K. LÖHLE.

GASOMETER.

APPLICATION FILED APR. 11, 1912.

1,068,677.

Patented July 29, 1913.

3 SHEETS—SHEET 1.

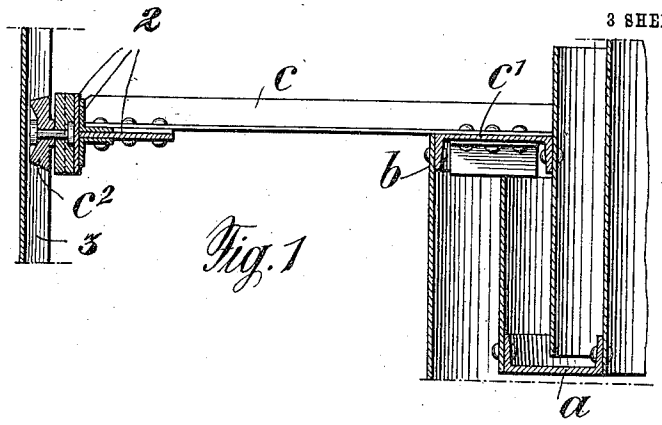


Fig. 1

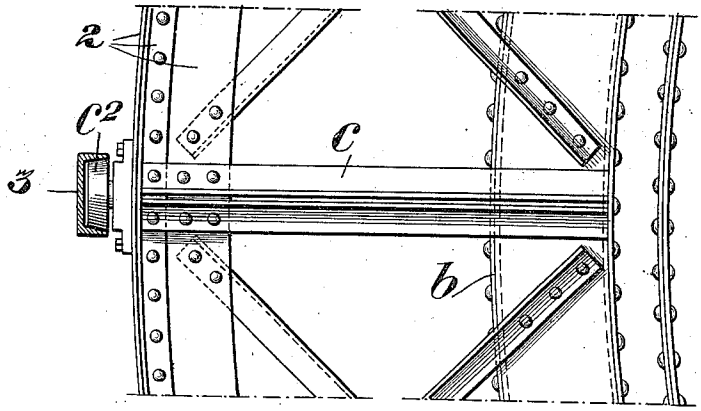


Fig. 2

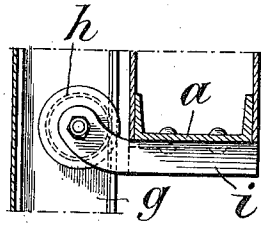


Fig. 5

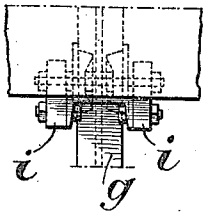


Fig. 7

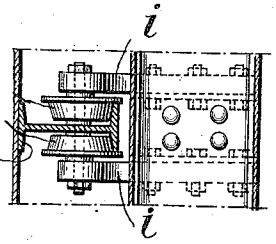


Fig. 6

Witnesses:

C. Dommers

E. Leckert.

Inventor:

Karl Löhle

By Henry Orth & Co

Atty.

K. LÖHLE.

GASOMETER.

