No. 647,636. Patented Apr. 17, 1900.

R. SIMPSON.

CLOTHES REEL.

(Application filed Oct. 21, 1898.)

(No Model.)

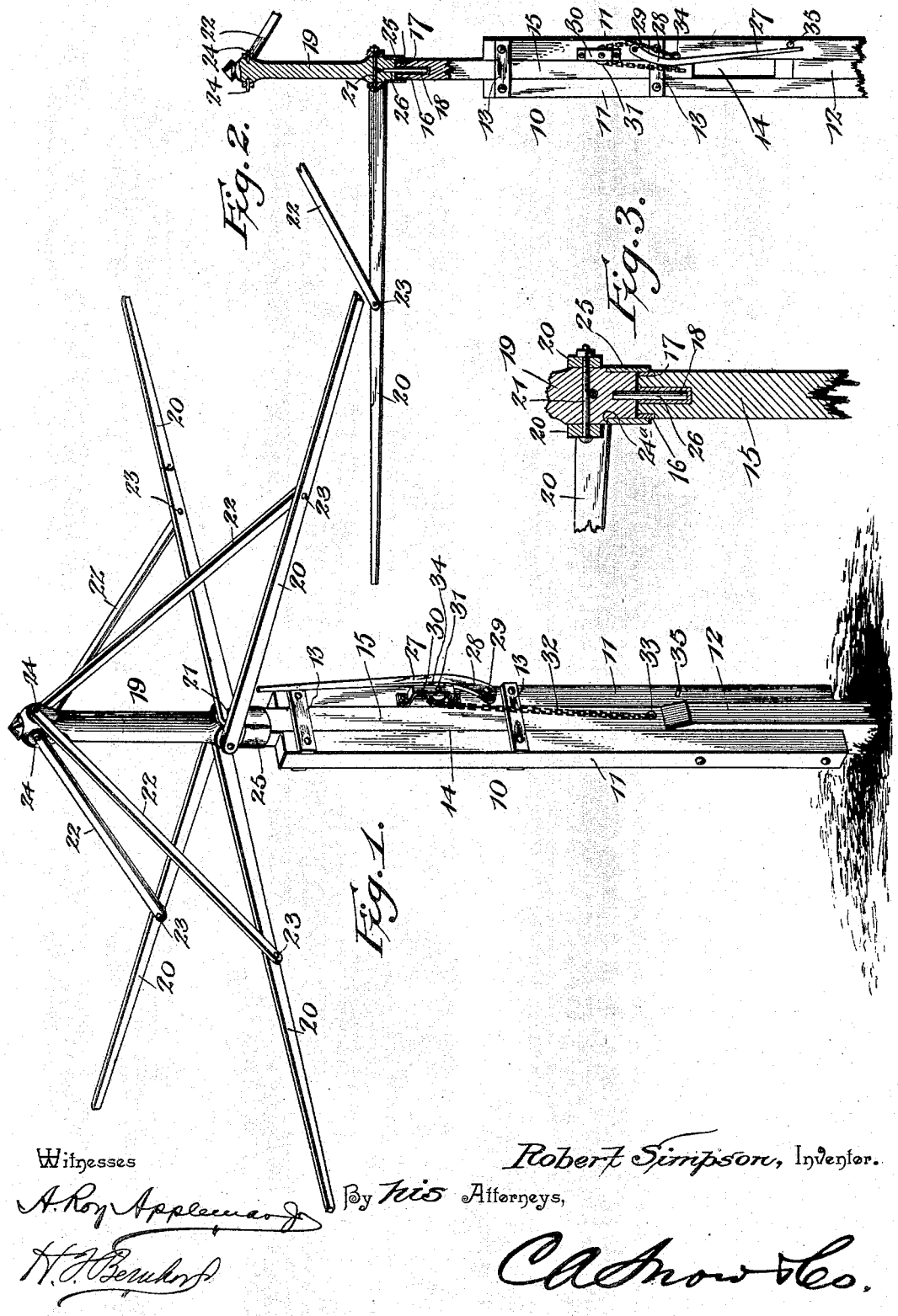

Fig. 2.

Fig. 3.

Fig. 1.

Witnesses
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UNITED STATES PATENT OFFICE.

