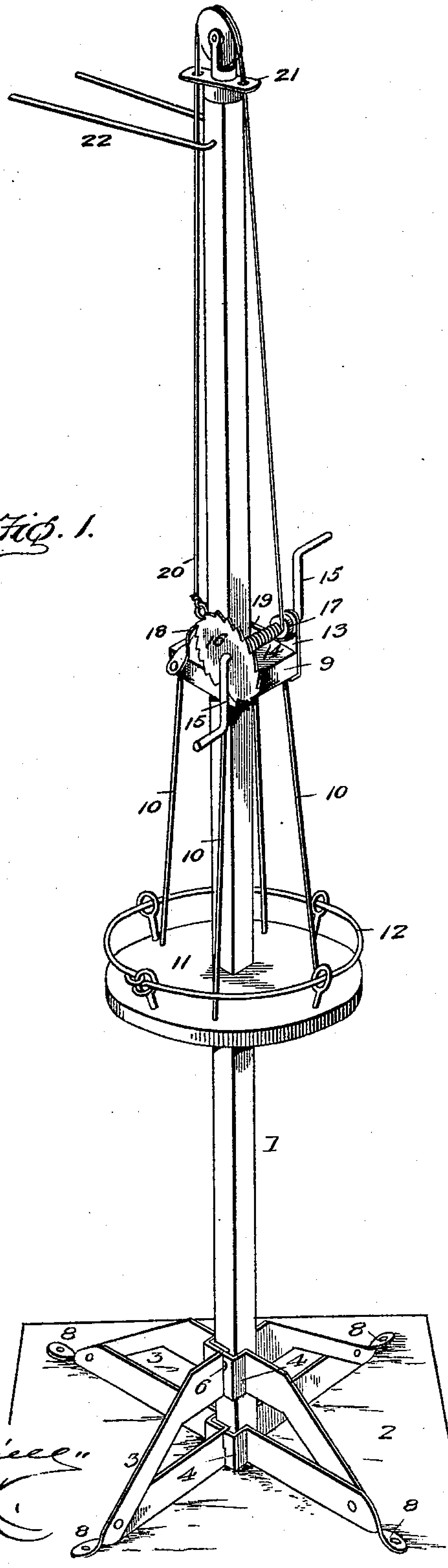
(No Model.)

4 Sheets—Sheet 1.

A. N. WOODARD.
ELEVATOR.

No. 583,562. Patented June 1, 1897.

Fig. 1.



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THE NORRIS PETERS CO., PHOTO-LITHO., WASHINGTON, D. C.

(No Model.) 4 Sheets—Sheet 2.

