

No. 711,584.

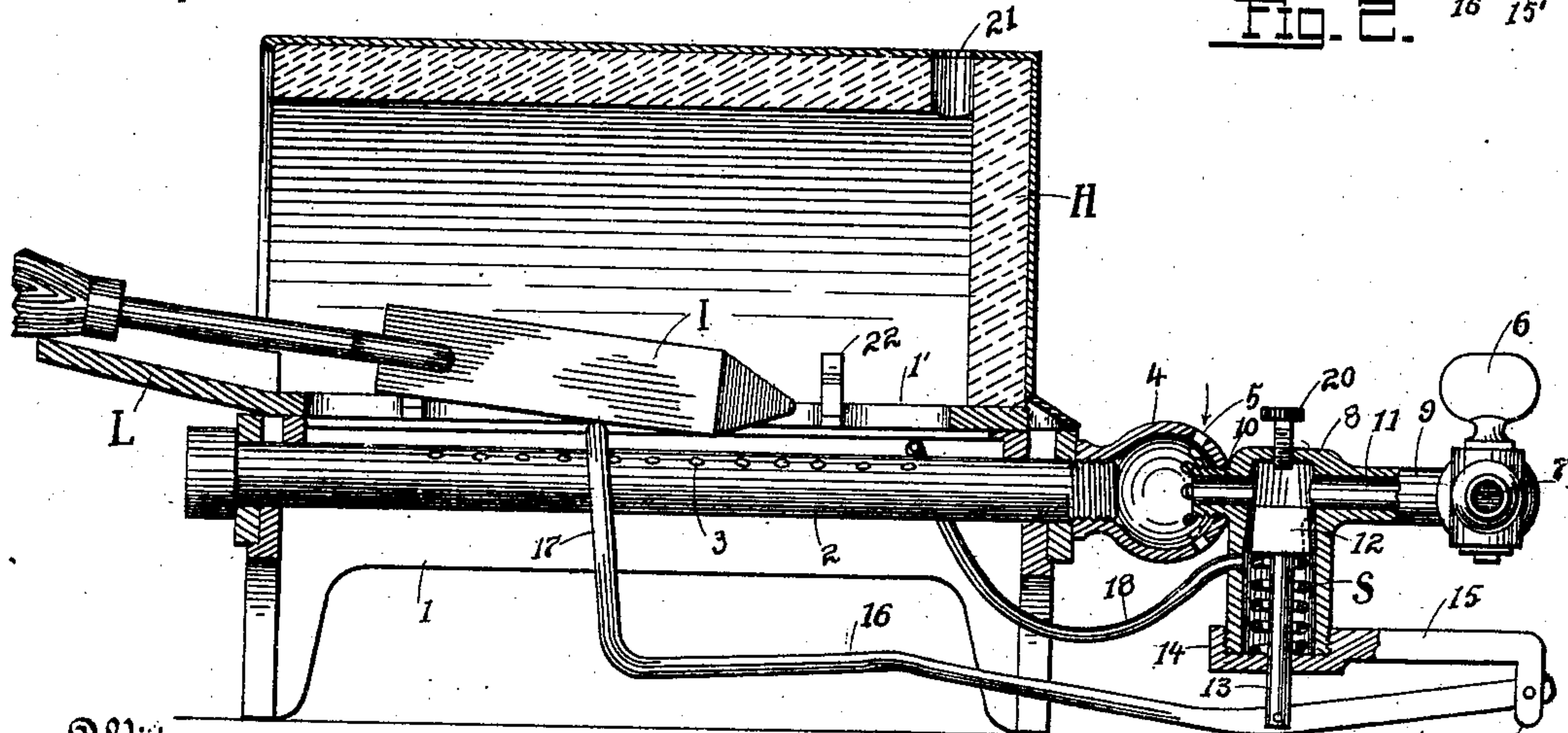
