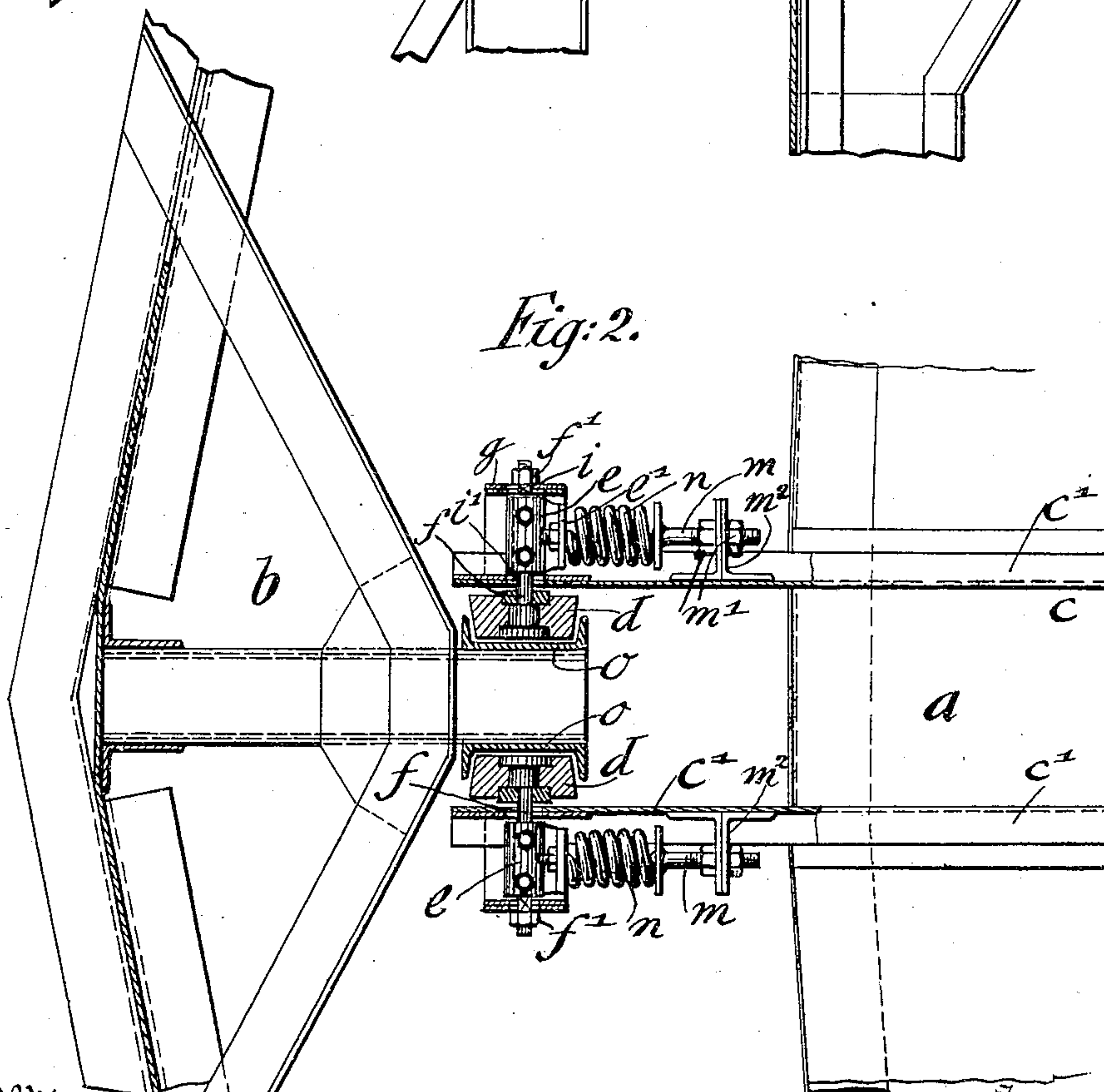
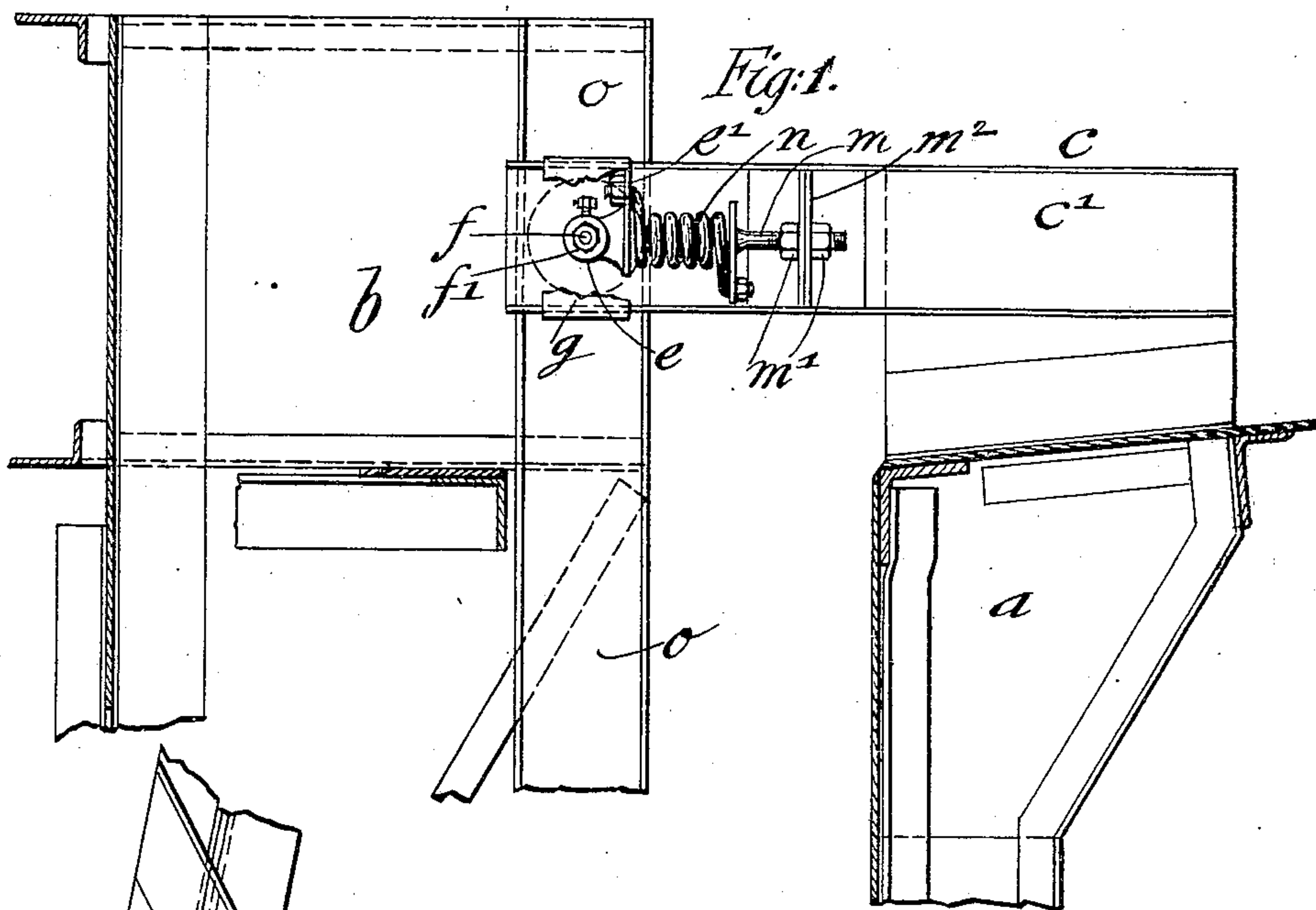