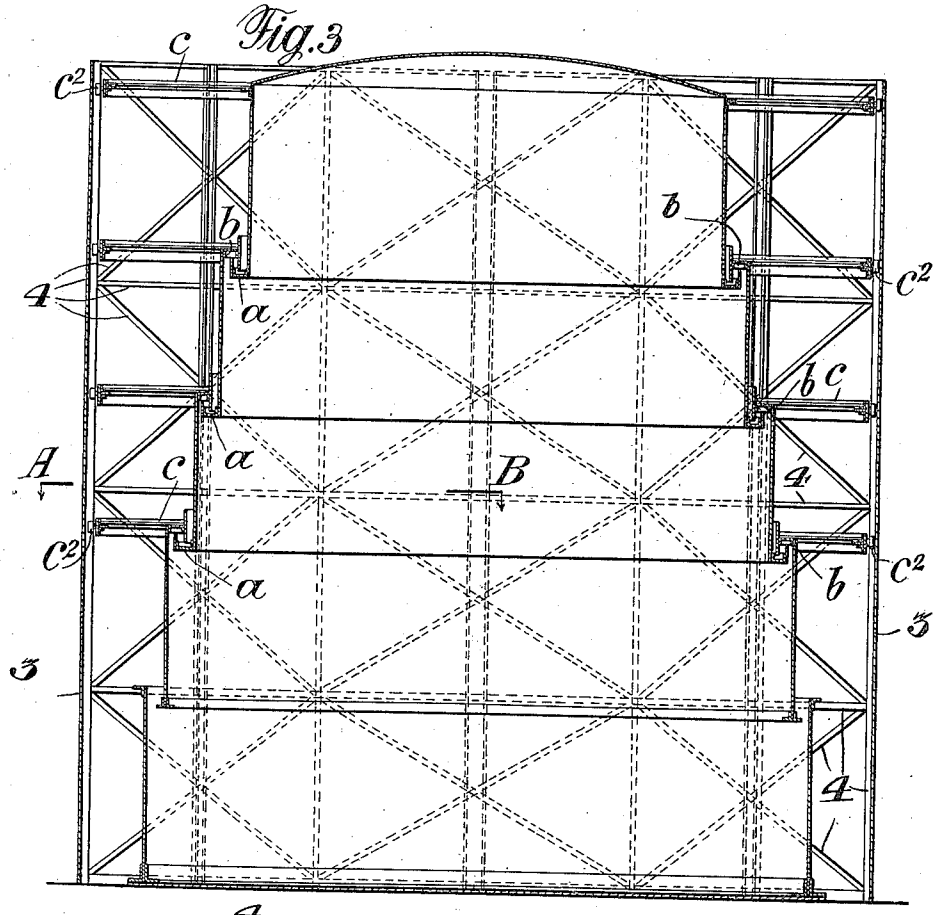
APPLICATION FILED APR. 11, 1912.

1,068,677.

Patented July 29, 1913.

3 SHEETS—SHEET 2.

Fig. 3



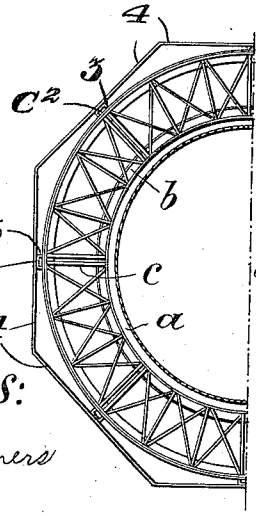
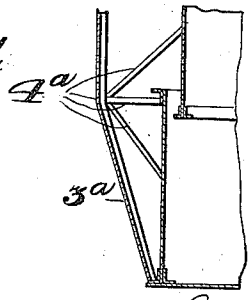


Fig. 4

Fig. 11



Witnesses:

B. Dommers

C. Leckert.

Inventor:

Karl Löhle

By Munn & Co

Atty

K. LÖHLE.

GASOMETER.

APPLICATION FILED APR. 11, 1912.

1,068,677.

Patented July 29, 1913.

