E. G. BOYES.

COMBINED WIRE STRETCHER AND WAGON JACK.

APPLICATION FILED MAY 5, 1908.

905,052. **Patented Nov. 24, 1908.**

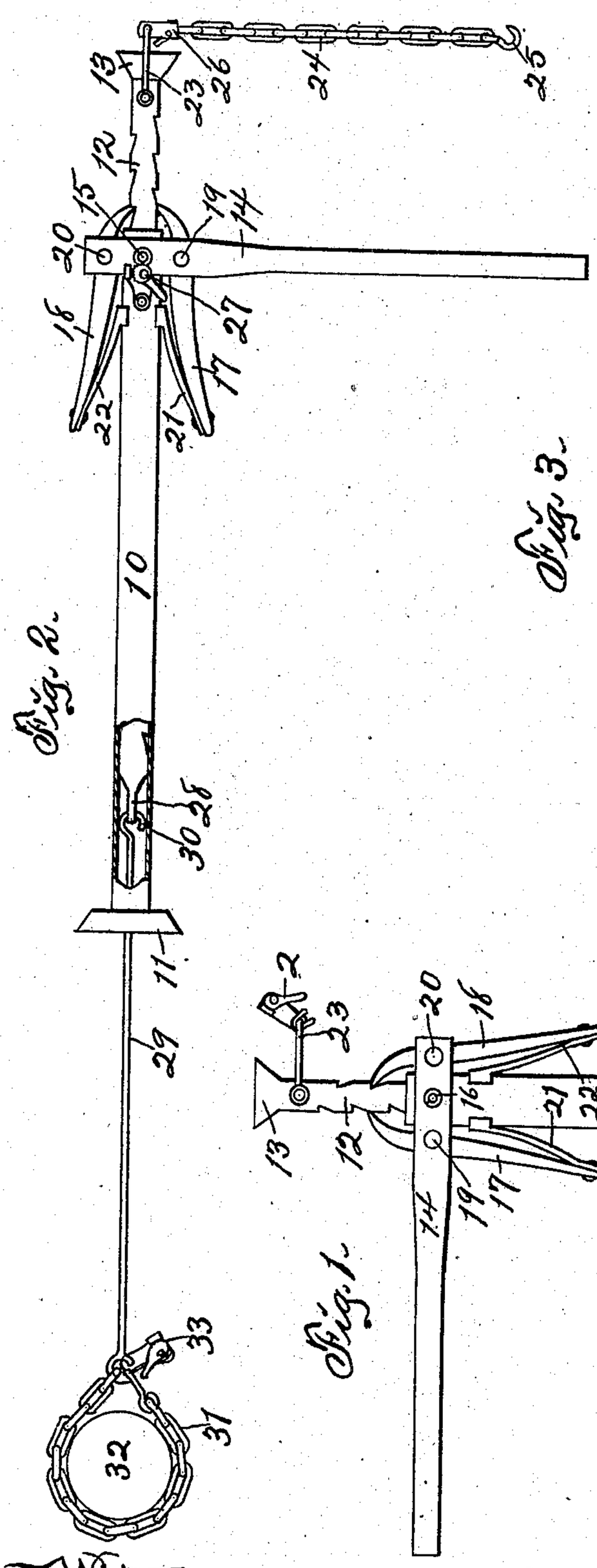

Fig. 2.

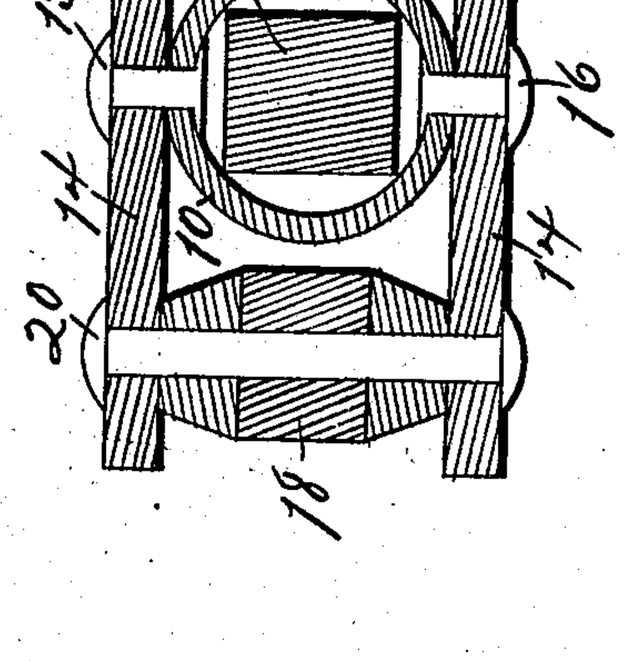

Fig. 3.