H. J. STOFFELS.
GUIDE FRAME FOR GAS HOLDERS.
APPLICATION FILED MAY 13, 1908.

925,850.

Patented June 22, 1909.
2 SHEETS—SHEET 1.



Witnesses:
H. J. Subbier.
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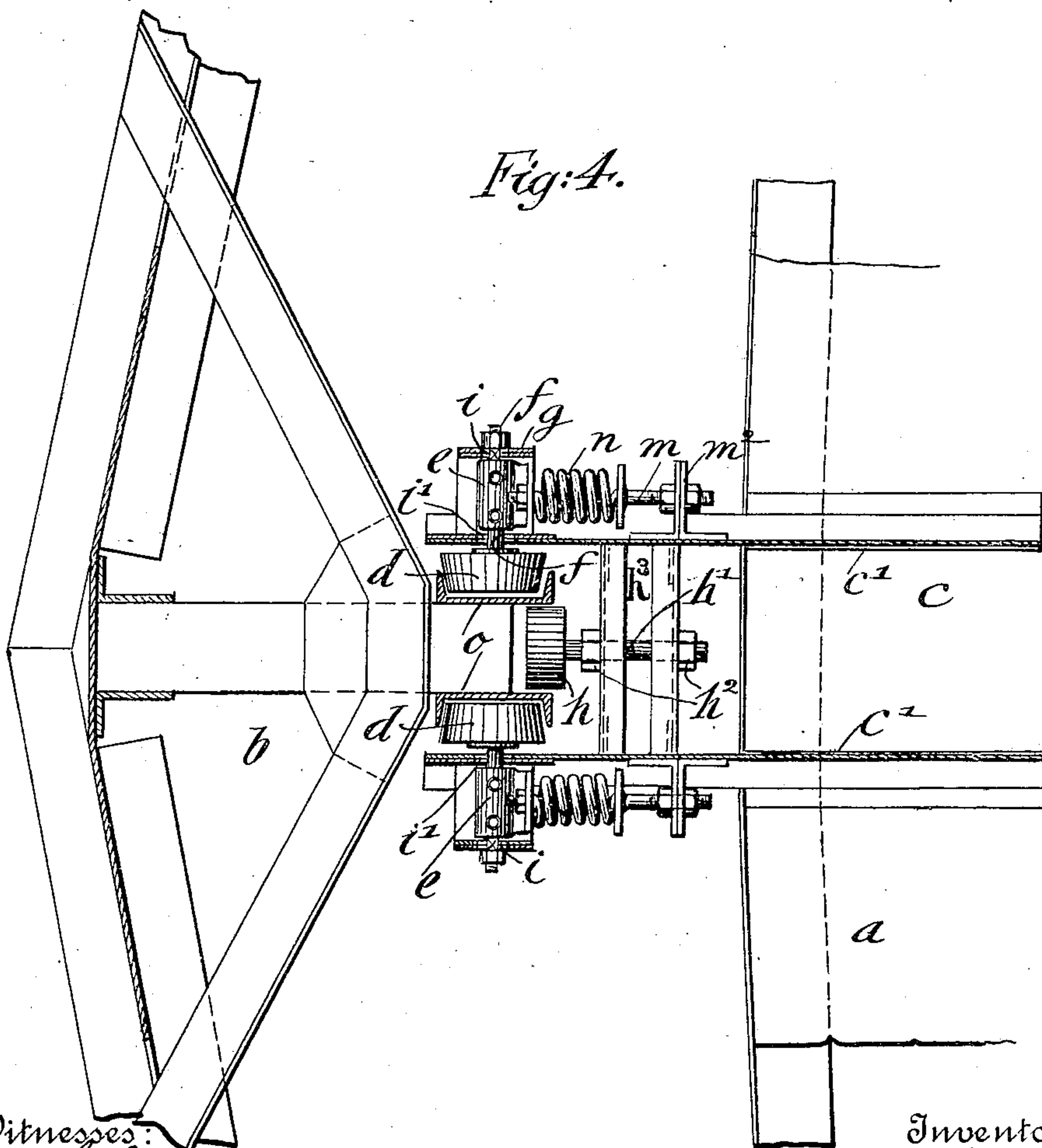
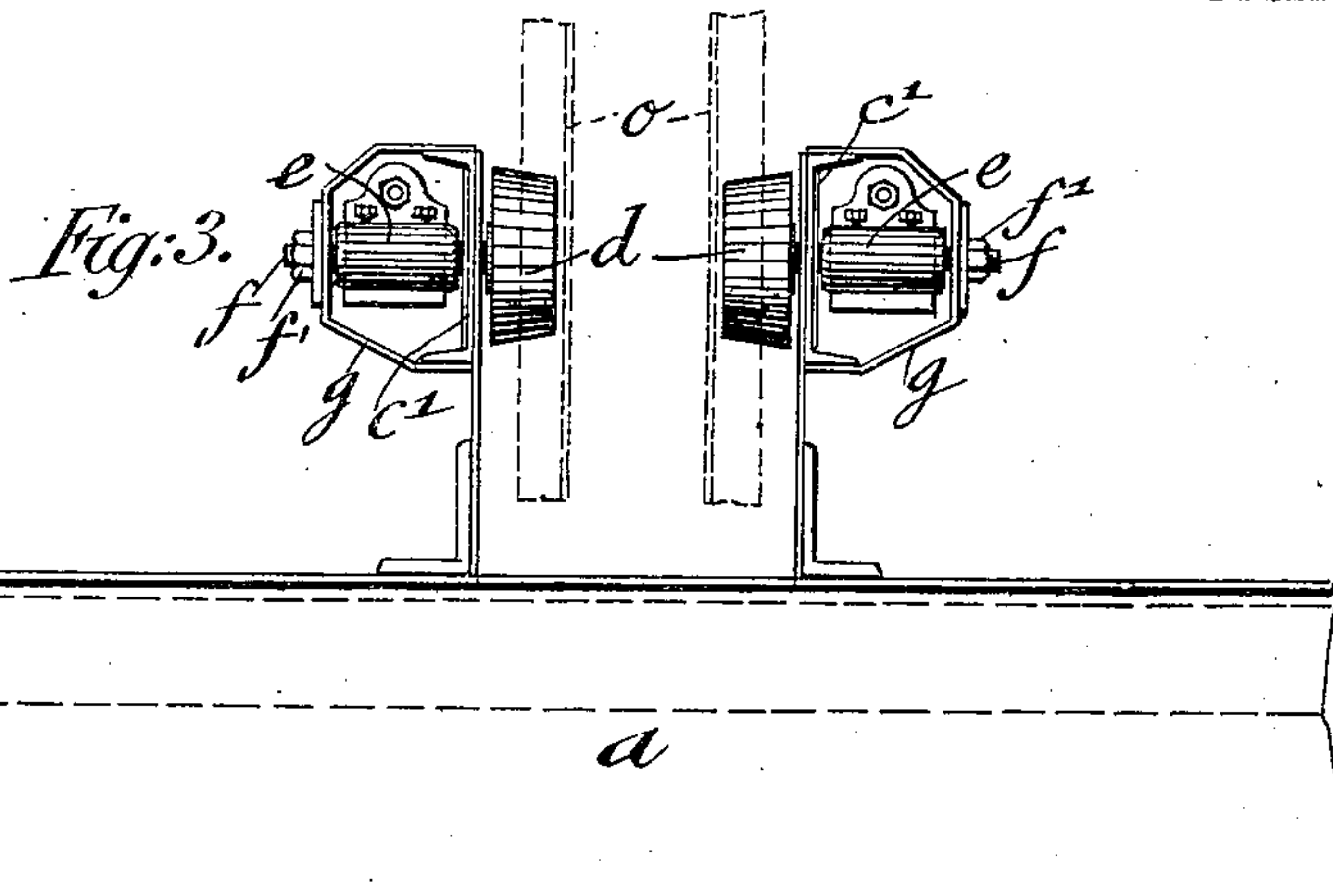
Inventor
Henry J. Stoffels
By his Attorney
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2 SHEETS—SHEET 2.



