

UNITED STATES PATENT OFFICE.

MICHAEL FITZSIMONS, OF LAKE, ILLINOIS.

SELF-ADJUSTING SEWER-SCRAPER.

SPECIFICATION forming part of Letters Patent No. 329,034, dated October 27, 1885.

Application filed July 28, 1885. Serial No. 172,914. (No model.)

To all whom it may concern:

Be it known that I, MICHAEL FITZSIMONS, residing at the town of Lake, in the county of Cook and State of Illinois, and a citizen of the United States, have invented a new and useful Improvement in Self-Adjusting Sewer-Scrapers, of which the following is a full description, reference being had to the accompanying drawings, in which—

Figure 1 is a top or plan view; Fig. 2, a side elevation with the scraper in position for use; Fig. 3, an edge elevation of the scraper; Fig. 4, a face view of the scraper; Fig. 5, a side elevation with the scraper folded down to pass into the sewer for the load.

The common practice in cleaning sewers where a scraping device is employed is to have the scraper or blade portion rigid, with ropes attached thereto, by which it can be drawn through the sewer from one opening to another, and with this practice it is exceedingly difficult and laborious to properly do the work, as where a large amount of filth has accumulated the drawing of the blade or scraper through the sewer accumulates a load which, in some cases, it is utterly impossible to handle.

The object of this invention is to construct a self-adjusting scraper, which can be readily inserted into the sewer to the distance required for an easy load, and when at the proper point have the action of withdrawing the scraper throw it up into a vertical position to catch the load; and its nature consists in the several parts and combinations of parts hereinafter described, and pointed out in the claims as new.

In the drawings, A represents the scraper or blade, made of sheet metal or other suitable material, and of a semicircular form, as shown, with the upper edge also cut on a curve to allow the water to readily pass thereover. The periphery of this scraper or blade is provided with a series of arms, *a*, which form guards to prevent the blade from dropping into cracks in the sewer, the arms being of a sufficient length to bridge any of the cracks usually encountered in a sewer; and the diameter of the blade or scraper will depend upon the diameter of the sewer with which it

is to be used, the diameter being one somewhat less than the diameter of the sewer to allow the blade to pass readily.

B are braces, made of wrought-iron or other suitable material, having at the end to be attached to the blade an eye, *b*, which lies adjacent to an eye, *b'*, on the face of the blade, and through which eyes *b b'* a bolt, *b''*, is passed, to secure the blade to the braces in a pivotal manner.

C is a rod, the forward end of which is provided with a fork, *c*, to receive an eye, *c'*, on the face of the blade A, the fork *c* and eye *c'* being in line with the eyes *b b'*, so that the bolt *b''* can pass through the fork *c* and eye *c'* to give the blade a support at that point, and, as shown, the braces B are firmly attached by a collar, *B'*, to the rod C, and this rod C extends back of the collar *B'*, and, as shown in Fig. 1, the end of the rod C is provided with a fork, *c''*, to receive the end of another rod-section, *C'*, which in turn has a fork, *c''*, to receive the end of another rod-section, *C''*, and as many rod-sections can be used as required for the length to be covered, and, if desired, the last section can have a handle or eye to be caught by the operator, or receive a rope, if so desired.

D is a movable brace, the forward end of which has an eye, *d*, to pass between ears *d'* at the lower edge of the blade A, and be there secured by a suitable pin or bolt, and the inner end of this brace D has a socket or head, *D'*, through which the rod C passes in a free manner, to allow the socket to slide back and forth on the rod.

E is a rope attached to an eye, *e*, on the face of the blade A, which rope is designed to be used in drawing the scraper into the sewer.

The operation is as follows: The scraper is carried into the sewer, either by pushing on the rod-sections C C' C'' or by means of the rope E, and when carried in the blade A will be folded down, as shown in Fig. 5, allowing the scraper to pass readily forward, and when the desired length for a load has been traversed the scraper is dropped and the operators, taking hold of the rod-sections or the rope thereon, draw the scraper backward, and such drawing action at once forces the blade into

the position shown in Fig. 2, catching the load in front thereof and withdrawing it with the scraper.

5 The device is very simple, and by its use the cleaning of sewers will be greatly facilitated and a less amount of labor will be required, as the scraper can be placed at any point desired to receive only a load that can be readily and quickly withdrawn, and when
10 in vertical working position the collar D' abuts against the collar or head B', so that the strain in withdrawing the load is equalized over the braces B D and rod C, and but little strain will therefore occur at any one point.

