

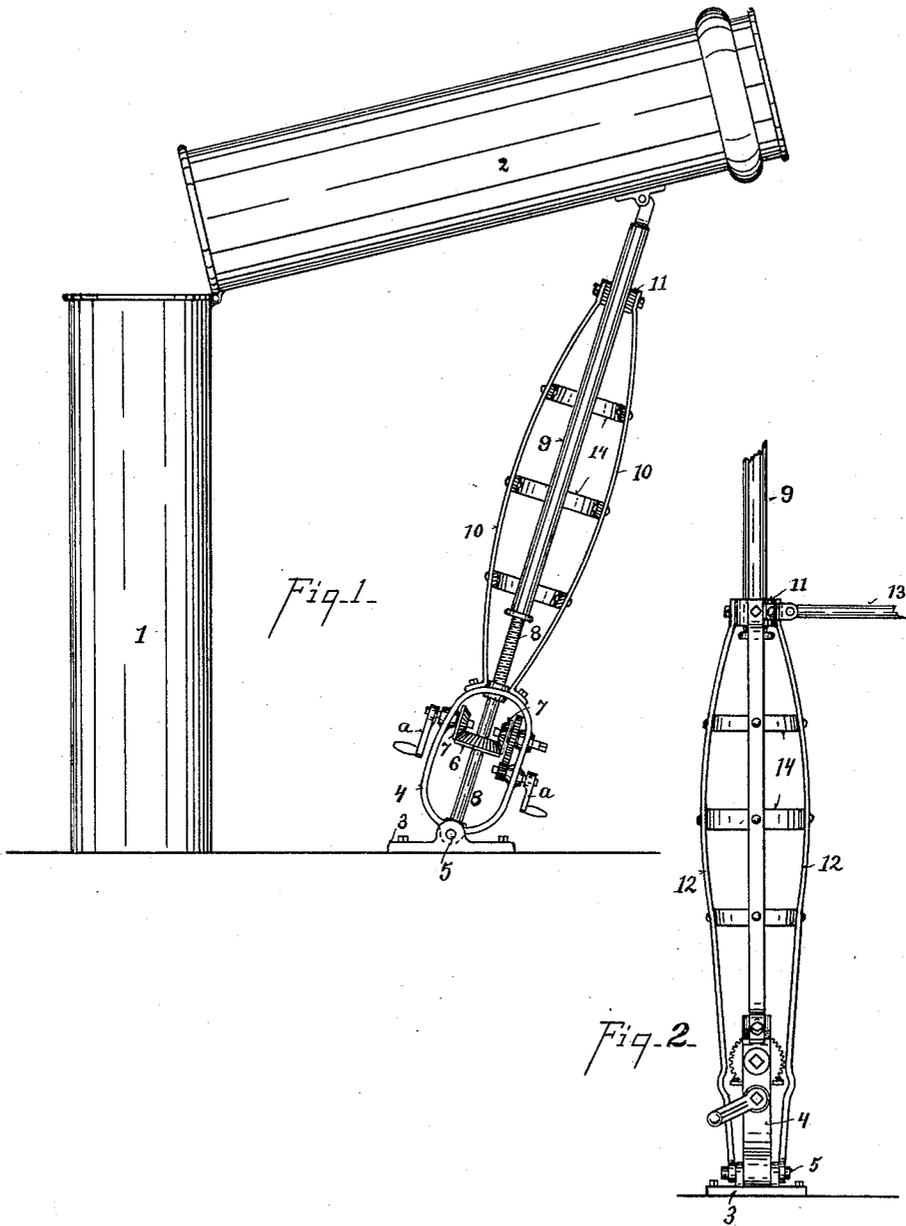
(No Model.)

J. CHRISTY.

APPARATUS FOR RAISING AND LOWERING STEAMBOAT CHIMNEYS.

No. 431,875.

Patented July 8, 1890.



Witnesses

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UNITED STATES PATENT OFFICE.

JOHN CHRISTY, OF DAYTON, KENTUCKY.

APPARATUS FOR RAISING AND LOWERING STEAMBOAT-CHIMNEYS.

SPECIFICATION forming part of Letters Patent No. 431,875, dated July 8, 1890.

