

No. 619,920.

Patented Feb. 21, 1899.

J. WRIGLEY.

CLEANING DEVICE FOR SEWERS, WATER CLOSETS, &c.

(Application filed Mar. 12, 1898.)

(No Model.)

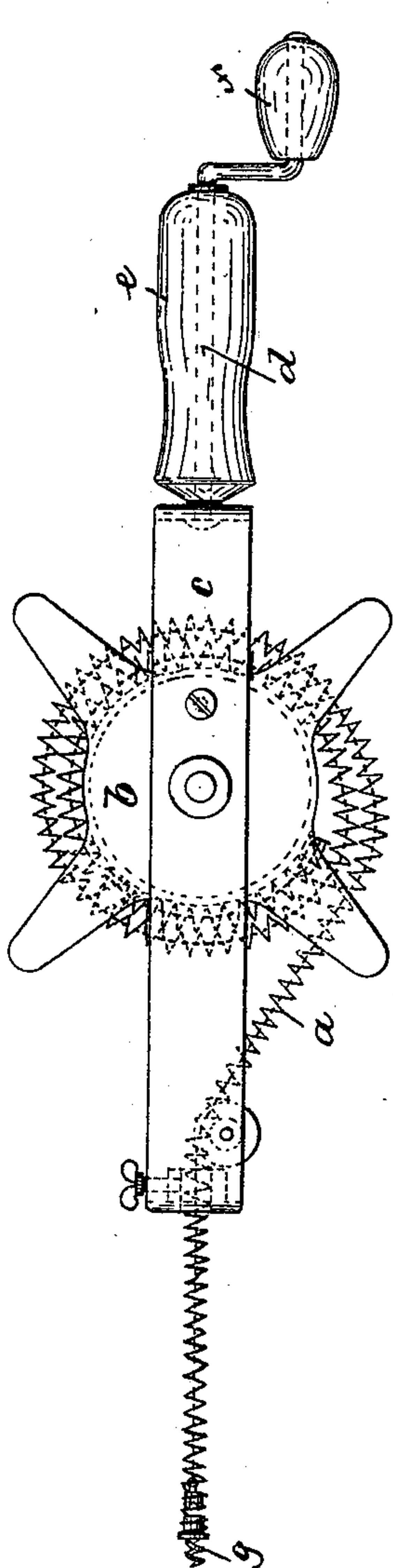


Fig. 1.