ROBERT SIMPSON, OF LONDON, CANADA.

CLOTHES-REEL.

SPECIFICATION forming part of Letters Patent No. 647,636, dated April 17, 1900.

Application filed October 21, 1898. Serial No. 694,233. (No model.)

To all whom it may concern:

Be it known that I, ROBERT SIMPSON, a subject of the Queen of Great Britain, residing at London, in the county of Middlesex, Province of Ontario and Dominion of Canada, have invented a new and useful Clothes-Reel, of which the following is a specification.

My invention relates to improvements in clothes-reels; and one purpose is to provide a powerful lifting appliance by which the reel, whether loaded or unloaded, may be easily and quickly lifted in a perpendicular direction with minimum sidewise friction and wear on the vertically-adjustable mast and the guideway in the post or column.

A further purpose is to provide an improved rotatable reel which may be easily and quickly detached from the mast should occasion require that the reel be taken down from the column—as, for instance, when the structure lies in the path of a loaded vehicle—and this reel is connected with the mast by devices which prevent splitting of the wood under the weight and strain of the load, which retain a lubricant to insure easy working of the metallic elements and also serve to exclude the weather from the joint between the revoluble reel-head and the upper end of the mast.

With these ends in view the invention consists in the novel construction and arrangement of parts and in the combination of elements which will be hereinafter fully described and claimed.

To enable others to understand the invention, I have illustrated a preferred embodiment thereof in the accompanying drawings, forming a part of this specification, in which—

Figure 1 is a perspective view of a clothes-reel constructed in accordance with my improvement. Fig. 2 is a vertical sectional elevation through the reel-head and illustrating the lifting appliance and the column in elevation. Fig. 3 is an enlarged detail section through the reel-head and the mast to illustrate the joint.

Like numerals of reference denote like and corresponding parts in each of the several figures of the drawings.

10 designates the post or column, which consists of the spaced uprights 11 and the foot-post 12. This foot-post is shorter than the uprights, and it is secured firmly in place between the latter, so as have its lower end project below the upright and enable the column to be planted firmly in the ground. The uprights which form a part of the column lie parallel to each other and are maintained in such parallel relation by the transverse straps 13. The spaced uprights coupled together by the straps provide a vertical guide or race way 14 to accommodate the vertically-adjustable mast 15, and the cross-sectional area of this mast is such as to insure proper fitting of the mast in the guide or race way 14, whereby the mast is adapted to be raised or lowered in the post or column 10. The upper end of this mast 15 is reduced to receive a metallic band 16, which rests upon a shoulder 17, and said upper extremity of the mast is provided with a central metallic socket 18, that is adapted to receive a lubricant which insures free rotation of a pintle on the reel-head presently described.

The revoluble reel-head 19 carries a series of radial arms 20, each of which is pivoted or secured to one face of an angular portion of said head 19 by the pivotal pin or bolt 21. These radial arms are held securely in their spread positions by a series of inclined braces 22, each having its outer end attached pivotally to one arm 20, as at 23, while its inner end is connected detachably, as at 24, to the face on the opposite side of the angular upper portion of the reel-head. In this manner the braces assist in holding the arms against lateral movement as well as holding them in a horizontal position. The reel-head is extended below that angular portion thereof to which the radial arms are fastened, and the lower end of said head is made cylindrical, shouldered, as at 24^a, for the reception of an annular metallic band or cuff 25. This metallic band is secured firmly around the lower end of the reel-head to bear against the shoulder 24^a thereof, and said band or cuff is extended or prolonged below the reel-head, so as to embrace the upper reduced end of the mast and the metallic band 16 thereof. Secured centrally to the lower end of the reel-head is a metallic pintle 26, which lies partly within the metallic band or cuff and extends a suitable distance below said head and the cuff thereon for the purpose of entering the