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Henry J. Suberbie.
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UNITED STATES PATENT OFFICE.

HENRY J. STOFFELS, OF NORWOOD, OHIO.

GUIDE-FRAME FOR GAS-HOLDERS.

No. 925,850.

Specification of Letters Patent.

Patented June 22, 1909.

Application filed May 13, 1908. Serial No. 432,652.

To all whom it may concern:

Be it known that I, HENRY J. STOFFELS, a citizen of the Empire of Germany, residing in Norwood, in the county of Hamilton and State of Ohio, have invented certain new and useful Improvements in Guide-Frames for Gas-Holders, of which the following is a specification.

This invention relates to guide-frames for gas-holders, and particularly to constructions of the type shown in my Patent No. 901,205, dated October 13, 1908.

In the patent referred to there are described two forms of guide-frames, in one of which three radial rollers are used in connection with each guide-column, while in the other two additional tangential rollers are used.

The object of this invention is to improve the construction described in the patent just mentioned by decreasing the number of rollers employed, and generally simplifying and strengthening the construction.

A further object of the invention is to provide means whereby the rollers may be properly adjusted with respect to the guide-column, and to furnish means for cushioning the rollers to allow for expansion and contraction due to changes of temperature, and to cause the rollers to travel more easily on the guide-columns.

With these ends in view, the invention consists in the novel features and combinations of parts to be hereinafter described and claimed.

In the accompanying drawing, in which the same reference characters denote the same parts throughout the views, Figure 1 is a side-elevation of a guiding device constructed according to the invention; Fig. 2 is a top-plan view, partly in horizontal section, Fig. 3 is an elevation taken at right angles to Fig. 1, with certain of the parts removed, and Fig. 4 is a top-plan view, partly in horizontal section, of a modified form of the construction.