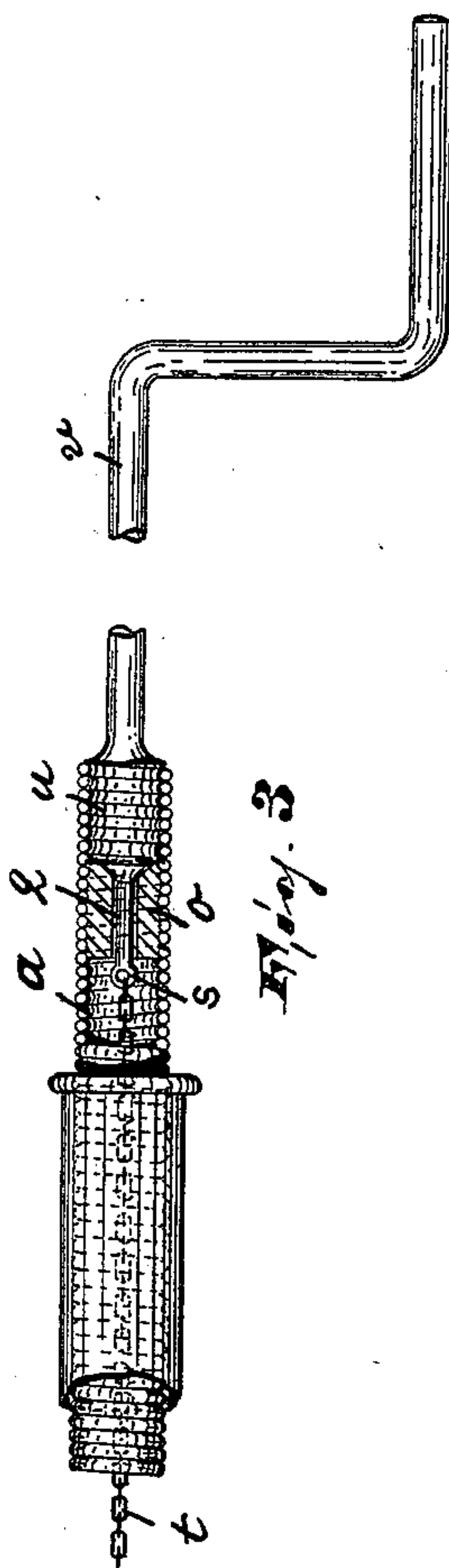


Fig. 3.

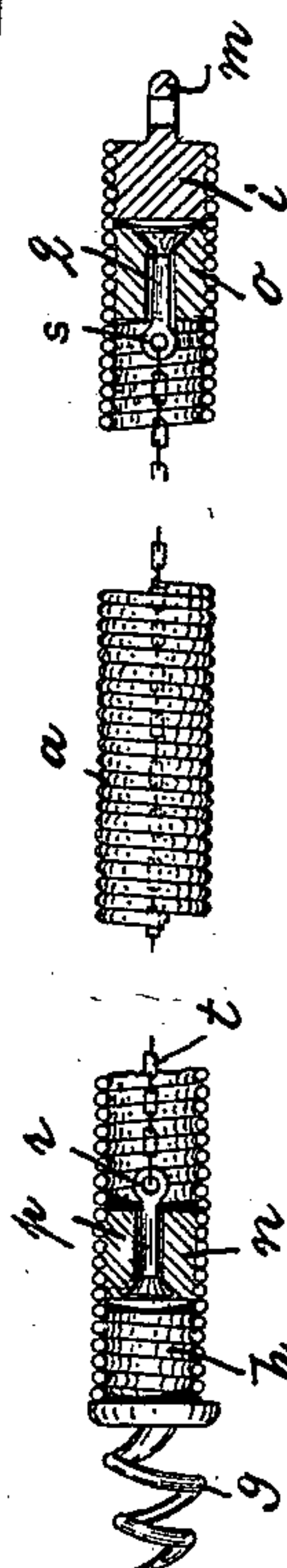


Fig. 2.

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# UNITED STATES PATENT OFFICE.

JOHN WRIGLEY, OF ELMIRA, NEW YORK.

## CLEANING DEVICE FOR SEWERS, WATER-CLOSETS, &c.

SPECIFICATION forming part of Letters Patent No. 619,920, dated February 21, 1899.

Application filed March 12, 1898. Serial No. 673,610. (No model.)

*To all whom it may concern:*

Be it known that I, JOHN WRIGLEY, a citizen of the United States, residing in Elmira, county of Chemung, and State of New York, have invented certain new and useful Improvements in Cleaning Devices for Sewers, Water-Closets, &c.; and I do hereby 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, reference being had to the accompanying drawings, and to letters of reference marked thereon, which form a part of this specification.

My present invention relates to cleaning devices for sewers, water-closets, sinks, drain-pipes, chimneys, flues, city or water mains, leaders, frozen pipes, and the like, and is an improvement on the device covered by my United States Letters Patent No. 566,110, of August 18, 1896, and No. 599,089, of February 15, 1898.

The object of this invention is to provide a flexible cleaning device of the character above referred to with means for connecting the extreme ends of said flexible cleaning device, so that the latter is rendered stronger and more durable without interfering with its working or adding great expense to the same.

The invention consists in the improved flexible cleaning device and in the means for connecting the extreme ends thereof, substantially as will be hereinafter more fully described and finally embodied in the clauses of the claim.

