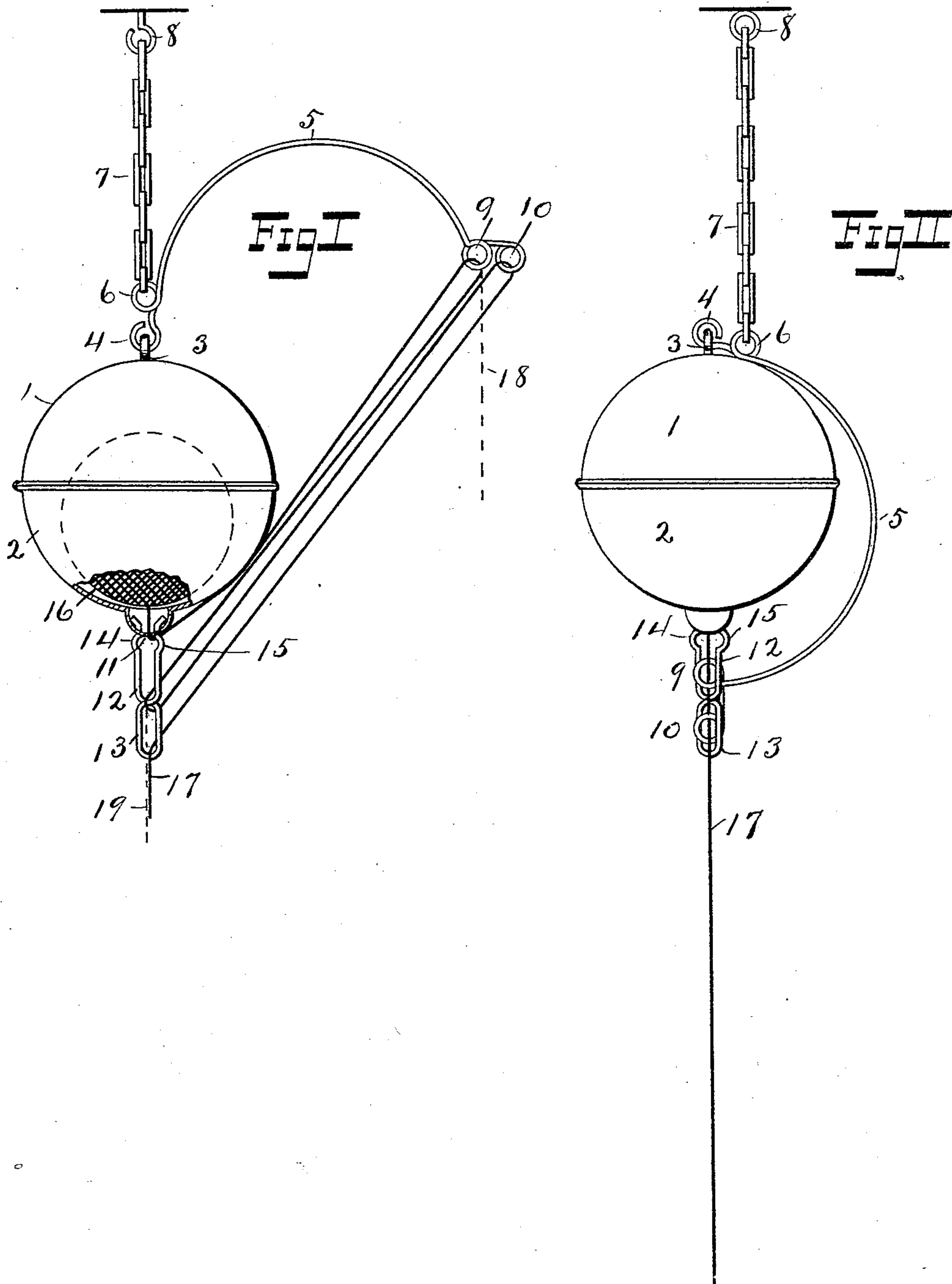


(No Model.)

E. NELSON.
TWINE HOLDER AND TAKE-UP.

No. 517,474.

Patented Apr. 3, 1894.



Witnesses

R. H. House

[Signature]

Edward Nelson

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UNITED STATES PATENT OFFICE.

EDWARD NELSON, OF KANSAS CITY, MISSOURI.

TWINE HOLDER AND TAKE-UP.

SPECIFICATION forming part of Letters Patent No. 517,474, dated April 3, 1894.

Application filed July 6, 1893. Serial No. 479,735. (No model.)

To all whom it may concern:

Be it known that I, EDWARD NELSON, a citizen of the United States, residing at Kansas City, in the county of Jackson and State of Missouri, have invented certain new and useful Improvements in Twine Holders and Take-Ups, of which the following is a specification, reference being had therein to the accompanying drawings.