Application filed April 25, 1890. Serial No. 349,498. (No model.)

To all whom it may concern:

Be it known that I, JOHN CHRISTY, a citizen of the United States, and a resident of Dayton, in the county of Campbell and State of Kentucky, have invented certain new and useful Improvements in Apparatus for Raising and Lowering Steamboat-Chimneys, of which the following is a specification.

The object of my invention is to provide a substantial device for raising and lowering chimney-stacks on steamboats and for other similar uses, all of which will be fully set forth in the description of the accompanying drawings, making a part of this specification, in which—

Figure 1 is a side elevation, partly in section, of my improvement. Fig. 2 is a transverse side elevation of the raising and lowering devices.

1 represents the base of the stack, and 2 the hinged portion.

3 represents a rocker-shoe, to the ears of which is journaled the yoke 4 by center 5. Upon the yoke 4 are journaled beveled gears 6 and 7. *a* represents hand-cranks for driving said gears. Bevel-gear 6 is secured to the screw-shaft 8, which taps into the sleeve 9, which is hinged to the chimney-stack 2. These features are generally shown in Patent No. 136,414, granted me March 4, 1873.

My present invention consists in the improvement on said patent, which is constructed as follows:

10 represents braces secured to the sleeve or collar 11, sliding longitudinally on the sleeve 9, and furnishes a top support for the braces 10. The lower end of said braces are securely fastened to the yoke 4. In Fig. 2 I have shown an additional set of braces 12, which are secured to the collar 11 at the top and are journaled upon the center bolt 5 at the bottom, so as to brace the extensible or telescope shaft 8 and sleeve 9. By means of the two sets of braces the section 2 is braced laterally in all directions and makes a very firm support. One of said braces, however, would brace it in one direction and be a material improvement upon my said former device.

It is sometimes desired to use two raising and lowering devices when there are two

stacks to be raised and lowered at the same time. These raising and lowering devices are duplicates of each other and are made to work in unison by means of the connecting-rod 13, which is hinged to the collar 11. The braces 10 and 12 are secured together by means of the hoops or rings 14, to which they are respectively riveted.

Mode of operation: In Fig. 1 the chimney-stack 2 is shown to be lowered. When it is desired to raise the same back into position, the cranks *a* are turned and drive the pinions, which revolves the screw-shaft 8, unscrewing the same and raising the sleeve 9, said sleeve moving longitudinally up through the collar 11. The braces 10 and 12 stiffen the sleeve 9 and transfer a portion of the strain from said sleeve through the braces to the rocking yoke 4, thereby obviating vibrations on the sleeve and materially strengthening and supporting the same, preventing breaking and twisting of the screw-shaft and sleeve, and making the same work easy, and at the same time avoiding danger of breakage.

Having described my invention, what I claim is—

1. The combination, with a hinged section 2, of the extensible shaft 8 and sleeve 9, one working on the other and pivotally connected with the hinged section, a base-shoe 3, a rocking or oscillating frame 4 on the base-shoe, the braces 10, secured to said frame and carrying the collar 11, through which the sleeve moves lengthwise, the hoops 14, secured to the braces below the collar, and means for extending the shaft and sleeve, substantially as described.

2. The combination, with the hinged section 2, of the extensible shaft 8 and sleeve 9, pivotally connected with the hinged section, the base-shoe 3, a rocking or oscillating frame 4 on the shoe, the braces 10, secured to the rocking frame, the supplemental braces 12, pivotally connected with the shoe, the collar 11, carried by the upper ends of the braces, and means for extending the shaft and sleeve, substantially as described.

3. The combination, with the hinged section 2, of the extensible shaft 8 and sleeve 9, pivotally connected with the hinged section, the base-shoe 3, the rocking or oscil-

lating frame 4 on the shoe, the braces 10, se-
cured to the rocking frame, the supplemental
braces 12, connected with the shoe, the col-
lar 11, carried by the upper ends of the braces,
5 the hoops 14, secured to the braces below the
collar, and means for extending the shaft and
sleeve, substantially as described.

In testimony whereof I have hereunto set
my hand.

JOHN CHRISTY.

Witnesses:

T. SIMMONS,
EDWARD BOYD.