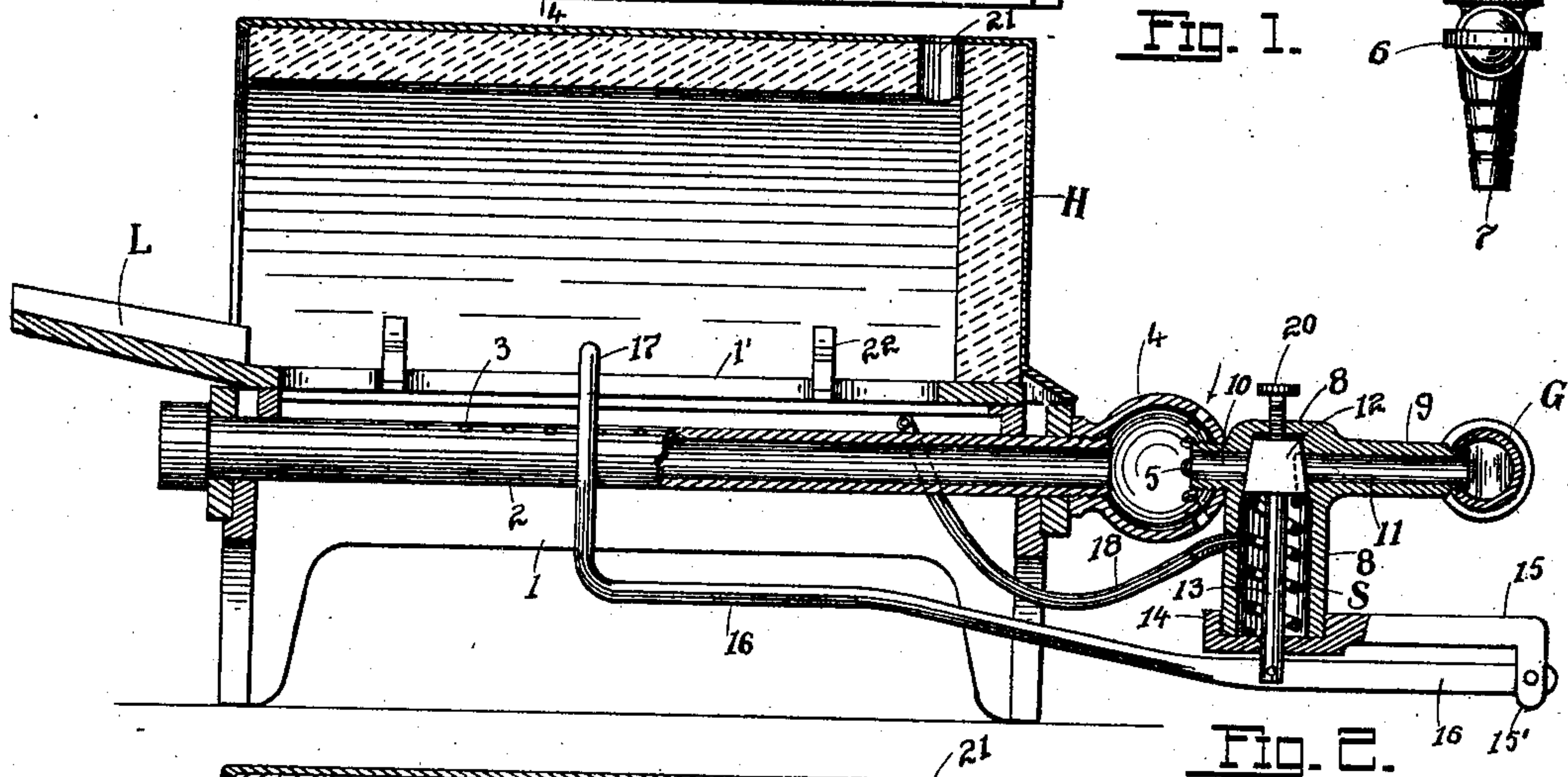
