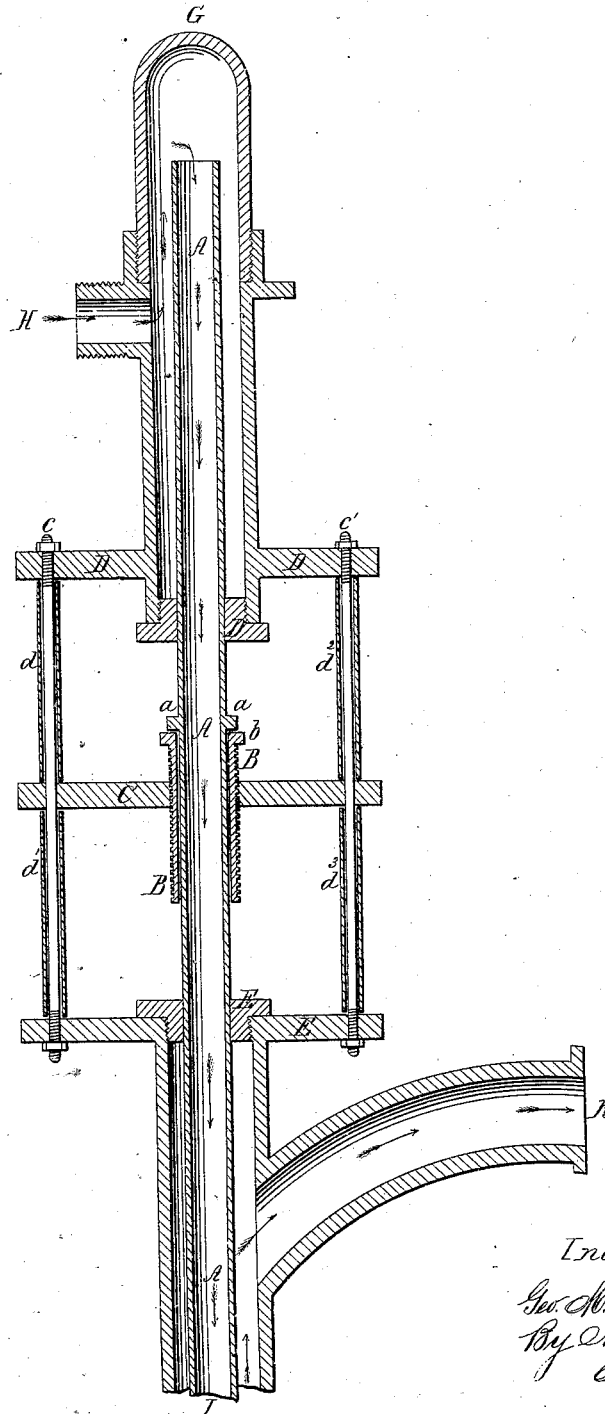


G. M. Mowbray
Ejecting Pump.

N^o 15,849.

Patented Jan. 10, 1865.



Witnesses
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UNITED STATES PATENT OFFICE.

GEORGE M. MOWBRAY, OF TITUSVILLE, PENNSYLVANIA.

IMPROVEMENT IN EJECTORS FOR OIL-WELLS.

Specification forming part of Letters Patent No. 45,849, dated January 10, 1865.

To all whom it may concern:

Be it known that I, GEORGE M. MOWBRAY, of Titusville, in the county of Chester and State of Pennsylvania, have invented a new and useful Improvement in Ejectors for Oil or other Wells; and I do hereby declare the following to be a full and exact description of the same, reference being had to the accompanying drawing, making part of this specification, and being a vertical section of the upper part of an ejecting apparatus illustrating my invention, adapted to an ejector where the blast-pipe is contained within the eduction-pipe.

This invention consists in a mechanical arrangement whereby either the eduction-pipe or the blast-pipe, when connected with the ejector of an oil-well, &c., may be suspended, raised, lowered, or rotated at the will of the operator. The raising or lowering may be performed simultaneously with the rotation or separately. The effect of this raising or lowering, &c., is to correct the relative relations of the blast-pipe with the eduction-pipe, so as to deliver the blast of compressed air in such volume and at that precise distance which will produce the most effective result. It may be applied to either the blast-pipe or the eduction-pipe, according to the circumstances, which are to be judged by the operator.

The following description will enable any one skilled in the art to which my invention appertains to fully understand and use the same.

A is a tube, which serves as the upper part of the blast-pipe and is turned smooth for about five feet of its length, having a square or hexagonal collar, *a*, forged onto the same, about two feet from its upper end.

B is a hollow sleeve screw, about one foot in length, terminating at its upper end in the head *b*.

C is a templet female screw-plate, with a lug cast on each side. D is an upper stuffing-box. It is easiest made out of a two and-a-half-inch coupling, cast with a couple of lugs, and fitted with gland, follower, &c., and should have a T cast on it for air-inlet.

E is a lower stuffing-box. It is easiest made out of a two-and-a-half-inch coupling, with oil, &c., outlet lead cast on, and a couple of lugs fitted with gland, follower, &c.

G is a cap made of two-and-a-half-inch pipe

and forged up at the top. This allows the pipe A to play up or down inside of the same.

c c' are two bolts, fitted with nuts, which hold the upper and lower stuffing-boxes in place, passing through the lugs of the templet female screw C, which is prevented from rising and falling by the pieces of pipe *d d' d² d³*, which slip over the bolt *c c'* and retain the upper and under stuffing-boxes in proper position relative to the templet or female screw-plate.

Connection being made with the discharge-pipe of a suitable air-pump at H, and the turned pipe A with its nut *a* being coupled at I with the blast-pipe of an ejector, the stuffing-boxes D D and E E being properly packed, it is evident that by turning (by means of a screw-wrench) the nut *a* a rotary motion will be given to the blast-pipe without disturbing the connections to the air-pump. In the same manner as the pipe A, resting by means of its collar *a a* on the sleeve-screw B, if we turn the nut *b* to the right or to the left, we lower or raise the pipe A perpendicularly, because the sleeve-screw is not attached to the pipe A, but whose collar *a a* nevertheless rests loosely on it.

When an ejector consists of a blast-pipe passing outside of the eduction-pipe and beside it, the stuffing-box E may be dispensed with. A plate with lugs cast on to receive the bolts *d d' d² d³*, allowing the pipe to pass through it, may be substituted.

By the above means either the blast-pipe or the eduction-pipe may be suspended, rotated, lowered, or raised, to compensate for expansion, contraction, or disturbance of their relative positions while lowering them into the well, and, after being lowered, for the further purpose of accurately adjusting them so as to cause the greatest possible delivery of liquid, suitable to whatever blast the operator may be able to command.

Having thus described my invention, the following is what I claim as new therein and desire to secure by Letters Patent:

1. The frame constructed, substantially as described, with one or more stuffing-boxes to receive the tube connecting with the blast-pipe, substantially as described, and for the purposes set forth.

2. The collar *a*, forged upon or otherwise secured to the tube A, in combination with the

hollow sleeve-screw B, for the adjustment of the tube A, substantially as described, and for the purposes herein specified.

3. The hollow screw B and templet female-screw plate C, in combination with the tube A, substantially as and for the purposes described.

4. The hollow cap G, in combination with the blast-tube A, substantially as described, and for the purposes explained.

5. The combination of a T, fitted with the

cap G, stuffing-box D, and lugs to receive bolts *c c*, with templet and hollow screw, substantially as described, and for the purposes set forth.

The above specification of my improvement in ejectors for oil and other wells signed this 9th day of November, 1864.

GEO. M. MOWBRAY.

Witnesses:

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