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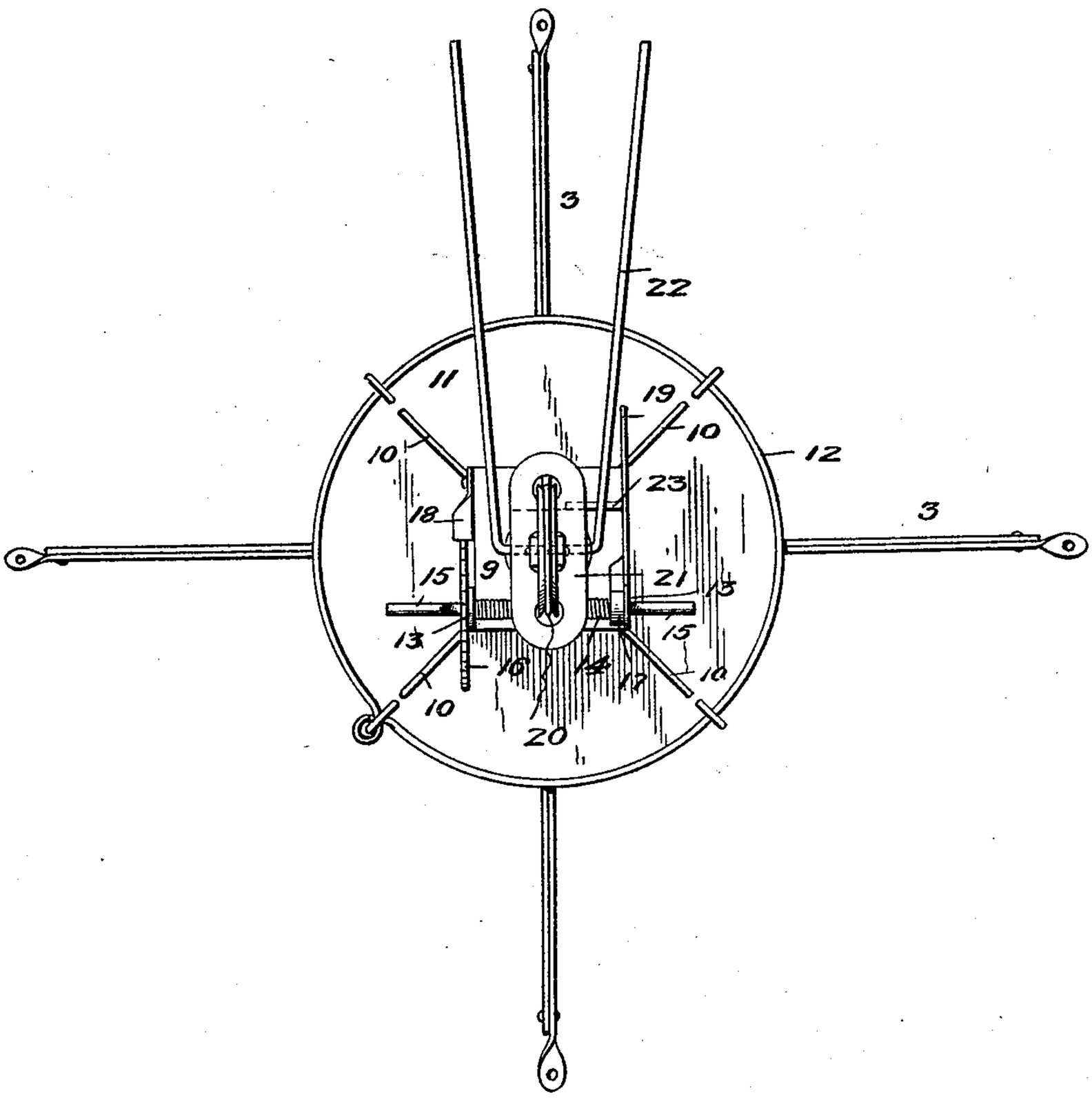
Fig. 2.



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(No Model.) 4 Sheets—Sheet 3.

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Fig. 3.

