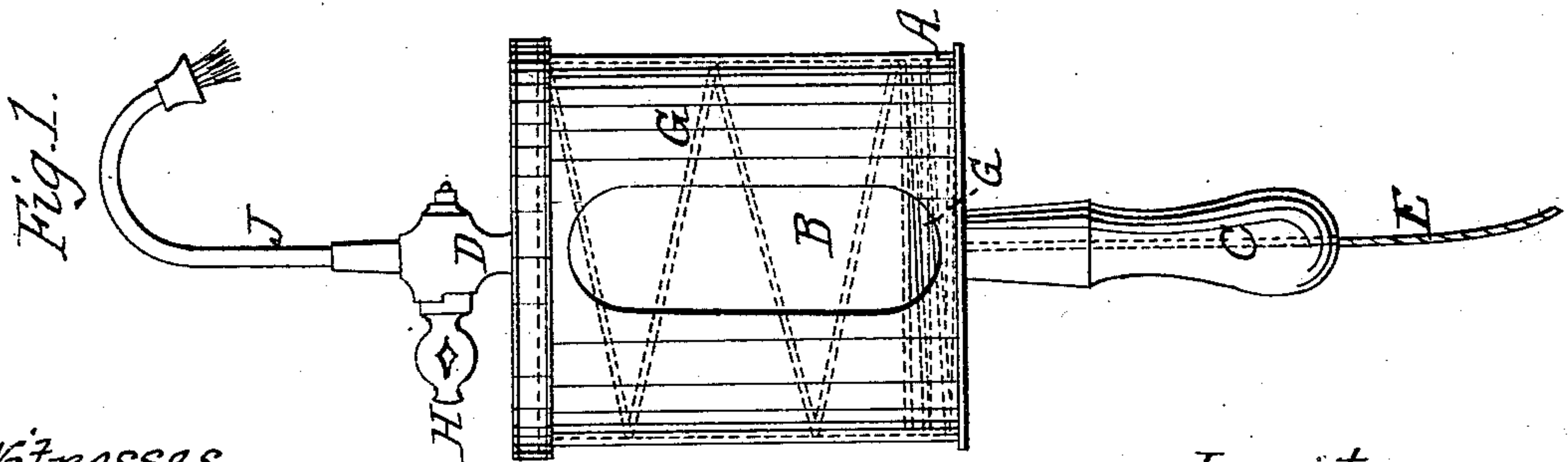
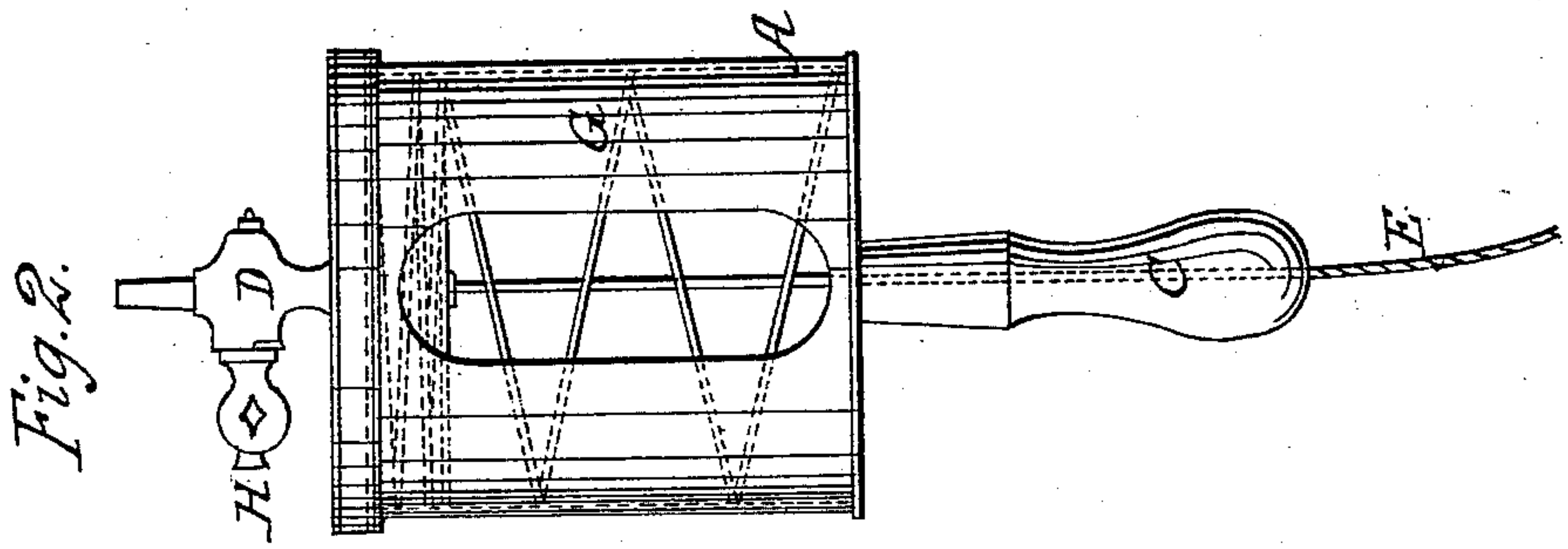
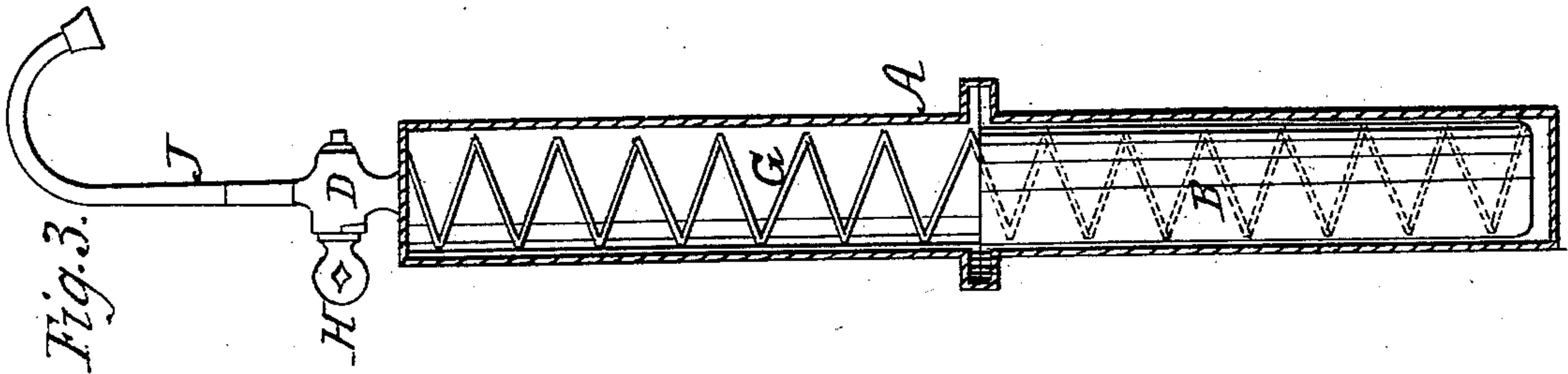