What I claim as new, and desire to secure 15 by Letters Patent, is—

1. The scraper A, in combination with the braces B, rod C, and movable brace D, substantially as and for the purpose specified.

2. The scraper A, provided with the guards 20 a, in combination with the braces B, rod C, and movable brace D, substantially as and for the purpose specified.

MICHAEL FITZSIMONS.

Witnesses:

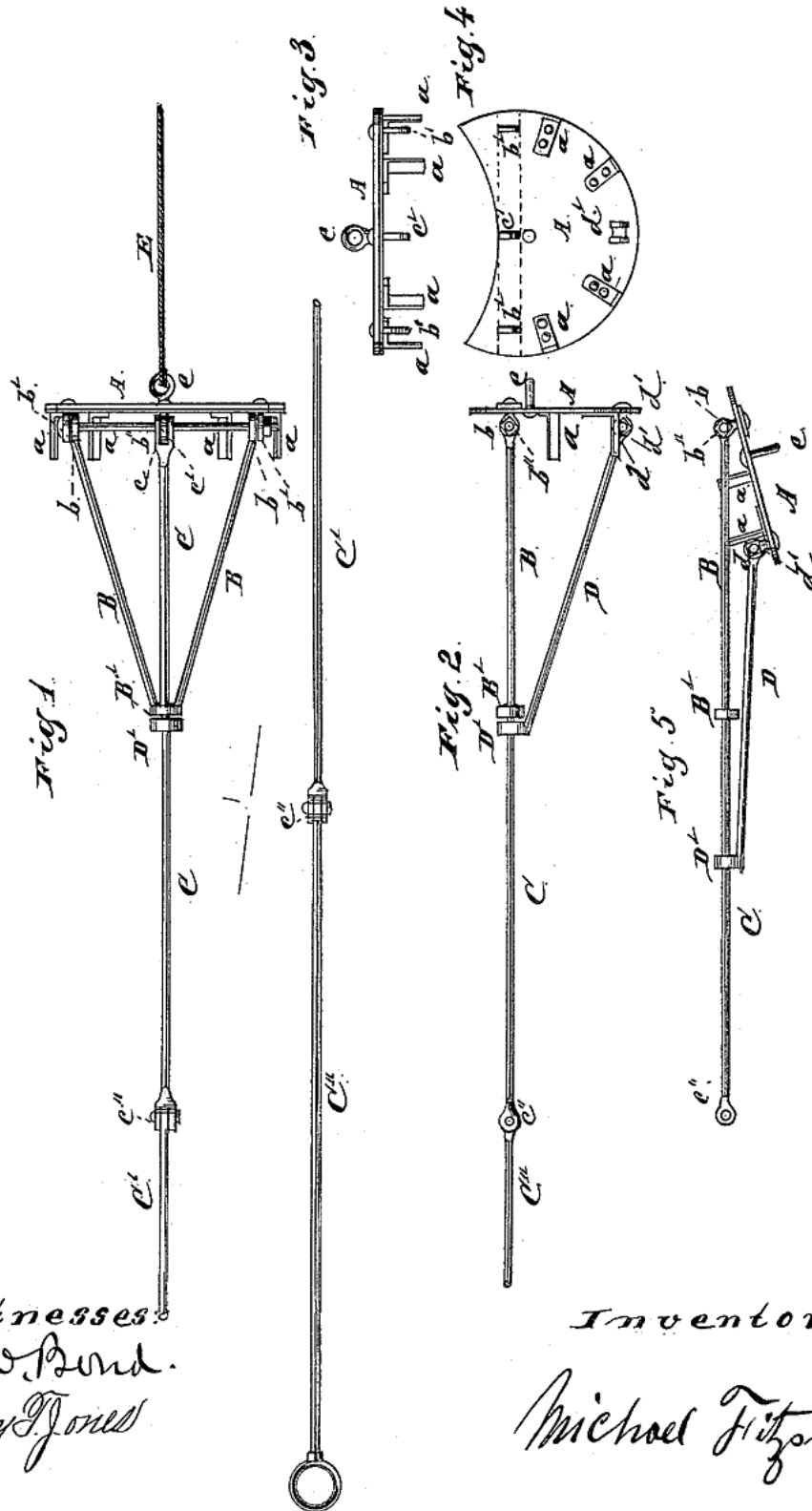
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(No Model.)

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SELF ADJUSTING SEWER SCRAPER.

No. 329,034.

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