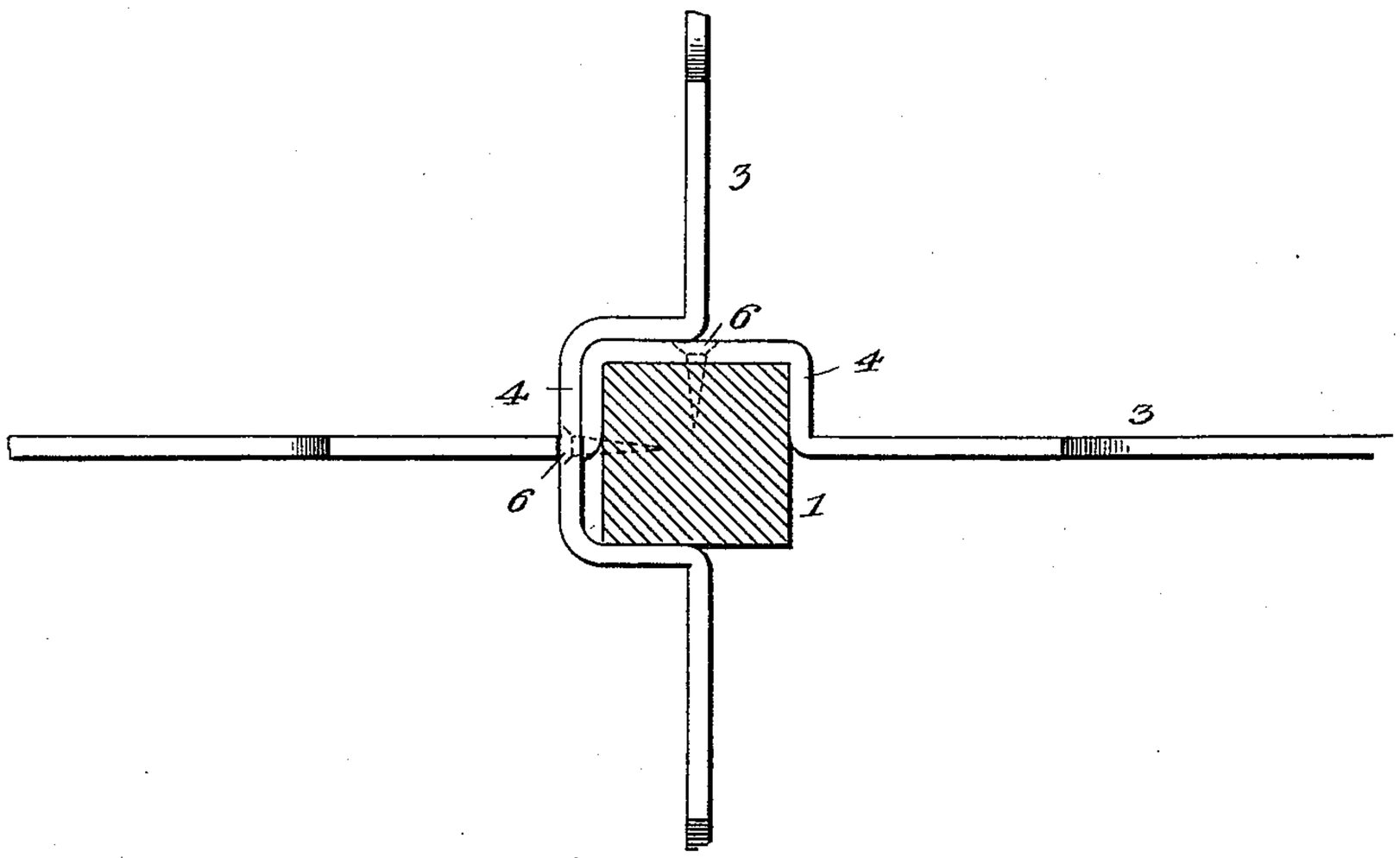
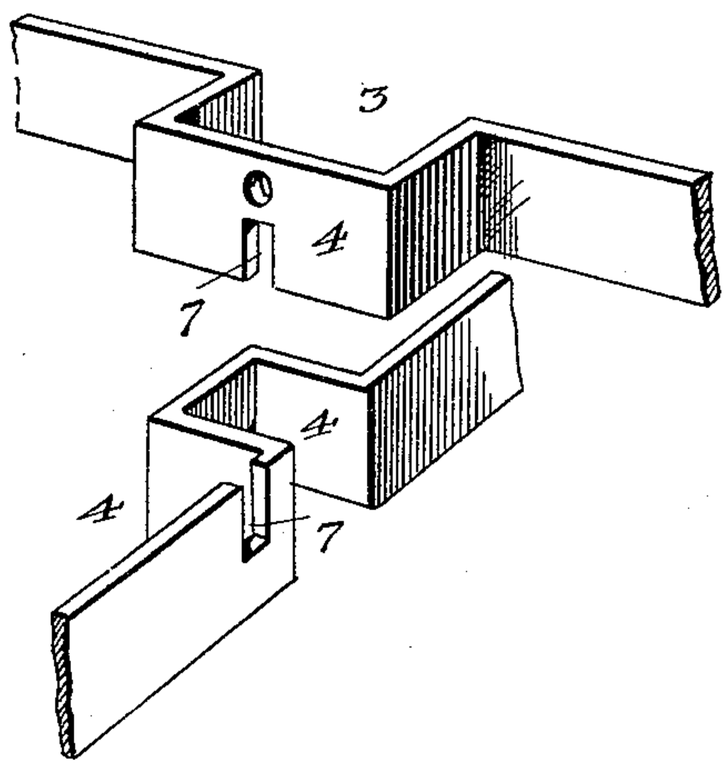


Fig. 4.



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(No Model.) 4 Sheets—Sheet 4.