Referring to the accompanying drawings, in which like letters of reference indicate corresponding parts in each of the several views, Figure 1 is an elevation of the flexible cleaning device covered by Patent No. 599,089 and provided with my improvements; Fig. 2, an enlarged detail view of the flexible coil detached (intermediate portions being broken away) and more clearly illustrating the nature of my present invention, and Fig. 3 an enlarged detail view of one end portion of the cleaning device covered by United States Patent No. 566,110 and provided with my present improvements.

The wire coil *a* is arranged on the reel *b*, revolvably mounted in a frame *c*, having on one end a projecting pin or axle *d* at right

angles to the axle of the reel and surrounded by a suitable handle *e* and terminating in a crank *f* for rotating said pin or axle *d* and the frame *c*. The wire coil *a*, which extends through the opposite end of the frame *c* and is suitably guided therein, is provided at its free end with a corkscrew *g* or with any other suitable tool or implement. Said corkscrew *g* is carried by a screw-threaded plug *h*, removably secured within the extreme end of the coil *a*, while the inner end of said coil carries a plug *i*, provided with an eye or loop *m*, (see Fig. 2,) by means of which latter the said coil is secured on the reel *b*. The threaded portions of the plugs *h* and *i* engage the helices at the ends of the coil in an obvious manner.

Within the extreme ends of the coil *a* and adjacent to the plugs *h* and *i* are the plugs *n* and *o*, in which are swiveled or loosely arranged pins *p* and *q*, provided with eyes *r* and *s*, respectively, to which are secured the ends of a chain *t* of a length equal to or slightly longer than the coil and extending within and throughout the entire length of the same.

In Fig. 3 of the drawings is illustrated the same improvement, with the exception that the plug *i* is substituted by a plug *u*, arranged on or integral with an operating crank-handle *v*, which device is otherwise similar to that covered by the Patent No. 566,110.

It must be remarked that the chain can be substituted by a wire, rope, or its equivalent; but in each of said cases the ends of said wire, rope, &c., must be swiveled within their respective plugs, so that no undue strain is exerted upon said wire, rope, chain, &c., while the coil is being rotated to remove an obstacle from the sewer, pipe, or wherever said cleaning device is being used.

It will be obvious that during the rotation of the coil and the exerting of strain upon the latter while the obstacle is being engaged and withdrawn the said chain, rope, &c., on account of its swiveled connection remains stationary while their respective plugs are being carried around or rotated together with the coil.

It must be further stated that by having the extreme ends of the flexible coil connected in a manner heretofore described the danger of losing the operating portion of the coil, if it



should break within the sewer, pipe, flue, &c., is overcome, as in that case by simply pulling the chain the latter will carry along said broken-off portion of the coil, and thus prevent plugging up, as will be manifest.

I do not intend to limit myself to the precise construction shown and described, as various alterations can be made without changing the scope of my invention; but

What I claim as new, and desire to secure by Letters Patent, is—

1. A cleaning device, consisting of a flexible coil, a tool or implement removably secured in one end of said coil, means at the other end thereof for operating the same, a plug in each end of the coil, and a chain, rope or the like extending throughout the entire length of said coil and swiveled with its ends to and within the said plugs, substantially as and for the purposes described.

2. A cleaning device, consisting of a flexible coil, operating means on one end of said coil, a tool or implement removably secured in the other end of said coil, a plug in each

end of the coil, and adjacent respectively to the tool and to the operating means, a pin swiveled in each of said plugs, and a chain within the coil and secured with its ends to said pins, substantially as and for the purposes described.

3. A cleaning device for sewers, &c., consisting of a flexible coil, plugs in said coil and near each end thereof, a pin swiveled in each of said plugs, a chain extending through said coil and secured at its ends to said pins, screw-threaded plugs arranged in said coil at the ends thereof and engaging its helices, one of said last-named plugs being provided with an eye, and a tool or implement secured to the other of said last-named plugs, substantially as described.

In testimony that I claim the foregoing I have hereunto set my hand this 7th day of March, 1898.

JOHN WRIGLEY.

Witnesses:

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