In the drawing, *a* denotes the gas-holder, and *b* one of the guide-columns therefor. Said guide-column is preferably constructed of a number of steel beams in the manner shown, and has at its inner part, adjacent the gas-holder, two oppositely-disposed upright channel-irons *o*. These channel-irons are of U-shaped cross-section and arranged back to back radially of the gas-holder.

The gas-holder *a* carries at its upper part a

laterally-extending bracket *c*, formed of two separate parallel arms *c*¹ secured to the upper surface of the gas-holder, and extending alongside the channel-irons *o* opposite the channels or grooves thereof. At the outer ends of the arms *c*¹ angle-irons are bolted in such a manner as to form housings *g*. These housings are provided in their side-walls with horizontal slots *i*, and opposite these slots corresponding horizontal slots *i*¹ are cut in the arms *c*¹. The slots *i*, *i*¹ of each arm serve to guide a transverse spindle *f* having near its outer end a square portion guided in the slot *i*, and held against rotation therein. On the inner end of each spindle *f* is rotatably mounted a roller *d* arranged to enter the channel or groove of the corresponding channel-iron *o*, and travel upon the flanges thereof, as shown in Fig. 3. Each spindle *f* is held in proper position by means of a nut *f*¹ applied to its outer end where it is guided in the housing.

Applied to each spindle *f* intermediately between the wall of the bracket-arm and the housing is a sleeve *e* clamped about the spindle by means of suitable bolts. This sleeve has a flange *e*¹ to which a helical spring *n* located alongside the bracket-arm is attached at one end, the other end of the spring being connected to a pin *m* adjustable by means of nuts *m*¹ in a bracket *m*² applied to the bracket-arm.

By the construction described, each roller *d* controls the movement of the gas-holder in opposite directions as it coöperates with both flanges of the corresponding channel-iron. When the gas-holder is subjected to wind pressure, the roller will be moved against one or the other of these flanges, and the gas-holder will, therefore, be efficiently supported and guided. This is produced by the use of only two rollers as distinguished from the three rollers employed in my previous construction.

As the spindle of each guide-roller is freely movable in its slots and acted upon by a spring, it will readily adjust itself to the surface over which it travels and roll easily in spite of any unevenness in the channel-iron of the guide-column.

It is apparent that each spindle *f* may be adjusted by means of the nut *f*¹ so that it enters to the proper extent between the flanges of the channel-iron, and the spring may be adjusted by the means described in order to alter its tension.

In the construction shown in Fig. 4, the arrangement of the radial rollers is substantially the same as that just described, but an additional tangential roller h is employed. This roller is located between the rear surfaces of the channel-irons, and travels over said surfaces. It is mounted on a spindle h^1 adjustable longitudinally by means of nuts h^2 in a cross-piece h^3 connecting the bracket-arms.

By employing this construction, the stress on all the guide-columns, irrespective of the direction of the wind, is always uniform. This is produced by the use of only three rollers instead of the five heretofore used for this purpose according to my prior patent.

Having thus described my invention, I claim:

1. The combination, with a gas-holder and a guide-column comprising oppositely disposed channel-irons, of bracket-arms extending laterally from the gas-holder at the sides of said channel-irons, housings carried by the bracket-arms, and transverse spindles guided longitudinally of said bracket-arms in slots in the latter and in said housings and carrying rollers traveling in the channel-irons.

2. The combination, with a gas-holder and a guide-column therefor comprising oppo-

sitely-disposed channel-irons, of bracket-arms extending laterally from the gas-holder at the sides of said channel-irons and provided with longitudinal slots, housings on the bracket-arms also provided with longitudinal slots, transverse spindles guided at their ends in the slots of the bracket-arms and housings, rollers on the ends of said spindles traveling in the channel-irons, and cushioning springs acting on said spindles intermediately of their length.

3. The combination, with a gas-holder and a guide-column comprising parallel channel-irons arranged radially of the gas-holder, of lateral arms on the gas-holder, radial rollers on said arms traveling in the channel-irons, a cross-piece connecting said arms, a spindle mounted on said cross-piece and entering the space between said channel-irons, a tangential roller mounted directly on said spindle and traveling between the opposing surfaces of said channel-irons, and means to adjust said spindle longitudinally.

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

HENRY J. STOFFELS.

Witnesses:

RAPHAEL B. LUEBBE,
WM. B. HILLEBRAND.