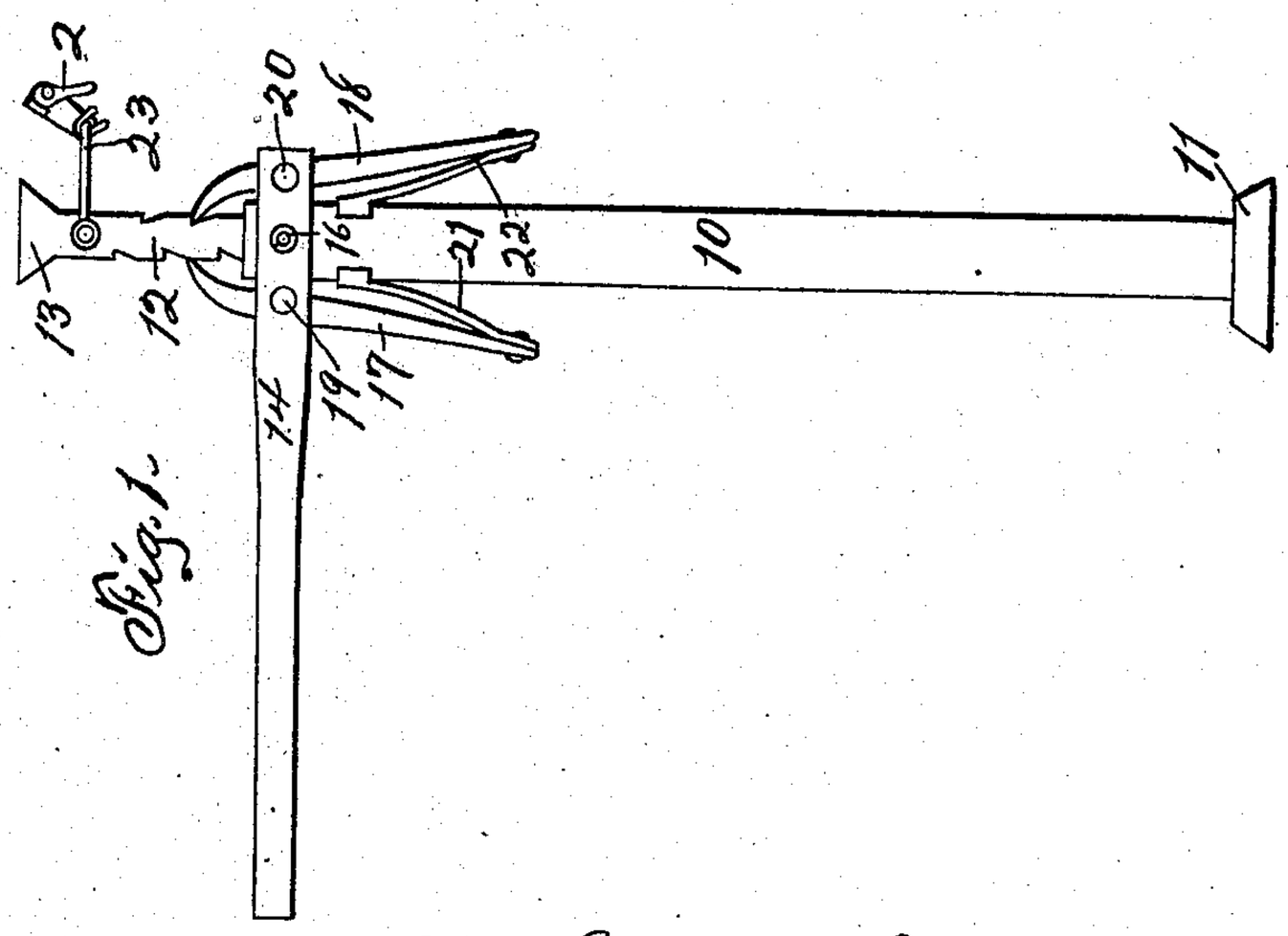

Fig. 1.

Witnesses:
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UNITED STATES PATENT OFFICE.

EDWARD G. BOYES, OF RALSTON, IOWA.

COMBINED WIRE-STRETCHER AND WAGON-JACK.

No. 905,052. Specification of Letters Patent. Patented Nov. 24, 1908.

Application filed May 5, 1908. Serial No. 431,726.

To all whom it may concern:

Be it known that I, EDWARD G. BOYES, a citizen of the United States, residing at Ralston in the county of Carroll and State of Iowa, have invented a new and useful Combined Wire-Stretcher and Wagon-Jack, of which the following is a specification.

The object of this invention is to provide an improved combination tool susceptible of use as a lifting jack and also as a wire stretcher or tightener.

A further object of this invention is to provide improved means for attaching a wire stretcher to a post.

A further object of this invention is to provide improved detachable means for attaching a wire stretcher to a post.

A further object of this invention is to provide improved means for disconnecting and removing post-attaching devices preliminary to the use of the tool as a lifting jack.

