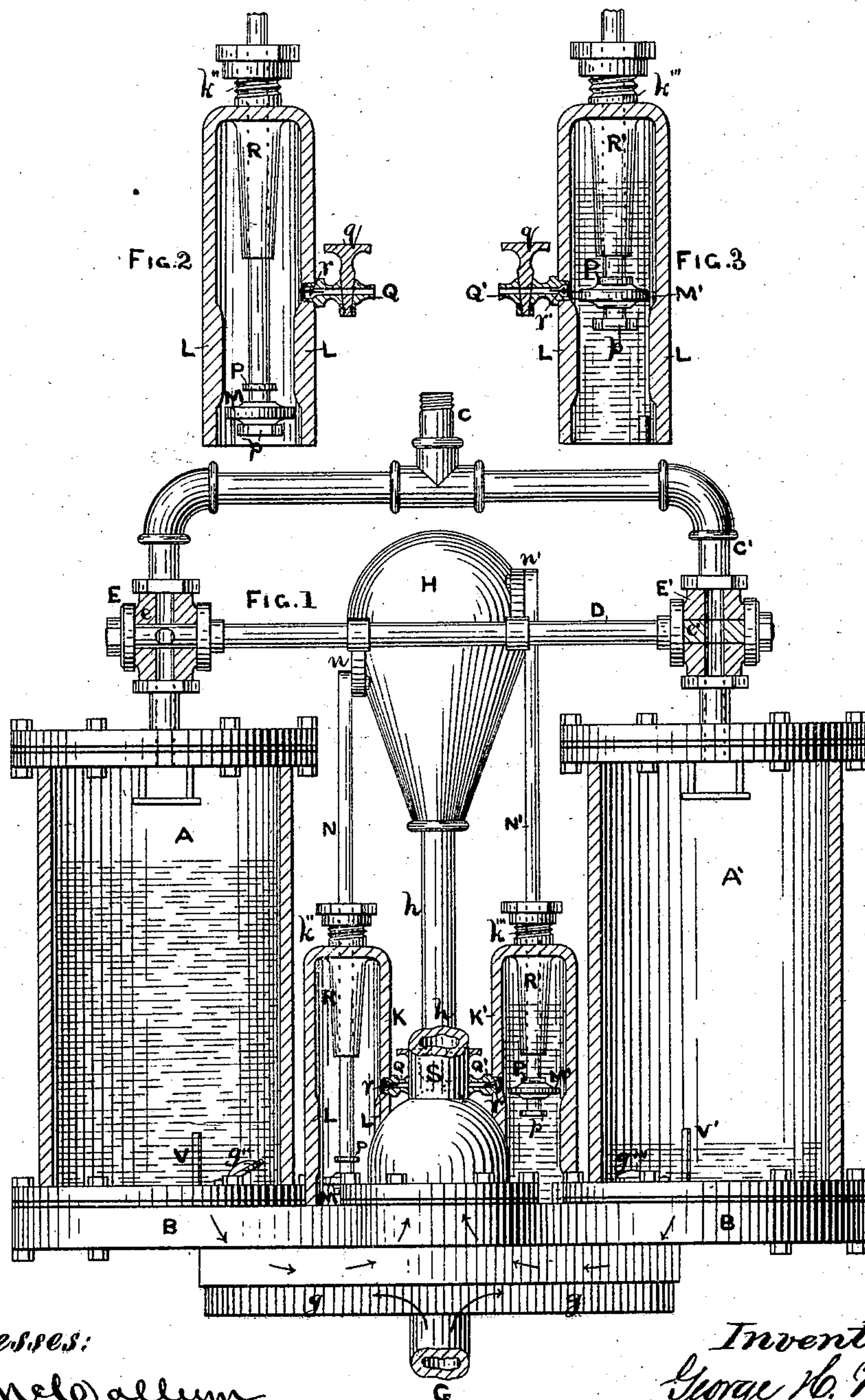


G. H. NYE.
Steam and Vacuum Pumps.

No. 153,454.

Patented July 28, 1874.



Witnesses:
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UNITED STATES PATENT OFFICE.

GEORGE H. NYE, OF MONMOUTH, ILLINOIS.

IMPROVEMENT IN STEAM AND VACUUM PUMPS.

Specification forming part of Letters Patent No. **153,454**, dated July 28, 1874; application filed February 13, 1874.

To all whom it may concern:

Be it known that I, GEORGE H. NYE, of Monmouth, county of Warren and State of Illinois, have invented certain Improvements in Steam Vacuum-Pumps, of which the following is a specification:

The nature of this invention relates to improvements on the one for which I obtained Letters Patent the 5th day of November, 1872, No. 132,732; and the invention consists in the arrangement of air-supplying pipes in the air-compressing chambers, lettered K K', in said patent.

In the accompanying drawing, Figure 1 is a vertical sectional view of my pump, with the present improvement embodied therein. Figs. 2 and 3 are enlarged sectional views of the valve-cylinders or air-compressing chambers, showing the device for supplying the same with supplies of air.

Referring to the parts by letters, letters A A' represent the pump-cylinders, and K K' the valve-cylinders in vertical section. M M' are the valves, N N' the connecting-rods, D the rock-shaft, and R R' the tubular projections in the cylinders K K'. In these respects, and in fact in all respects except the improvement to be hereinafter described, my present pump is the same in construction and operation as the one fully described in my aforesaid patent, and I refer to the same for a full description thereof. Q Q' represent faucets in openings in the sides of the cylinders K K',

above their contracted portions L L, provided with the ordinary keys *p q. r r'* are stem-valves in the faucets Q Q', opening toward the interior of the chamber of cylinders K K'.

The operation of my invention is as follows: Water is forced from the cylinders A, by the steam, into the cylinders K K', during the operation of the pump, for the purpose of raising the valves M M, and operating the valves thereby in the steam-induction pipes, the return of which and the forcing down of valves M M are effected by the compressed air in the upper parts of the cylinders K K', as fully described in the patent hereinbefore referred to. The compressed air in the cylinders K K may become partially exhausted from various well-known causes, and it will be seen, from an inspection of the accompanying drawings, that the required re-enforcing-supply may enter through faucets Q Q' in the obvious manner, as the valves M M descend, and that said supply may be entirely cut off by turning the key in the said faucet, or its quantity may be regulated thereby.

I claim as new—

The faucets Q Q', having stem-valves *r r'*, and arranged to operate with the cylinders K K' and A A' of a steam vacuum-pump, substantially as and for the purpose specified.

GEORGE H. NYE.

Witnesses:

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