E. P. GLEASON.

Gas Lighter.

No. 84,689.

Patented Dec. 8, 1868.



Witnesses.
John Buchman
Vincent Fountain Jr.

Inventor.
E. P. Gleason by his aty.
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United States Patent Office.

E. P. GLEASON, OF NEW YORK, N. Y.

Letters Patent No. 84,689, dated December 8, 1868.

IMPROVEMENT IN GAS-LIGHTING DEVICES.

The Schedule referred to in these Letters Patent and making part of the same.

To all whom it may concern:

Be it known that I, E. P. GLEASON, of the city, county, and State of New York, have invented, made, and applied to use, a new and useful Instrument for Lighting Gas; and I do declare that the following is a full, clear, and correct description of my invention, reference being had to the accompanying drawings, making a part of this specification, and to the letters of reference marked thereon, in which—

Figure 1 is a side elevation of my improved instrument for lighting gas, the receptacle being shown very nearly filled.

Figure 2 is a side elevation of the same, the receptacle being shown nearly empty.

Figure 3 is a view of a modification of the present invention.

In the drawings, like parts of the invention are pointed out by the same letters of reference.

The nature of the present invention consists in the construction and operation of a new and useful instrument for lighting-purposes, as more fully hereinafter set forth.

Previous to the present invention, various instruments for lighting gas have been employed, among which may be cited alcohol-torches of various kinds, instruments supplied with tapers, and lamps filled with oil and supported upon poles.

My invention consists in the use of a proper receptacle, charged with gas, and provided with a burner, supplied from said receptacle, the whole contrivance being light and simple in its operation.