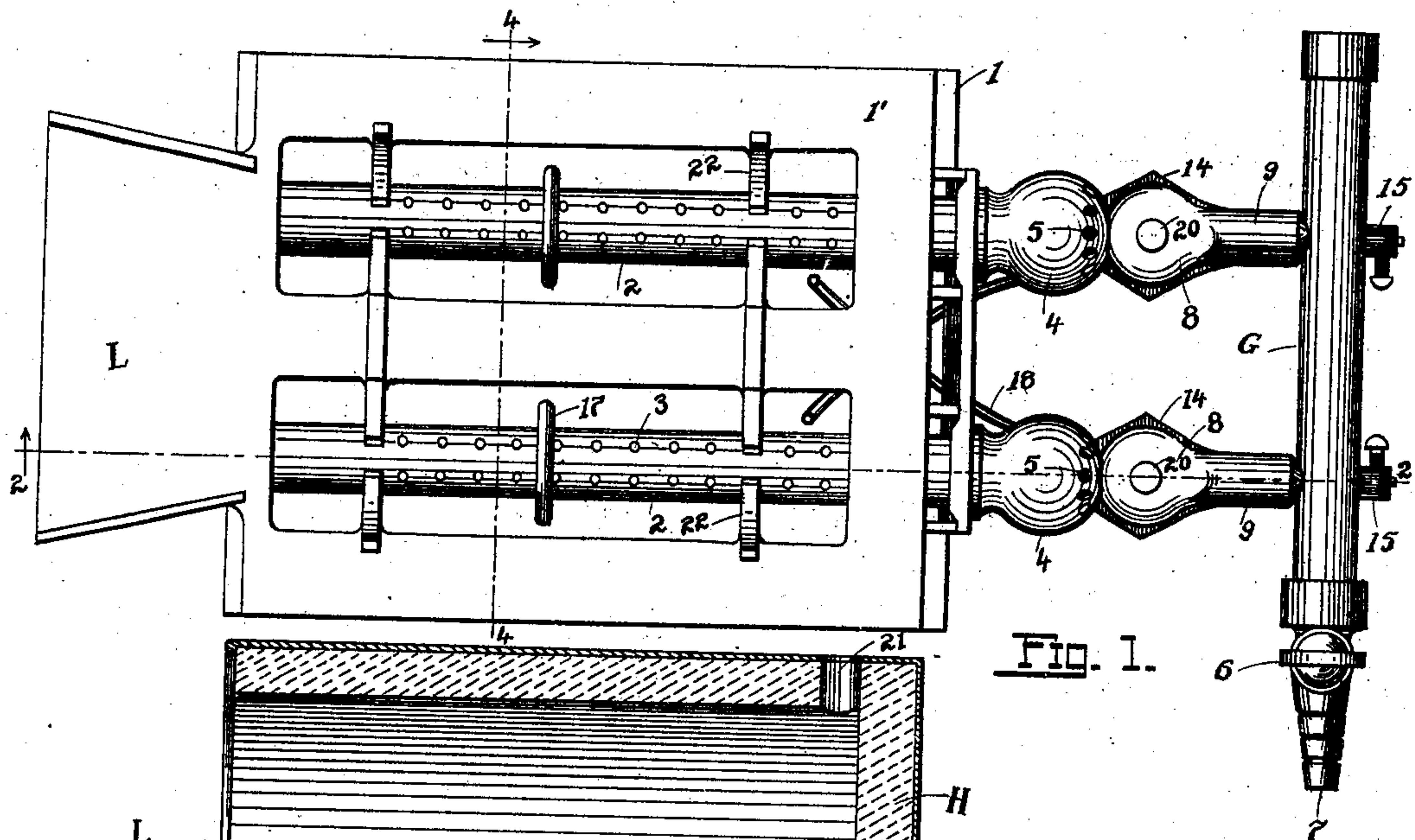
Patented Oct. 21, 1902.