3 SHEETS—SHEET 3.

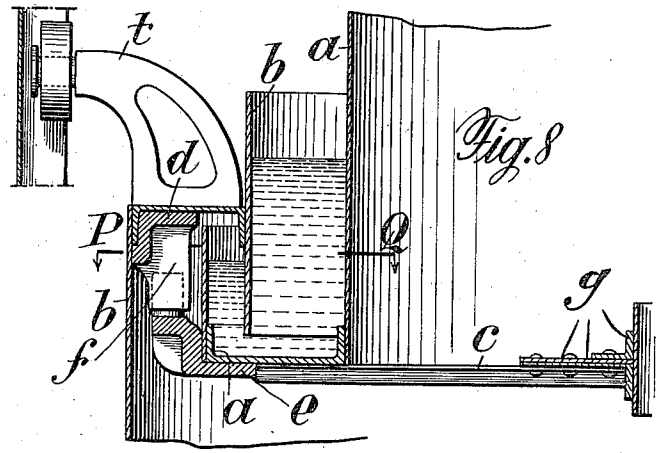


Fig. 8

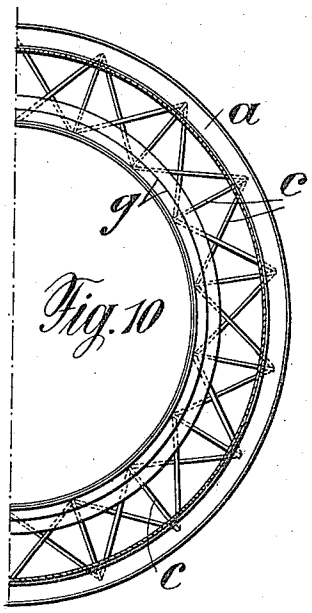


Fig. 10

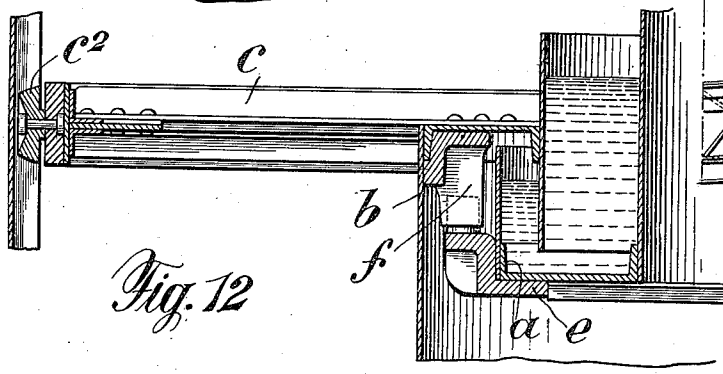


Fig. 12

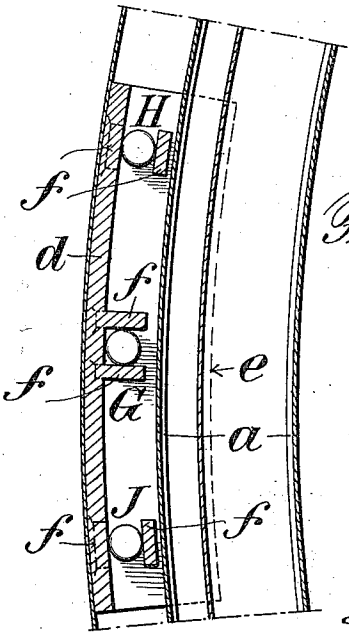


Fig. 9

Witnesses:

B. Dommers

E. Leckert.

Inventor:

Karl Löhle

By Henry Orth Jr.

Atty.

UNITED STATES PATENT OFFICE.

KARL LÖHLE, OF ZURICH, SWITZERLAND.

GASOMETER.

1,068,677. Specification of Letters Patent. Patented July 29, 1913.

Application filed April 11, 1912. Serial No. 690,122.

To all whom it may concern:

Be it known that I, KARL LÖHLE, a citizen of the Republic of Switzerland, residing at Weinbergstrasse 55, Zurich, Switzerland, have invented new and useful Improvements in Gasometers; 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 or figures of reference marked thereon, which form a part of this specification.

All rollers of a ring of rollers of a gasometer guide must be dimensioned with regard to the pressure exerted on a roller in the said ring of rollers. It is therefore useful to provide the ring of rollers but with a small number of rollers. As experience has proved the distance between two rollers in a radial guide cannot be much larger than 8 meters, otherwise the gas-bell and the telescopic parts would be deformed by the wind pressure. A reduction of the number of rollers and in consequence the increase of their horizontal distance is allowable only if it is possible to sufficiently strengthen the bell and the telescopic parts in horizontal direction.

The tangential guide in a ring of rollers requires much less rollers than the radial guide and it possesses by the contsruction of the guide great advantages as compared with the latter. The good working of the tangential guide supposes also a good horizontal strengthening of the telescopic parts and the bell.

The object of the present invention is to provide a horizontal strengthening trussed girder which is sufficient for the said purposes.

In the accompanying drawing several illustrative embodiments of a construction according to this invention are shown by way of example.

Figure 1 is a vertical section through a first illustrative embodiment, Fig. 2 a plan view of the same, partly in section. Fig. 3 is a vertical section through the gasometer. Fig. 4 is a section on line A—B of Fig. 3, showing parts of the gasometer at a reduced scale. Figs. 5, 6 and 7 are detail views; Figs. 8–10 show a second illustrative embodiment of the construction, Fig. 8 being a partial vertical section, Fig. 9 a section on line P—Q of Fig. 8 and Fig. 10 a partial plan view. Fig. 11 shows a modification of the lower part of Fig. 3. Fig. 12 is a vertical section showing a third illustrative embodiment.

