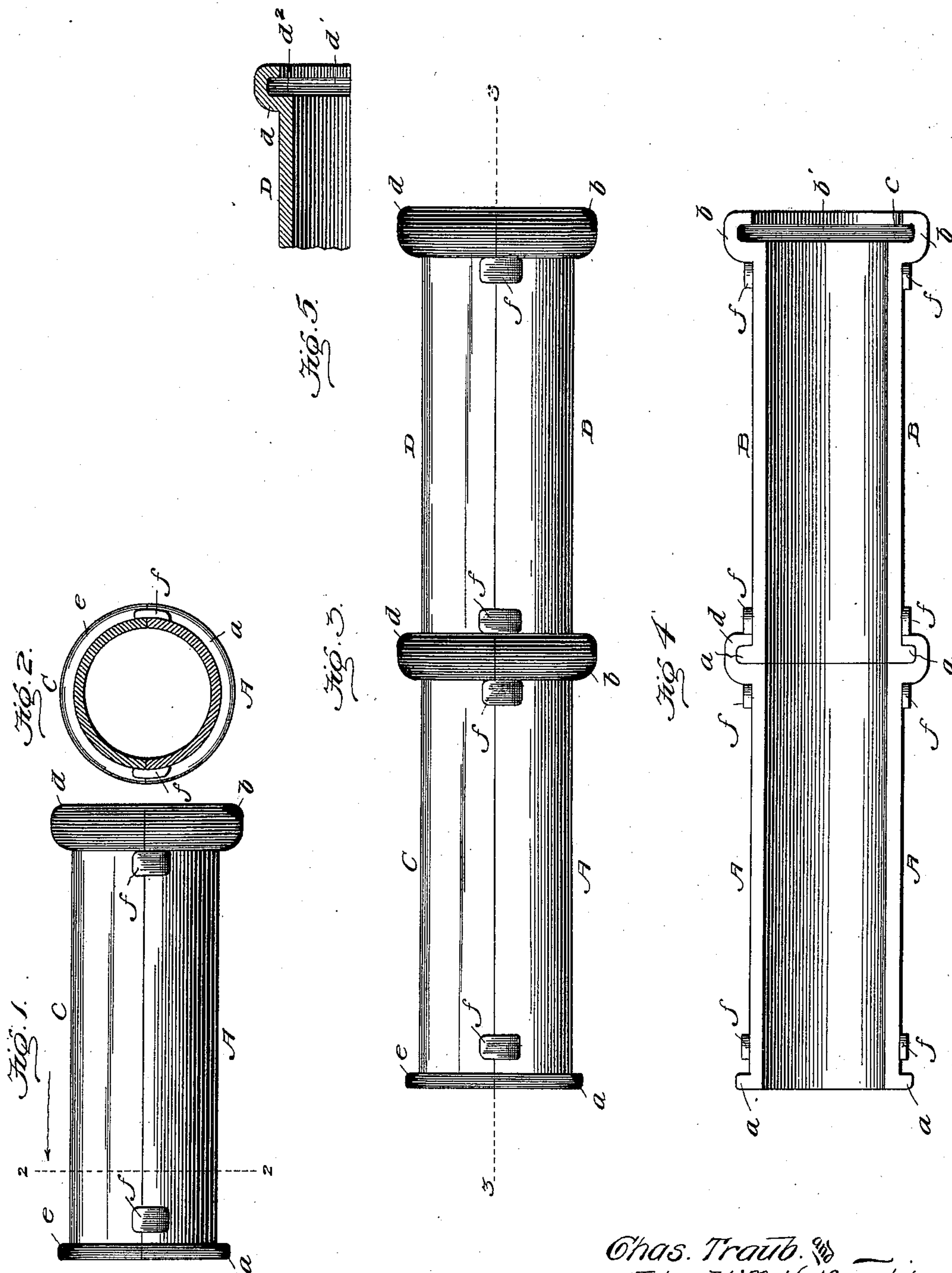


(No Model.)

C. TRAUB & J. W. HELFRECHT.  
DRAIN.

No. 590,779.

Patented Sept. 28, 1897.



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# UNITED STATES PATENT OFFICE.

CHARLES TRAUB AND JOHN W. HELFRECHT, OF GERMANIA, PENNSYLVANIA.

## DRAIN.

SPECIFICATION forming part of Letters Patent No. 590,779, dated September 28, 1897.

Application filed June 11, 1896. Serial No. 595,190. (No model.)

*To all whom it may concern:*

Be it known that we, CHARLES TRAUB and JOHN WILLIAM HELFRECHT, citizens of the United States, residing at Germania, in the county of Potter and State of Pennsylvania, have invented certain new and useful Improvements in Drains; and we 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.

Our invention relates to improvements in drains which are used for carrying off surface rain-water, &c.; and the object that we have in view is to produce a simple and cheap construction which can be laid with ease and which will provide for ready access to the lower permanent part of the drain for the purpose of cleaning out any sand or earth or any matter which may accumulate in the drain and "choke up" or retard the free flowing of water through the same.