M. J. NASH.
SOLDERING IRON HEATER.

(Application filed Nov. 27, 1901.)

(No Model.)

2 Sheets—Sheet 1.



Witnesses
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Fig. 3.

By his Attorney

Inventor
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No. 711,584.

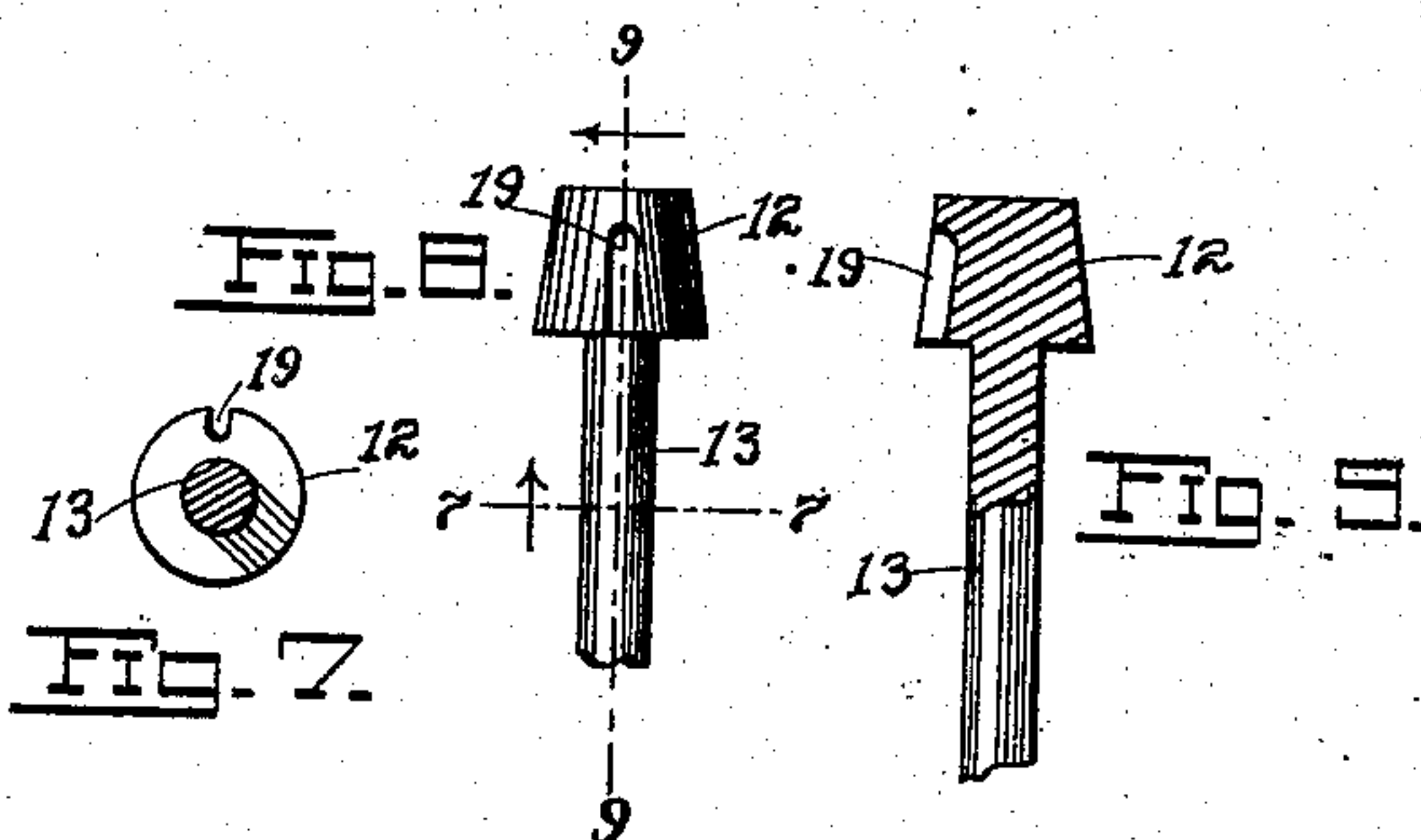
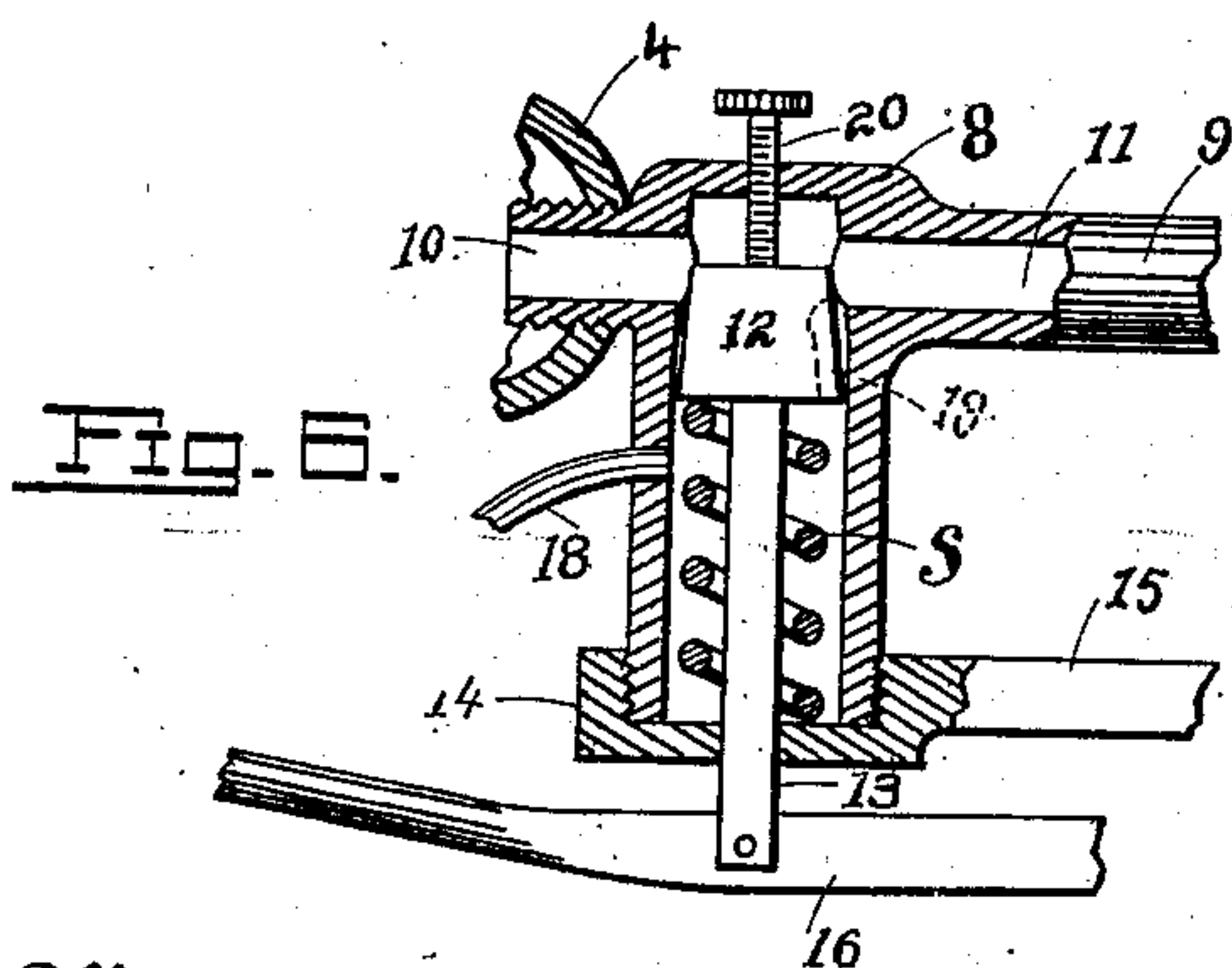
