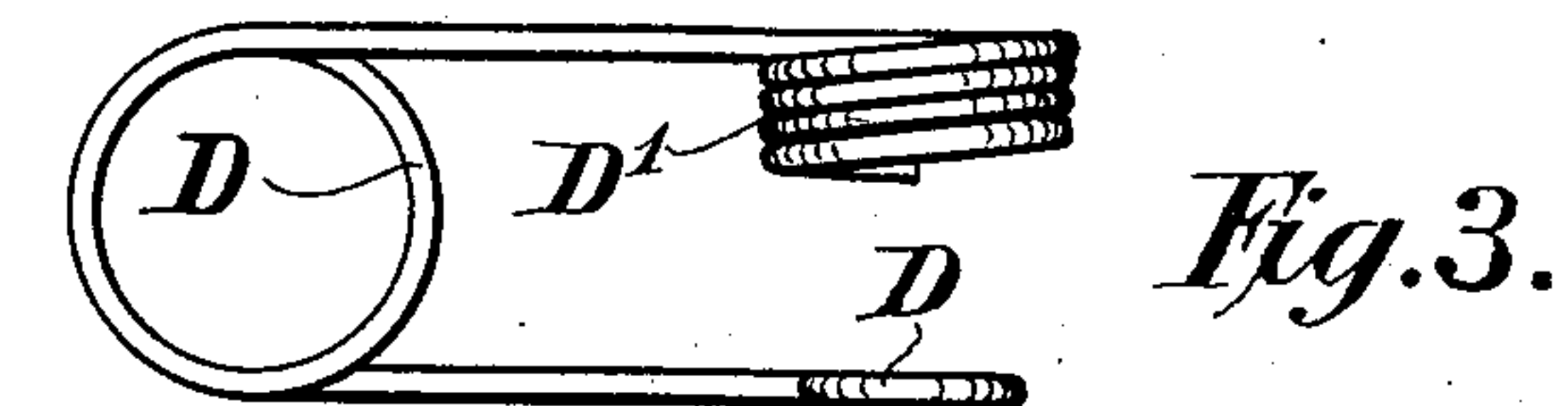
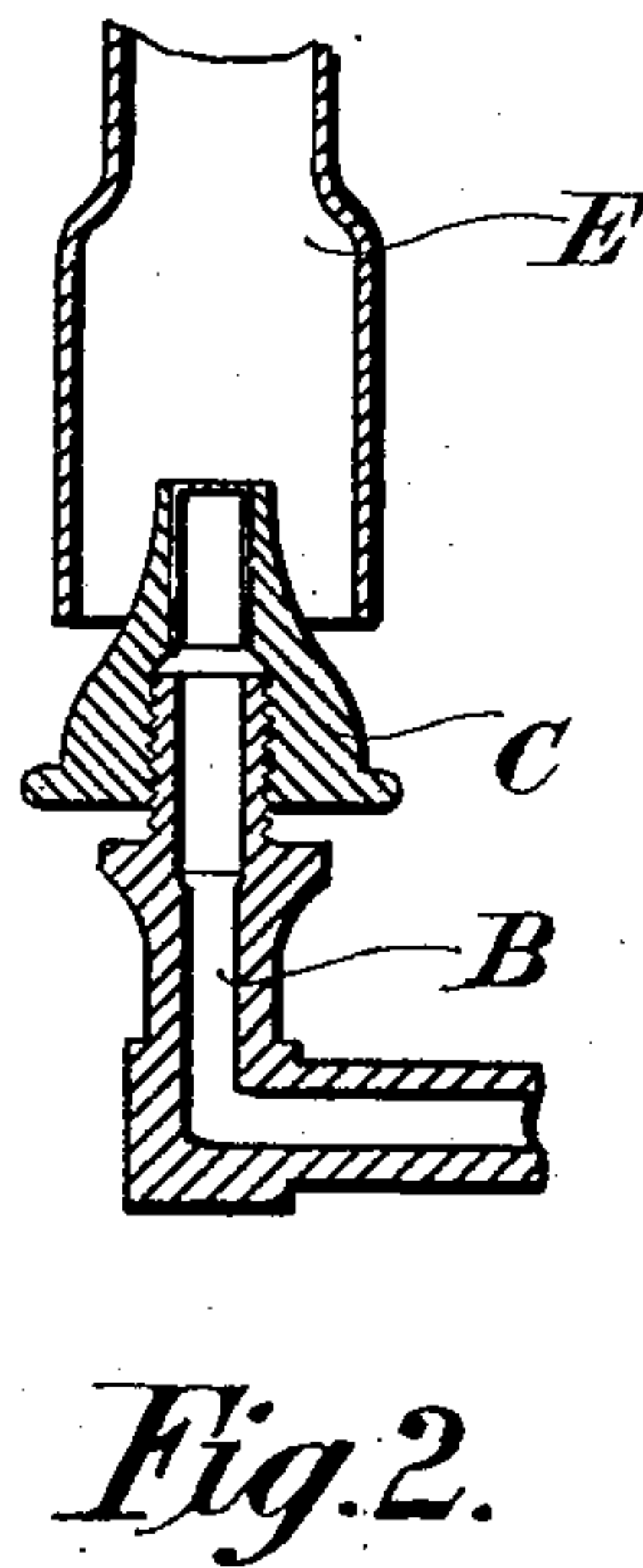