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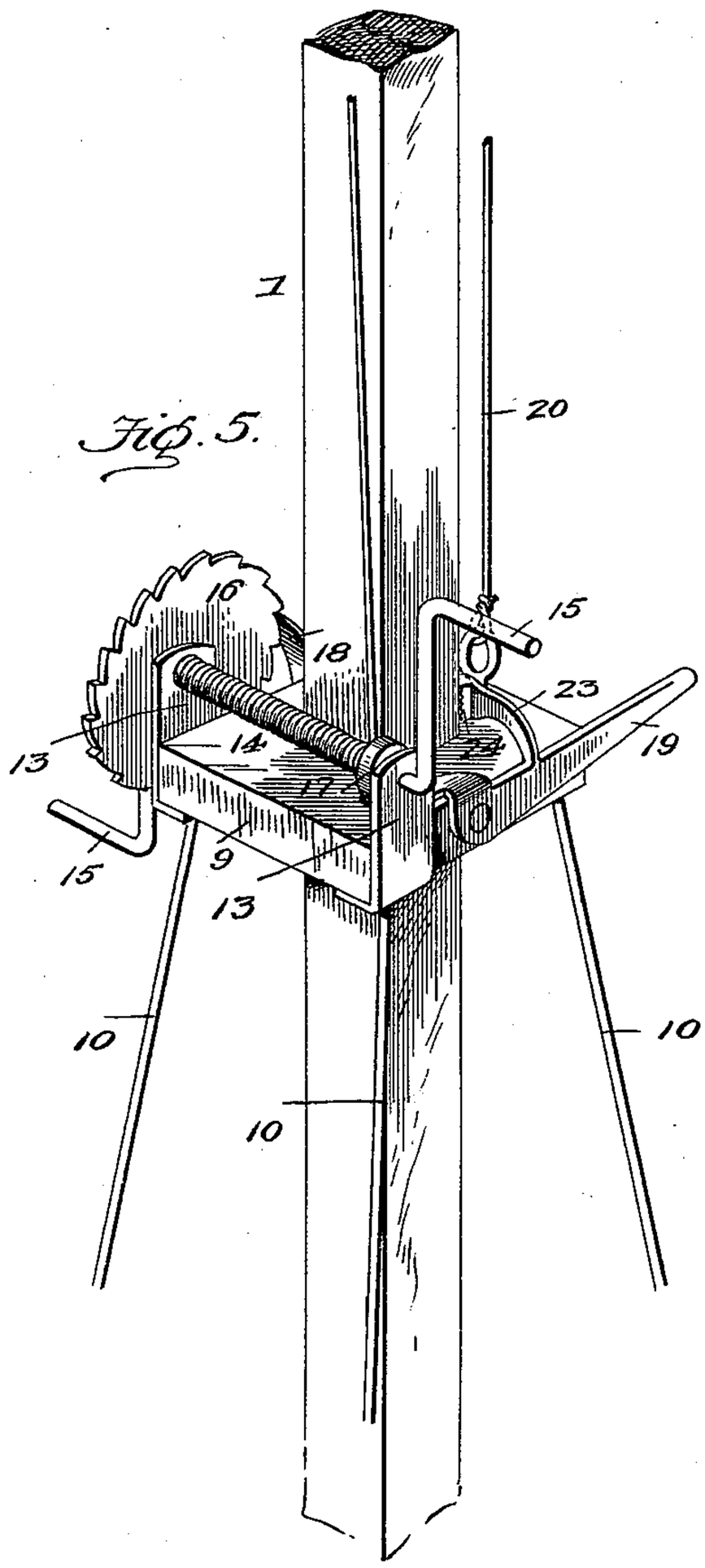
Fig. 5.



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Attorney

UNITED STATES PATENT OFFICE.

ALVIN NELSON WOODARD, OF MANSFIELD, OHIO.

ELEVATOR.

SPECIFICATION forming part of Letters Patent No. 583,562, dated June 1, 1897.

Application filed February 3, 1897. Serial No. 621,820. (No model.)

To all whom it may concern:

Be it known that I, ALVIN NELSON WOODARD, a citizen of the United States, residing at Mansfield, in the county of Richland and State of Ohio, have invented certain new and useful Improvements in Portable Tower-Elevators; and I do 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.

This invention relates to elevators, and more particularly to that class known as "portable tower-elevators."

The object of the invention is to provide a device of this character which shall be simple of construction, durable in use, and comparatively inexpensive of production and by means of which a person may raise and lower himself at will and have full control of the mechanism.