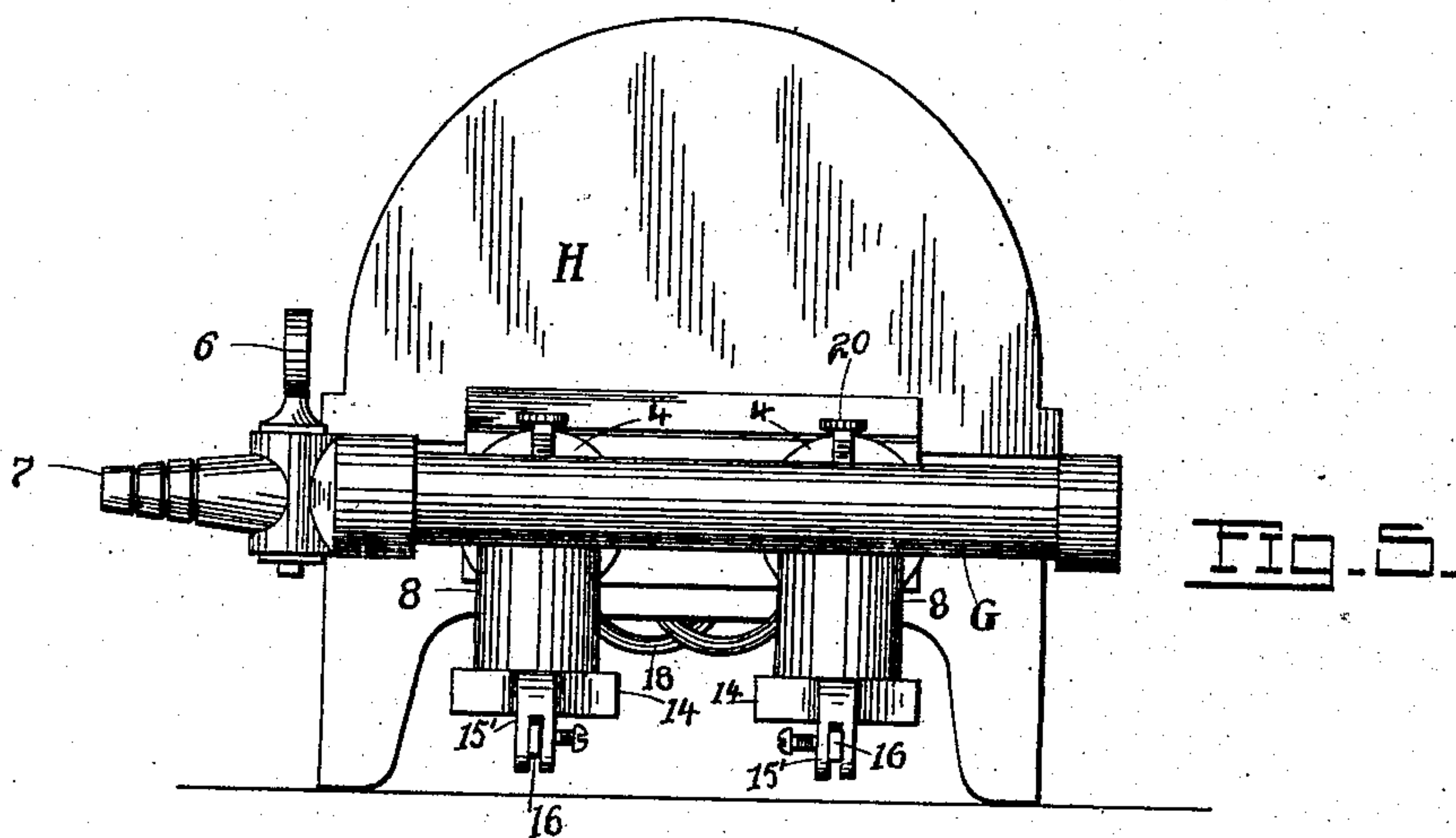
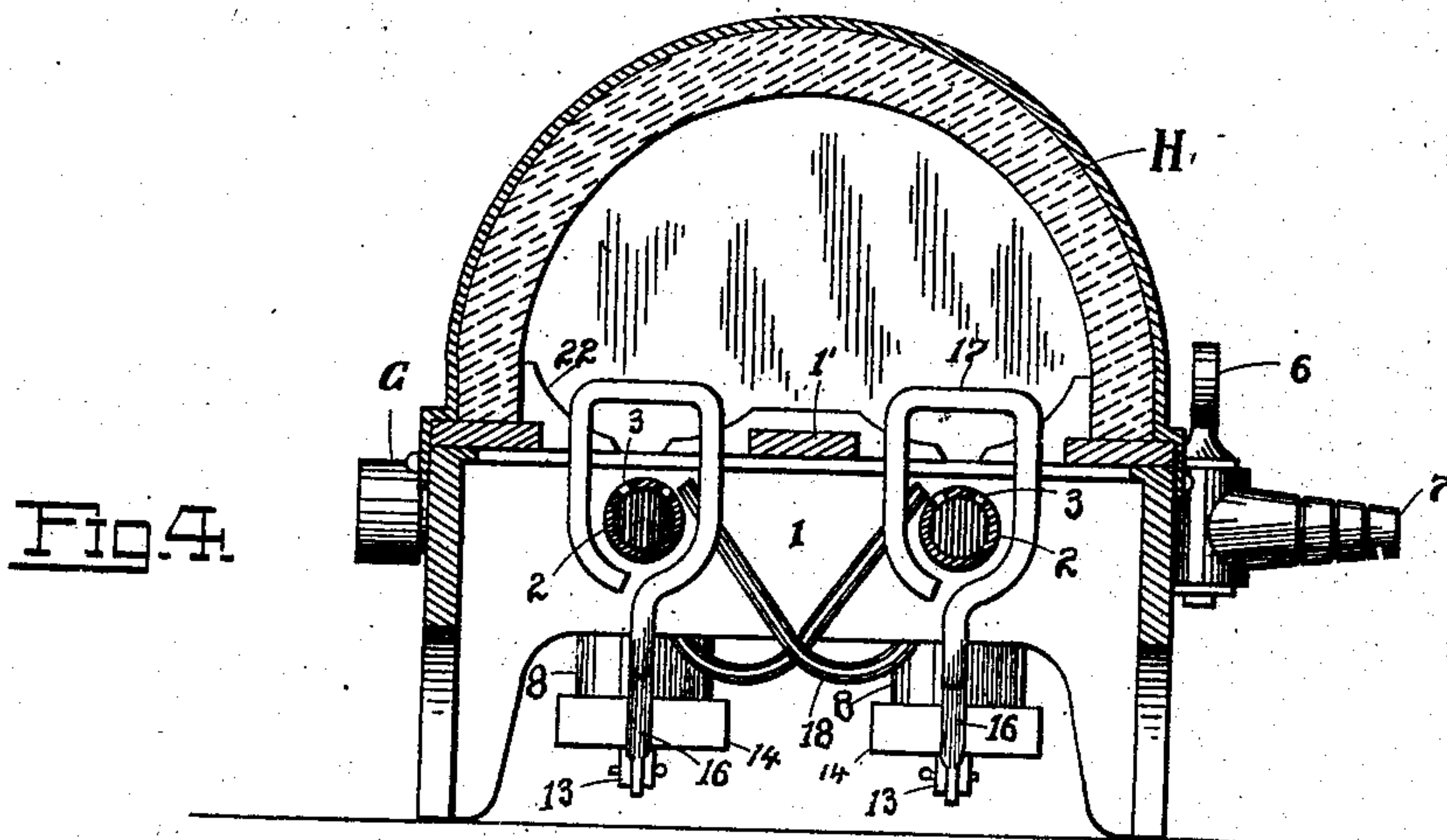
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SOLDERING IRON HEATER.