Referring firstly to Figs. 1 to 4, *a* designates the bottom of a telescopic gasometer bell and *b* the cover of the next lower telescopic member. The latter is strengthened by a horizontal outward projecting trussed girder *c*. The channel iron *c'* is used as inner chord of this strengthening girder. The outer chord 2 which may be constructed as a circle, as well as a polygon, is provided outside with a guide roller c^2, which moves in a tangential guide as shown in Figs. 1 and 2 comprising a channel iron 3 mounted on the guiding frame work 4, Fig. 3. By suitably selecting the cross sections of the chords and the distance of the outer chord 2 from the cover *b* it is possible to reduce the deformation by wind pressure to as small an amount as desired. The guide framework 4 is changed as compared with the usual arrangement in so far, as its diameter must be larger than the inner diameter of the basin by an amount nearly as large as the distance of the chords (Fig. 3). If necessary this drawback may be partly removed by arranging the lower post 3^a of the framework 4^a in an inclined direction as shown in Fig. 11. The bottom portion is guided by the telescopic member of the cover so that it is prevented from being pressed inwardly, as shown by Figs. 5 to 7. The outer telescopic member or the tank is provided inside with an I-beam *g* on which rollers *h* are guided, each of the rollers being mounted on an arm *i*.

Another mode of strengthening the telescopic members is illustrated by Figs. 8 to 10. *a* designates the bottom portion of a telescopic gasometer and *b* the cover of the next outer telescopic member. The bottom portion is strengthened by an inwardly projecting trussed girder *c*. The channel iron of the bottom portion *a* is used as outer chord of this strengthening girder. The inner chord *g*, which is shown to be circular, may also be formed as a polygon if desired. By suitably selecting the distance and the cross-section of the chords *a* and *g* it is possible to reduce the deformation caused by wind pressure to as small an amount as desired. The bracket *t* carrying a roller is mounted on the cover *b* and forms the sup-

port for the girder *c* connected to the bottom portion *a*. The bracket *t* and the strengthening girder *c* are therefore to be connected as will be described hereinafter so that with filled gasometer the pressure exerted on a roller is transmitted to the strengthening girder, but the connection must be so that it can be loosened with as little friction resistance as possible if by emptying the gasometer the bottom portion is lowered with regard to the cover. The connection may be constructed as illustrated on the drawing. A casting *e* is connected to the outer chord, that means the channel iron forming the bottom portion *a* (Fig. 8), which casting so engages a second casting *f* secured to the cover *b*, that the roller pressure and the moment due to the roller pressure and the eccentricity are transmitted from the casting *f* to the casting *e*. The castings engage one another at three points G, H and J, so that in one of the points, G for example, no displacement is possible in tangential direction, while in the other points, H and J no displacement is possible in radial direction (Fig. 9).

Instead of the castings, forged or riveted parts *e* and *f* of iron or steel may be applied.

Both arrangements can be combined, by strengthening the cover by outward projecting and the bottom-portion by inward projecting trussed girders, as shown in Fig. 12. In this case the connection of the cover and the bottom portion could be omitted. The trussed girders may also be arranged in an inclined instead of a horizontal direction, but the latter arrangement is the most preferable.

I claim:

1. In a guide for gasometers having a bell, telescopic members, and guide rollers connected to said members and movable therewith; trussed girders on the telescopic members strengthening the bell and the telescopic members for the purpose of reducing the number of the guide rollers required, and tangential guides for said rollers.

2. In a guide for gasometers having a bell and telescopic members, trussed girders strengthening the bell and the telescopic members, mounted on the covers of the telescopic members, means for guiding the bottom portions of the telescopic members mounted at the inside of the next outer telescopic member.

3. In a guide for gasometers having a bell and telescopic members, trussed girders strengthening the bell and the telescopic members mounted on the bottom portions of the telescopic members, guiding means mounted on the covers, and means connecting the covers to the bottom portions and adapted to be disconnected with slight friction resistance.

4. In a guide for gasometers having a bell and telescopic members, trussed girders strengthening the bell and the telescopic members mounted on the covers and the bottom portions of the telescopic members, means for guiding the bottom portions of the telescopic members mounted at the inside of the next outer telescopic member.

In testimony that I claim the foregoing as my invention, I have signed my name in presence of two subscribing witnesses.

KARL LÖHLE.

Witnesses:
ARNOLD LEHNER,
CARL GUERBER.

Copies of this patent may be obtained for five cents each, by addressing the "Commissioner of Patents, Washington, D. C."