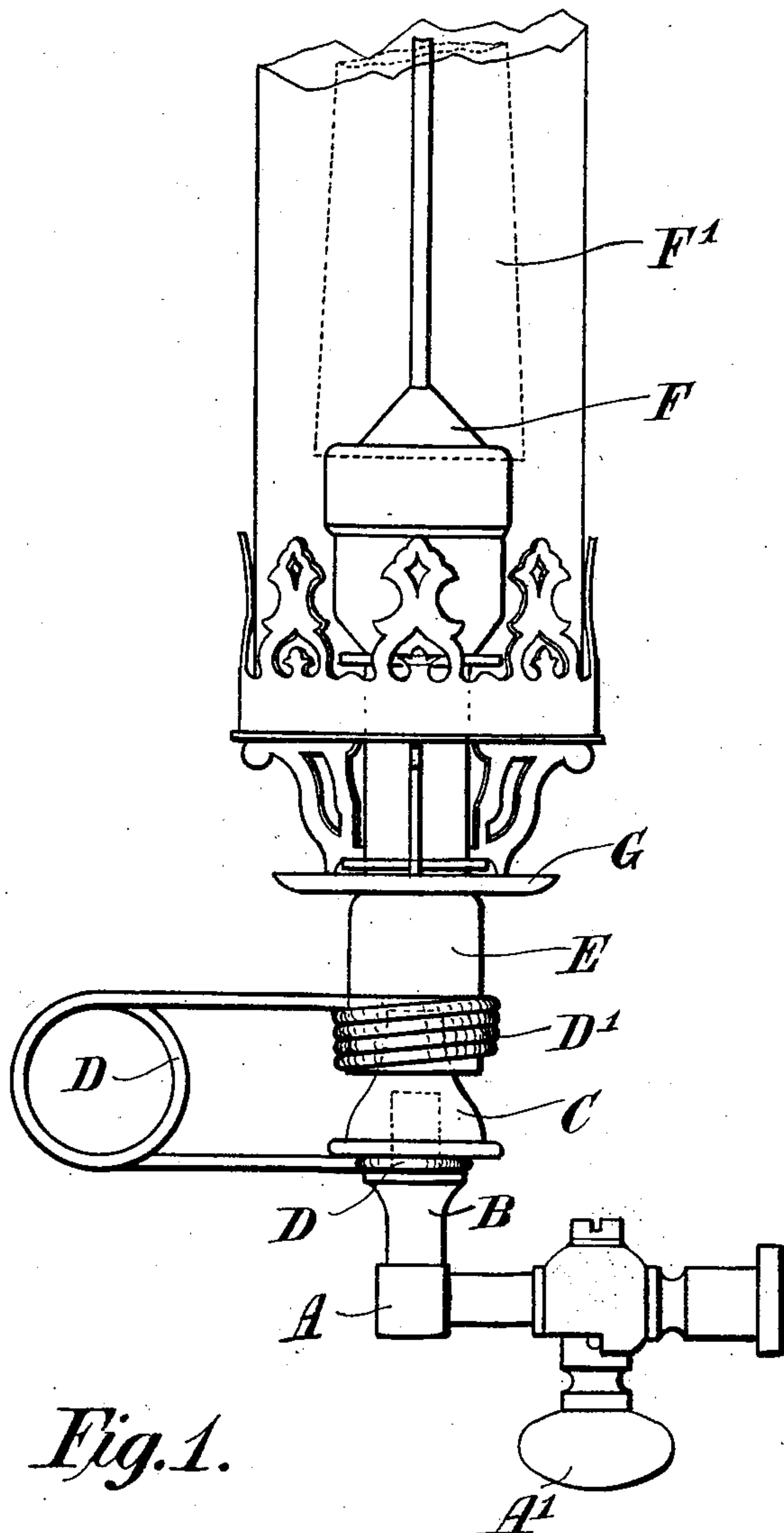