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2 Sheets—Sheet 2.



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UNITED STATES PATENT OFFICE.

MICHAEL J. NASH, OF ST. LOUIS, MISSOURI.

SOLDERING-IRON HEATER.

SPECIFICATION forming part of Letters Patent No. 711,584, dated October 21, 1902.

Application filed November 27, 1901. Serial No. 83,931. (No model.)

To all whom it may concern:

Be it known that I, MICHAEL J. NASH, a citizen of the United States, residing at St. Louis, State of Missouri, have invented certain new and useful Improvements in Soldering-Iron Heaters, of which the following is a full, clear, and exact description, reference being had to the accompanying drawings, forming a part hereof.

My invention has relation to improvements in soldering-iron heaters; and it consists in the novel construction and arrangement of parts more fully set forth in the specification and pointed out in the claims.

In the drawings, Figure 1 is a top plan of the heater with hood removed. Fig. 2 is a vertical longitudinal section on line 2 2 of Fig. 1 with hood, however, in place. Fig. 3 is a similar section showing the soldering-iron in place and the feed-valve open. Fig. 4 is a transverse vertical section on line 4 4 of Fig. 1 with hood in place. Fig. 5 is an end view looking toward the left on Fig. 2. Fig. 6 is an enlarged sectional detail of the feed-valve, showing the latter partially closed. Fig. 7 is a transverse section on line 7 7 of Fig. 8 looking in the direction of the arrow. Fig. 8 is a detached view of the valve, and Fig. 9 is a vertical section on line 9 9 of Fig. 8.

The object of my invention is to construct a vapor-burning or gas-burning soldering-iron heater in which the flame by which the iron is heated is automatically extinguished (or the supply of gas cut off) by the removal of the iron from the heater, and, further, to provide means for automatically igniting the extinguished flame by a reinsertion of the iron into the heater.

A further object is to construct a heater which shall be simple, durable, and inexpensive, and one possessing further and other advantages better apparent from a detailed description of the invention, which is as follows:

Referring to the drawings, 1 represents a suitable supporting-base for the support of the gas-burner pipes 2 2, the latter being closed at one end and being provided with peripheral perforations 3 for the issue of the flame. The opposite end of each pipe 2 is coupled to an air-chamber 4, formed in the shape of a spherical bulb, and being provided

with a series of air-openings 5 for the free admission of air thereinto and its subsequent mixture with the gas coming from the main gas-supply pipe G. The latter is provided with an ordinary gas cock or valve 6 and a terminal nozzle 7, to be attached to a hose leading to any suitable source of gas-supply. (Not shown.) The pipe G is coupled to the air-chamber 4 by a valve-casing 8, the latter being provided with hollow arms 9, screwed directly to the pipe G, and with screw-threaded coupling-nozzles 10, secured directly to the chamber 4, the gas being delivered through the passage 11 of said arms and nozzles. The passage 11 is controlled by a conical valve 12, whose stem 13 projects beyond the bottom of the valve-casing, said bottom being closed by a screw-cap 14, with which is formed integrally an arm 15, provided with a free depending or downwardly-deflected portion or extension 15'.