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

To enable others to understand our invention, we have illustrated the same in the accompanying drawings, forming a part of this specification, and in which—

Figure 1 is a side elevation of our drain. Fig. 2 is a transverse sectional view on the line 2 2 of Fig. 1. Fig. 3 is a side elevation of a part of a drain embodying our invention, showing the top and bottom lengths interlocked together and illustrating the connected top length seated upon the bottom length to be held thereby against sidewise or endwise displacement. Fig. 4 is a plan view of the lower length of the drain, the top length thereof being omitted. Fig. 5 is a detail vertical sectional view through the grooved end of one of the top tiles.

Like letters of reference denote corresponding parts in all the figures of the drawings, referring to which—

The lower permanent length of the drain consists of the sections A B, and the upper removable length of the drain consists of the sections C D, which are fitted or seated upon the lower length A B in a manner to permit easy removal of the upper length for the pur-

pose of having easy and ready access to the lower permanent length of the drain, so as to clean the same when it is clogged or chokes by accumulation of earthy matter therein.

Each section A or B of the lower length of the drain is provided at one end with a solid external tongue *a*, and at its other end each section is provided with an enlarged bead *b*, in which is produced a groove *b'*, adapted to receive the tongue *a* on an adjacent section on the lower length of the drain.

In laying the lower permanent length of the drain one section is laid endwise to an adjacent section, with the tongue *a* of one section fitting in the groove *b'* of the section adjacent thereto and so that the end faces of the adjacent sections abut together and the inner faces of the sections are flush with each other. This arrangement of the sections is due to the fact that the bead *b* is enlarged as compared with the tongue *a* and to the fact that the groove *b'* is formed in the bead in a plane outside of the end of the section and outside of the plane of the external surface of said section, thus leaving the end wall or face *c* of the section exposed within the line of the grooved bead *b b'*.

The upper length of the drain has its sections C D corresponding in form and size to the lower length, and these sections C D are each made with an external rib or tongue *e* at one end and with a bead *d* at its other end, said bead provided with a groove *d'*, said bead and groove *d'* arranged in a manner similar to the groove and bead *b b'* on each section of the lower length, so as to expose the end face *d<sup>2</sup>* of the length C or D within said grooved bead *d d'*.

The section C is laid in an inverted position over the section A, while the section D is seated in an inverted position over the section B, as shown, the sections A B and C D being locked together, as shown, to join them endwise to each other throughout the length of the drain; but the upper length of the drain is not locked to the lower length of said drain, but merely rests on the same, so as to permit ready removal of the upper length of the drain and to have access to the lower permanent length of said drain. Of course any suitable number of sections may be used in each length of the drain, both the upper and



lower lengths of the same, and the shape of the sections may be changed as desired.

To hold the upper and lower lengths of the drain in alinement with each other, we provide the lugs  $f f'$  on the lower length, which lugs extend up from the lower sections a suitable distance to lap over or extend across the joint or seat between the upper and lower sections of the drain.

The lugs  $f$  at one end of the bottom section of the tile are arranged a short distance within the solid tongue  $a$ , so that they lie from the end of the tile a distance equal to about one-half the width of the grooved bead  $b$ . The other lugs  $f'$  are arranged on the tile quite close up to the grooved bead  $b$  at the end thereof opposite to the solid tongue  $a$ , and all of these lugs  $f f'$  extend up from the top edge of the bottom section or member of the tile, so as to fit against the outside of the top section of the tile. The adjacent lugs  $f$  and  $f'$  on two bottom sections of tiles are spaced apart a distance equal to the width of the grooved bead  $d$  on the top tile-section, as shown by Figs. 3 and 4, and thus the interlocked top sections or lengths have their grooved beads  $d$  fitted between adjacent pairs of lugs  $f f'$  on the bottom length of the tile.

We attach importance to the top sections interlocked endwise to each other by the grooved-bead and tongue joints and to the bottom length provided with upwardly-projecting lugs  $f f'$ , spaced apart on adjacent sections for distances equal to the widths of the grooved beads  $d$  on the top sections, whereby the top length of the drain is held by the lugs against endwise and sidewise movement.

Our improvements in the drain, as above recited, provide tight joints between the endwise-alined sections and at the same time enable the sections to be readily coupled together or disconnected, as may be required. They also provide for retaining the upper

length of the drain in position against accidental displacement either sidewise or endwise and for easy access to the interior of the drain by removing one or more of the top lengths for the purpose of cleaning the drain from any obstruction which may accumulate therein.

Having thus fully described our invention, what we claim as new, and desire to secure by Letters Patent, is—

1. A horizontally-divided drain-tile comprising the upper and lower sections each having at one end an external solid tongue and at the other end provided with an enlarged bead, the internal diameter of which is greater than the radius of the section, and said bead having a deep tongue-receiving groove lying outside of the passage through the tile, the lower section further provided with the spaced upwardly-extending lugs  $f, f'$ , said lugs  $f$  arranged within the external tongue for a distance equal to half the width of the grooved bead, and the lugs  $f'$  lying close up to the bead, for the purposes described, substantially as set forth.

2. The lower drain-sections interlocked endwise together and provided with the upwardly-extending lugs  $f, f'$ , the adjacent pairs of which on the interlocked ends of said sections are spaced apart equal to the width of the joints between upper sections, in combination with upper sections interlocked endwise together by tongue and grooved-bead joints which are fitted between said pairs of adjacent lugs, for the purposes described, substantially as set forth.

In testimony whereof we affix our signatures in presence of two witnesses.

CHARLES TRAUB.

JOHN W. HELFRECHT.

Witnesses:

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