To enable those skilled in the arts to make and use my invention, the following description will suffice.

A shows a case, formed of metal, of any desired shape, to receive and protect the reservoir or receptacle B for containing the gas.

B shows the reservoir or receptacle for the gas, placed within the case A, and corresponding in form with the same. The reservoir or receptacle may be made of rubber or any elastic material, and in some cases of a fibrous or textile material, rendered gas-proof by the application thereto of any known agent or agents to effect the result.

C is the handle, to support the case A, and

D is an exit-pipe for the gas, inserted about centrally into the top of the case A.

The receptacle or reservoir may be provided with a bottom plate, to the centre of which may be attached a cord, E, while the opposite end of the receptacle may be confined or secured within the upper portion of the case A.

G shows a spiral spring, placed directly beneath the reservoir or receptacle, and resting upon the interior of the case A, or, if preferable, a spiral spring may be used, placed within the receptacle B.

The exit D may be provided with a cock, H, and, when the instrument is in use, it has screwed into it a bent pipe, J, over the forward end of which is passed

a bonnet, to protect the flame, and prevent its being easily extinguished.

Such being the construction, the operation may be thus described:

The bent pipe J may be removed and connection established between a gas-burner or other source of supply and the instrument, the cock H being opened, to allow a supply of gas to enter the receptacle through the pipe D, and fill the same.

As in some cases the pressure of the gas may be insufficient to overcome the spring G, the cord E, one end of which is attached to the lower portion of the receptacle, may be gradually drawn down by the hand of the operator, thus expanding the receptacle, as the gas enters the same. As the receptacle expands, the spring G is contracted, or, if an interior-spring be used, this spring is expanded.

As soon as the receptacle B has been charged or filled with gas, the cock H may be closed, and the connection between the instrument and the gas-burner or other source of supply cut off, when the bent pipe J may be inserted in the pipe D. The cock H being again opened, the gas will be supplied from the receptacle to the burner, which may be lighted, and the instrument may be used for lighting-purposes until the supply of gas be exhausted.

When the spring G is used, the function of this spring, compressed as it will be while the receptacle B is being charged, is, when the cock H is opened, that gas may be supplied to the burner, to expand gradually, and thus cause the receptacle to contract as it rises, materially assisting the exit of the gas therefrom.

If an internal spring be used, this spring may have one end connected to the bottom of the reservoir or receptacle, upon its interior, and its opposite end to the lower side of the top plate of the case A. In this case, as the receptacle is charged with gas, the spring is expanded, and, when the cock is opened for the exit of the gas, the contraction of this spring causes the receptacle to contract, thus facilitating and keeping up the supply of gas thence to the burner.

In fig. 3, a modification of the invention is shown, in which the case for the receptacle may be made of two hollow tubes, united together, so as to form a gas-tight joint between them or at their point of jointure. In this case, the interior spring has one end attached to the under side of the top plate of the upper section, while its opposite end is attached, about centrally, to the bottom of the receptacle B. As the receptacle is charged with gas, this spring is expanded, and as the gas is supplied to the burner the contraction of the spring draws the receptacle outside in, upward, so that the receptacle follows the gas, as it were, in its exit, and supplies its place, thus travelling from the lower to the upper section.

Any form of case may be used, although I prefer the round or circular form, care being taken that the case shall be made, like the receptacle, gas-tight, while the

size of both will depend, in a great measure, upon the number of burners to be lighted.

The value of the invention is found in the ease with which it can be operated and supplied with gas, and the low cost to the consumer, the rapid evaporation of alcohol, and the cost of wax tapers so generally used, being, of course, considered.

Having thus described my invention,

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

1. Charging or filling an elastic gas-tight receptacle with gas, and then supplying the same to a burner connected thereto, for lighting-purposes, whether the same shall be accomplished in the precise manner shown, or in an equivalent manner.

2. The combination, with an elastic gas-tight reservoir, B, of a suitable case, A, and an exit-pipe, D, constructed and operating substantially as described, for the purposes specified.

3. The combination of an elastic gas-tight reservoir or receptacle, B, case A, and exit-pipe D with a spring, G, placed either within or beneath the receptacle B, for the purposes fully described.

4. The combination of the case A, receptacle B, exit-pipe D, and spring G with the cord E, for the purposes set forth.

E. P. GLEASON.

Witnesses:

A. SIDNEY DOANE,
J. C. GRANGER.