Pivotally secured to the extension 15' and to the lower end of the valve-stem 13 are respectively the rear end and an intermediate portion of the valve-controlling lever 16, the long arm of said lever extending forward and upward and its free end terminating in an enlarged loop 17, which encompasses the gas-burner pipe 2.

Surrounding the stem 13 and interposed between the base of the valve 12 and the cap 14 is a resilient coiled spring S, the action of which is to normally force the valve upward, and thus cut off the supply of gas from the passages 11 to the air-chamber 4. When, however, a soldering-iron I is laid across the loop 17, (see Fig. 3,) the weight thereof depresses the lever 16, compressing the spring and drawing the valve downward sufficiently to allow the gas to pass freely into the chamber 4 and pipe 2 and there be ignited for purposes of heating the iron. The ignition is usually accomplished by means of a small flame at the outer end of the igniting-tube 18, whose opposite end taps the valve-casing below the valve, the tube then curving upward to a suitable point in proximity to the series of openings 3, formed in the pipes 2. The tube 18 is kept supplied with a small quantity of gas, which is constantly fed thereto through the peripheral feed port or groove 19, formed on the valve, said port (see Fig. 2) be-

ing in position to establish communication between the gas-supply pipe G and pipe 18 the moment the lever 16 is restored to its normal raised position upon the removal of the soldering-iron, the gas of one burner-pipe being ignited from the tube 18 of the adjacent pipe. Should it be desirable not to extinguish the flame upon the removal of the soldering-iron from the heater, the valve 12 may be intercepted before it is forced to its completely-closed position by the spring S by the adjustable intercepting-screw 20, mounted on top of the valve-casing, (see Fig. 6,) the valve thus intercepted permitting a limited supply of gas to reach the pipes 2, and thus cause the latter to burn with a low flame upon the removal of the iron from the heater. This expedient is generally resorted to in heaters having but a single burner-pipe 2 and where it is not desirable that the flame be wholly extinguished. Of course with the use of two pipes 2 and two irons it is preferable that the flame of one pipe 2 shall be wholly extinguished while its neighbor is heating the iron placed over it.

Forming a part of the base 1 is a cover-frame 1', designed to be superposed over the pipes 2 and being provided with a ledge L for the support of the handle-bar of the soldering-iron. The cover-frame 1' serves to support a hood H, of fire-brick, covered with an outer metallic plate, said hood forming a fire-chamber within it from which the gases escape through the flue 21. The hood serves to retain as much of the heat as possible during the heating of the iron. The hood is held in position on the frame 1' by the lugs 22, cast thereon.

It is to be understood, of course, that I may depart from the details of construction without departing from the spirit of my invention; nor is its application to be limited to heating soldering-irons.

Having described my invention, what I claim is—

1. A soldering-iron heater comprising one

or more gas-burner pipes having suitable peripheral perforations, an air-chamber at one end thereof, a valve-casing coupled to said chamber, a valve in said casing for controlling the admission of gas into said air-chamber, a stem carried by said valve and projecting from the casing, a lever pivoted at one end and having an intermediate point pivotally secured to the outer end of the stem, the free end of the lever terminating in a loop encircling the burner-pipe and adapted to be actuated in one direction upon the placing of the iron over the flame, thereby opening the valve, the latter automatically closing upon the removal of the iron, and a lighting-tube leading from the valve-casing of one burner-pipe to a point in proximity to the openings of the adjacent burner-pipe, substantially as set forth.

2. A soldering-iron heater comprising one or more gas-burner pipes, a gas-supply pipe therefor, a valve-casing interposed between each burner-pipe and the supply-pipe, a spring-actuated valve in each casing, a feed-port formed in each valve, a lighting or igniting tube leading from the valve-casing to a point in proximity to the flame-openings of the burner-tube, a stem for each valve, a screw-cap closing the bottom of each valve-casing, an arm forming an integral part of each screw-cap, a lever having one end pivotally secured to said arm, and an intermediate point pivotally coupled to the outer projecting end of the stem, the opposite and long arm of each lever terminating in a loop embracing the gas-burner pipe, the loop serving to support the soldering-iron and an adjusting-screw carried by the valve-casing, the parts operating substantially as and for the purpose set forth.

In testimony whereof I affix my signature in presence of two witnesses.

MICHAEL J. NASH.

Witnesses:

EMIL STAREK,
M. J. HOGAN.