metallic socket 18 in the mast 15. The metallic band 16 on the upper extremity of the mast 15 and the metallic cuff 25 on the lower end of the reel-head prevent the wood from splitting under the action of the weather and the strain or weight of the fabrics which constitute the load on the arms of the revoluble reel. The socket 18, which receives the pintle of the reel-head, provides a central metallic bearing for the rotation of the reel on the mast, thus reducing the friction and wear of the pintle in the mast, and this socket is adapted to receive and retain the lubricant which is deposited in said socket to insure freedom in the rotation of the reel. By extending the band or cuff 25 below the reel-head said band is adapted to embrace the upper end of the mast and the metallic band 17 thereon, whereby the cuff excludes rain and snow and dust from the joint between the mast and the reel-head, and it assists in the retention of the lubricant between the rotatable joint of the mast and said reel-head. The reel-head is arranged to travel vertically with the mast 15, but it is capable of rotation thereon freely irrespective of the elevation of the mast. This reel-head is adapted to be removed easily and quickly from the mast by simply lifting the head to disengage the cuff 25 and the pintle 26 from the mast and the socket therein, thus allowing the entire reel to be taken off should the apparatus lie in the path of a loaded team.

In connection with the mast and the column I employ a lifting appliance which is adapted to be operated easily for the purpose of raising the mast and which consists of a lever which is fulcrumed on the column to occupy a compact relation thereto when raised or lowered. This lever 27 is provided with a curved end 28, that is fulcrumed by a bolt 29 to one side of the column. A pulley-bracket 30 is secured firmly to that face of the column on which the lever is fulcrumed, and in this bracket is journaled a guide-pulley 31, the inner edge of which extends across the joint between one edge of the mast 15 and one of the uprights 11 of the column. A chain or cable 32 passes freely over this guide-pulley, and it has one end attached to the mast 15 near the lower end thereof by means of a staple 33; but its other end is secured at 34 to the lever 27 at a point some distance from the fulcrum 29. By arranging the guide-pulley in the position described and attaching one end of the chain or cable centrally to the foot of the mast the latter is adapted to be lowered in a perpendicular direction and without binding on the uprights or the guide-straps 13, thus minimizing the friction and wear between the mast and the column. The staple projects far enough beyond the side of the mast to cause the chain to lie in the plane of the pulley and also to clear the strap 13 and prevent friction. The curved arm of the lever is fulcrumed to the column below the guide-pulley, and when the lever is raised on the lowering of the mast it occupies a compact relation to the column, because its curved end lies closely adjacent to the pulley and its bracket. To raise the mast, the operator grasps the lever and pulls downwardly thereon, thus drawing on the chain or cable and moving the mast in an upward direction. When the lever is lowered, it lies compactly against one side of the column, between the edges thereof, and this lever may be held in its lowered position by a stop-pin 35, which is fitted removably in a proper aperture of the column, whereby the pin and the lever sustain the mast and the reel in their elevated positions. The pin is preferably located below and adjacent to the top of the foot-post 12, so that when the lever is in its lowered position its end lies between the foot-post and the pin, as in a pocket, and is protected thereby from being accidentally released, which would cause the mast and reel to fall. The employment of the lever fulcrumed and connected with the chain, as described, and the arrangement of the cable or chain to secure the perpendicular lift to the mast 15 provides for the proper elevation of the mast and reel by a minimum effort on the part of the operator.

Changes may be made in the form of some of the parts, while their essential features are retained and the spirit of the invention embodied. Hence I do not desire to be limited to the precise form of all the parts as shown, reserving the right to vary therefrom.

Having thus described the invention, what I claim is—

A clothes-reel comprising parallel uprights mutually connected, a mast slidably disposed between the uprights and adapted to rest upon the connection of the uprights when in its lowermost position, supporting-arms fixed to the mast, a pulley mounted upon one of the uprights, a lever fulcrumed at its end below the pulley and to the upright carrying the pulley, a chain attached to the mast and passed upwardly and over the pulley and secured to the lever above its fulcrum at a point equidistant with the remote face of the pulley from the fulcrum, whereby the lever may operate to draw the adjacent end of the chain downwardly and engage the end of the lever therewith and bend the chain around said end, and means for holding the lever in the last-named position whereby the lever may be pulled outwardly and pressed downwardly and backwardly with a gradually-decreasing resistance.

In testimony that I claim the foregoing as my own I have hereto affixed my signature in the presence of two witnesses.

ROBERT SIMPSON.

Witnesses:
WILLIAM HARVEY WOOLLEY,
EDWARD B. HARGREAVES.