No. 747,457.

PATENTED DEC. 22, 1903.

C. MARSHALL.
ANTIVIBRATING BURNER.
APPLICATION FILED NOV. 4, 1902.

NO MODEL.



WITNESSES

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UNITED STATES PATENT OFFICE.

CHARLES MARSHALL, OF SOUTH YARRA, NEAR MELBOURNE, VICTORIA,
AUSTRALIA.

ANTIVIBRATING BURNER.

SPECIFICATION forming part of Letters Patent No. 747,457, dated December 22, 1903.

Application filed November 4, 1902. Serial No. 130,081. (No model.)

To all whom it may concern:

Be it known that I, CHARLES MARSHALL, gas engineer, a British subject, and a resident of 69 Hope street, South Yarra, near Melbourne, in the State of Victoria, Commonwealth of Australia, have invented a certain new and useful Improved Antivibrating Burner, of which the following is a specification.

10 This said invention is designed to counteract the influence of vibratory shock common to rigid gas-burners and mountings carrying incandescent mantles such as the "Welsbach" and the like, and to thus decrease the liability
15 to and percentage of breakage or fracture of such mantles.

The said invention will be clearly understood by describing same, referring to the accompanying drawings, which form a part of
20 this specification.

Figure 1 is an elevation or view of my said combined antivibrator and gas-feeding device mounting the burner-mantle, chimney, and connections. Fig. 2 is a sectional view
25 of the feed-pipe and gas-feeding device; Fig. 3, a view of the spring-bow removed.

A is the supply pipe or fitting with tap A'; B, the detachable threaded nipple secured thereon; C, the detachable threaded tubular
30 cone-shaped nozzle screwed into such nipple bearing on and compressing the ring of the lower arm of spring-bow D down on boss on such nipple, by which means such bow is held and sustained securely in its position; E, the
35 feed-pipe, held erect in ringed or coiled socket D', such socket D' being composed of a plurality of parallel compressing rings or coils.

The spring-bow D D' is formed of a single strand of strong steel wire ringed in the bow to
40 bring the arms of such bow parallel, the ringed terminations of such arms being formed by coils turned therein. The feed-pipe E is enlarged at its base and open at its lower end, such end lying about midway between the
45 arms of such bow D. The cone-shaped nozzle C, projecting above the lower arm of the bow D, is hollow and finely punctured or per-

forated at its flattened apex, such apex projecting centrally up into the interior of the feed-pipe E, the open space between the base
50 of such feed-pipe E and the base of the nozzle C admitting air freely bunsenwise to the feed-pipe, to therein mingle with the gas fed thereby to the burner F, carrying the incandescent mantle F'. G is a draft-deflecting
55 disk encircling loosely the feed-pipe E. By thus feeding the gas to the burner without mechanically connecting the supply pipe or fitting with the feed pipe, the spring-bow D sustaining the feed-pipe burner and connec-
60 tions apart from the supply pipe or fitting, thus breaking the connection of the respective supply and feed pipes, the necessity for the use and interposition of flexible and consequently
65 perishable tubing or otherwise providing and movable air-tight connection is obviated.

Having now described, my invention it is obvious that the feed-pipe and mountings thereon, including the mantle, are free to move
70 integral with the vibratory motion of the upper arm of the spring-bow D, thus breaking or minimizing any vibratory shock imparted to the fitting.

Having now described my invention and the manner in which it operates, what I claim
75 as new, and desire to secure by Letters Patent, is—

In combination with a supply-pipe A and nozzle C screwed thereon, a spring having one end clamped between the nozzle and the
80 supply-pipe and having its other end coiled to form a socket, a feed-pipe E carried in said socket so as to leave a space between the said pipe and the nozzle C, said spring having at an intermediate point the coil D and
85 the burner carried by the pipe E substantially as described.

In witness whereof I have hereunto set my hand in presence of two witnesses.

CHARLES MARSHALL.

Witnesses:

ALFRED FORD,
JONATHAN BEAR.