With these objects in view the invention consists of certain features of construction and combination of parts, which will be hereinafter fully described, and particularly pointed out in the claims.

In the accompanying drawings, Figure 1 is a perspective view of my improved device. Fig. 2 is a top plan view of the same. Fig. 3 is a cross-sectional view through the pole, looking downward, and showing the novel manner of supporting the elevator-pole. Fig. 4 is a similar view through the pole and the brace, and Fig. 5 is an enlarged view in perspective of the sliding head and the parts carried thereby.

In the drawings, 1 denotes a vertical pole or support, preferably square or angular in cross-section, and attached to a base 2 in the following manner: Two sets of braces 3 are formed at their central horizontal portions with boxes 4, which embrace different sides of the pole and are secured thereto by bolts 6. These box portions are provided with slits 7, whereby an interlocking joint is formed by the braces. The upper set of braces have their ends inclined downward, and their extremities are given a quarter-twist to form feet 8, which are bolted to the base. The lower set of braces extend laterally and are bolted or riveted to the upper set of braces, thus forming a strong and substantial union of the parts.

9 denotes a sliding head formed centrally with a square or angular aperture to fit and conform to the pole, and connected to this head by rods 10 is the sliding platform 11, having a central aperture to fit the pole and a guard-rail 12.

Mounted in bearings 13, secured to the side of the sliding head, is a windlass 14, having cranks 15 at its opposite ends and provided near one end with a ratchet-wheel 16 and near the other end with a frictional brake-wheel 17. 18 denotes the ratchet or dog to engage the ratchet-wheel and prevent a reverse movement, and 19 denotes a brake-lever pivoted to the side of the platform and provided with a laterally-projecting brake-shoe which engages the brake-wheel, whereby the lowering of the platform may be controlled by the operator.

20 denotes a rope or cable, one end of which is made fast to the platform, and which extends upwardly through an eye in a guide-arm 21 at the upper end of the pole and over a pulley, thence downwardly through an eye in the opposite end of the guide-arm and has its other end connected to the windlass.

An elevator thus constructed can be put to all the uses of an ordinary ladder, and when the pole is made very long to adapt the elevator for use on the outside of buildings and high structures I provide a swinging prop 22, which consists of a U-shaped rod pivoted to the upper end of the elevator and which is adapted to be swung outward and engage the face of the building or structure and support the ladder against lateral vibration.

In use, a person alone or with his fellow workman gets on the platform. The cranks of the windlass are then turned and the platform with the load is elevated to the desired point, where it is held by the ratchet or dog. When it is desired to descend, the ratchet or dog is disengaged from the wheel, and by working the cranks the platform will lower, or instead of working the cranks the descent of the platform may be controlled by the brake-lever. This brake-lever is provided with an arm 23, projecting upwardly and formed with

a transverse gripping-face 24, so that in the event of the cable or rope breaking by elevating the inner end of the lever the transverse gripping-face will be brought into frictional contact with the pole and the descent of the platform checked and injury to the occupants avoided.

Having thus described my invention, what I claim is—

1. In an elevator of the character described, the combination with the supporting-pole having at its top a pulley or sheave, of a platform mounted to slide on said pole, a sliding head connected to said platform and provided with a windlass, a ratchet-wheel and brake-wheel fixed to said windlass, a brake, a pawl or ratchet to engage said ratchet-wheel, a brake-lever to engage said brake-wheel, and provided with an arm to be brought into engagement with the pole to check the descent of the platform in case of accident, and a cable connected to said platform, passed over said pulley or sheave, and connected to the windlass, substantially as set forth.

2. In an elevator of the character described, the combination with the pole and a sliding platform and mechanism for raising and lowering it, of a supporting-brace, and means for connecting the pole to said base comprising two sets of braces, the braces of each set provided with boxes to receive the pole and bolted thereto, and provided with interlocking slits, the upper set of braces having their ends bent downward and formed with feet that are bolted to the base, and the ends of the lower set of braces being riveted to the ends of the upper set of braces, substantially as set forth.

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

ALVIN NELSON WOODARD.

Witnesses:

A. J. TWITCHELL,

R. W. HARTMAN.