My invention is an improved twine-holder and take-up.

The object of my invention is to provide the ordinary suspended hollow ball twine holder with means for automatically taking up the slack end of the twine, which ordinarily hangs suspended quite a distance below the holder.

In the accompanying drawings illustrative of my invention, Figure 1 represents an elevation view having a portion of the lower half of the holder broken away so as to show the manner of fastening by a loop to the holder. This figure shows the curved lever raised, with the slack of the twine taken up. Fig. 2 represents an elevation view with the cord holder in its raised position and the curved arm in the position it will take when the twine is pulled downward.

Similar numerals of reference indicate similar parts.

1, and 2, indicate the upper and lower half respectively of a hollow spherical twine holder, such as are commonly used for this purpose. The upper side of the top half is provided with a ring 3, secured thereto, to which ordinarily is secured a cord or chain that supports the holder from a hook fastened in the ceiling. In my invention, however, a ring 4, formed in one end of a bow-shaped rod or lever 5, made preferably of wire, is passed through the ring 3. At a short distance from the ring 4, of the bow-shaped lever 5, is formed a similar ring 6, to which is secured a chain or other supporting medium 7, the upper end of said chain 7, being secured to the ceiling in any manner, as by means of a hook 8, fastened to the ceiling, and having one end of the chain 7, secured thereto. At the extreme other end of the lever 5, are formed two rings or loops 9, and 10. The lower side of the hemisphere 2, is provided with a central opening 11, through which the twine is withdrawn.

An opening through the bottom of the hemisphere 2, is provided, one on each side of the opening 11, through which pass the two upper ends respectively, of a wire U-shaped loop which is twisted half way around so as to form the double loops 12, and 13. The upper ends of the U-shaped loop 12, are provided with offsets 14, and 15, respectively, which are forced against the lower side of the hemisphere 2, when the ends of said loop are thrust through the openings provided for them therein. The ends of the wire are then forced to one side thus securing the looped wire to the holder. The end of the ball of twine 16, is now passed through the opening 11, upwardly through the loop 9, thence back and through loop 12, thence through loop 13, upwardly to and through loop 10, thence to and through loop 13, from which the free end of the cord depends. The slack twine is indicated by 17.

I will now describe the operation of my invention:—The ball of twine 16, having been placed within the holder, a portion thereof is passed, as hereinbefore described, through the opening 11, and loops 9, 10, 12, and 13. The free end of the cord 17, is drawn downwardly and at the same time the loops 9, and 10, of the bow-shaped lever 5, are drawn down until they pass respectively through the loops 12, and 13, as indicated in Fig. 2. The cord 17, is now passed through the said loops 9, 10, 12, and 13, in almost a straight line from the ball 16, and any amount desired may be easily withdrawn from the ball. It will be noted that the loop 6, becomes the fulcrum of the lever 5, the load, which is the twine holder, being carried by the loop 4, the power being applied to the loop 9, and 10. When the cord 17, draws down the loops 9, and 10, the other end of the lever 5, is elevated, thus raising the twine holder. As soon as the desired amount of the twine has been withdrawn from the ball, and broken off, the tension on the twine 17, is removed, thus relieving the long end of the lever 5, from strain and permitting the weight of the twine holder to draw downward the short end of the lever 5, and thus raising the long end of the lever, withdrawing the loops 9, and 10, from the loops 12, and 13, respectively. The long end of the lever 5, in returning to the

position indicated in Fig. 1, carries with it the slackened end of the twine 17, instead of drawing more twine from the ball, there being less resistance offered by this portion of the twine. The portion of the twine which, with the ordinary holder, would be left hanging down, is thus taken up between the loops 9, 10, 12, and 13, and remains in such position until the operation hereinbefore described is repeated.

My invention may be applied to any of the well known forms of hollow spherical twine holders. Various departures from the specific construction shown may be made without departing from the spirit of my invention.

In Fig. 1 I have illustrated by means of the dotted line 18, how the cord may be passed from the holder through the opening 11, to and through the loop 9, thus dispensing with the loop 10, and 12, and 13, or, as indicated

by the dotted line 19, the cord may pass from the twine-holder to and through loop 9, and then through loop 12, dispensing with loops 10, and 13. More cord, however, is taken up in the construction in which all of the loops shown are used.

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

In a twine-holder and take-up, the combination with the lever 5, of the twine-holder 1, 2, connected therewith, the supporting medium 7, and 8, connected with the lever 5, the loops 9, 10, 12, and 13, substantially as described.

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

EDWARD NELSON.

Witnesses:

WILLIAM W. FENNER,
R. M. FENNER.