My invention consists in the construction, arrangement and combination of elements hereinafter set forth, pointed out in my claims and illustrated by the accompanying drawing, in which—

Figure 1 is a side elevation of the improved device in the position required for use as a lifting jack. Fig. 2 is a side elevation of the device in position required for use as a wire stretcher, one end portion of one of the members being attached to a post, and a portion of the casing broken away to reveal the interior construction. Fig. 3 is a detail cross-section illustrating the construction of various elements.

In the construction of the device as illustrated in Fig. 1, the numeral 10 designates a tubular standard formed with a base or foot 11. A jack-stem 12 is mounted within and arranged for reciprocation relative to the tubular standard 10. The jack-stem 12 preferably is annular in cross-section, while the standard 10 is circular in cross-section, and opposite sides of said stem are formed with notches or ratchet teeth. A head 13 is formed on the jack-stem 12 outside of the standard 10.

A bifurcated lever 14 is mounted on the stem 10 and is fulcrumed thereto by means of rivets or bolts 15, 16 extending through opposite arms of said lever, and also extending through the standard 10 at diametrically opposite points. Lever pawls 17, 18 are fulcrumed in the bifurcated portion of the lever 14 and on opposite sides of the stem by means of pins 19, 20 extending through said lever and through the pawls. The pins 19, 20 are parallel with the axis of oscillation of the lever 14. Upper end portions of the lever pawls 17, 18 are turned inwardly toward and are adapted to engage the ratchet teeth or notches in the faces of the jack-stem 12. The lower end portions or arms of the lever pawls 17, 18 are curved outwardly relative to the longitudinal trend of the standard 10, and leaf springs 21, 22 are mounted on the extremities thereof and impinge opposite sides of the standard. A clevis 23 embraces the jack-stem 12 and is pivoted thereto adjacent the head 13. The clevis 23 is adapted to swing across the head 13 in either direction. A chain 24 is attached at one end to the clevis 23 and preferably terminated in a hook 25. The chain 24 and hook 25 may be employed to attach the jack-stem to a post. A wire clamp or gripping device 26 is mounted pivotally on the clevis 23 and is adapted to grip a fence wire and attach the same to the jack-stem when desired. A wire clamp or gripping device 27 is mounted on the standard 10 adjacent the lever 14 and is adapted to grip a fence wire and attach the standard thereto when desired.

An eye 28 is formed on the lower end portion of the jack-stem 12 and a rod 29 is provided and is formed with a hook 30 detachably engaging the eye 28. The hook 30 is adapted to be engaged with the eye 28 when said eye projects outside the base end portion of the tubular standard 10, and thereafter said hook and eye may slide within the tubular standard. A chain 31 is attached to the outer end portion of the rod 29 and is adapted to connect said rod to a post 32 when desired. A wire gripping device 33 also is attached to the rod 29 and is adapted to grip a wire and secure the same to said rod when desired.

When it is desired to employ this device as a lifting jack, such as may be used for lifting wagon axles for the removal of wheels therefrom, and commonly known as a wagon jack, the parts are assembled and adjusted as shown in Fig. 1, with the head 13 of the jack-stem 12 beneath an axle or other device to be lifted. The lever 14 then is manipulated to cause the pawls 17, 18 successively to engage ratchet teeth and lift the jack-stem 12 and head 13 and the load thereon to the desired elevation. The loading stem may be lowered by alternately

compressing the levers 17, 18 toward the standard 10, and letting the device down notch by notch. Or both of said levers may be compressed and the load be allowed to descend abruptly if desired.

When it is desired to employ this device as a stretching mechanism, one of the chains 24, 31 is attached to a post, such as 32, and then a fence wire or other device to be stretched is engaged by one or the other of the gripping devices. When the chain 24 is attached to a post, the grip device 27 is employed to engage the article to be stretched. It is to be understood that the rod 29 is unhooked from the eye 28 when the device is employed as a lifting jack. When used as a stretching mechanism, the stretching force is applied by moving the jack-stem 12 longitudinally of the standard 10 through manipulation of the lever 14 and consequent step-by-step operation of the pawls 17, 18.

I claim as my invention—

1. A combination tool, comprising a tubular standard, a toothed stem therein, a lever fulcrumed on said standard, pawls on said lever engaging said stem, a chain flexibly connected to one end of said stem, a rod detachably connected to the opposite end of said stem, a chain flexibly connected to said rod, and a gripping device on said standard.

2. A combination tool, comprising a tubular standard, a toothed stem mounted therein, a lever fulcrumed on said standard, spring-pressed pawls on said lever engaging said stem, a gripping device flexibly connected to said stem, a gripping device connected to said standard, a rod detachably connected to said stem, and a grip device and chain flexibly connected to said rod.

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Witnesses:
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