

*A. Smith.*  
*Feeder for Ruling Mach.*  
*N<sup>o</sup> 44,980. Patented Nov. 8, 1864.*

Fig. 1.

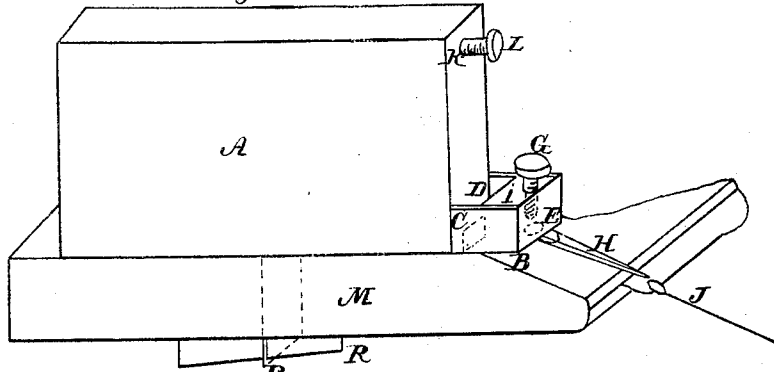
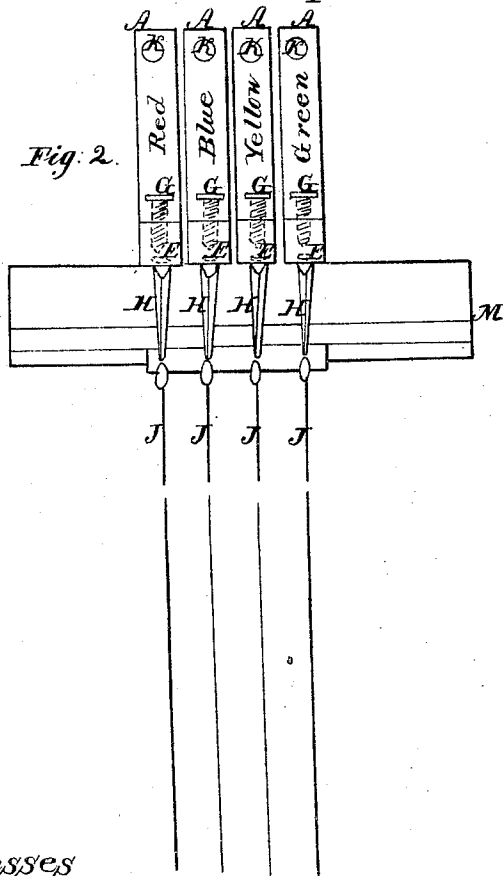


Fig. 2.



Witnesses  
*T. Harper Day*  
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Inventor  
*Addison Smith*  
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# UNITED STATES PATENT OFFICE.

ADDISON SMITH, OF PERRYSBURG, OHIO.

ADJUSTABLE ATMOSPHERIC FOUNTAIN-FEEDER FOR RULING-MACHINES.

Specification forming part of Letters Patent No. 44,980, dated November 8, 1864.

*To all whom it may concern:*

Be it known that I, ADDISON SMITH, of Perrysburg, Wood county, State of Ohio, have invented new and useful Adjustable Atmospheric Fountain-Feeders for Ruling Colored Lines; and I do hereby declare that the following is a full and exact description thereof, reference being had to the accompanying drawings, and to the letters of reference marked thereon, making a part of this specification.

The nature of my invention consists in the mode and manner of ruling colored lines, in various colors, (which I call "polychrome ruling;") by a series of adjustable reservoirs and atmospheric fountain-feeders, each feeder containing its respective colored fluid.

The object of my invention is to secure a uniform supply of colored ruling fluid in faint-line ruling by means of a series of adjustable reservoirs and fountains kept at a uniform head by atmospheric pressure, and to be attached to any ordinary ruling-machine. It is intended especially for ruling in different-colored lines, which I term polychrome ruling, and is to facilitate the method of carrying out and tracing statistics, accounts, and all kinds of memoranda in account, manuscript, and record books, on the proper lines, following the respective colored line, which effectually prevents errors.

To enable others skilled in the art to make and use my invention, I will proceed to describe its construction and operation.

Figure 1 represents a side view; Fig. 2, a front view.

A represents a tight box or reservoir, shaped either square or cylindrical, made of metal, porcelain, or any suitable material, to contain the particular colored fluid, and be adjustable so as to discharge the fluid regularly by the pressure of the atmosphere, and rule the lines closely or wider apart, according to the width required, the lower portion of the reservoir A being prolonged so as to form a square or round chamber, B. This chamber B communicates with the interior of the reservoir through an orifice, C, that is below the under edges of the chamber B, so as to prevent the overflow of the colored ruling-fluid, the level

of which will not rise above the upper part of the orifice C on account of the outward pressure of the atmosphere at the opening D. In the bottom of the chamber B is a conical-valved orifice, E, which is opened or closed by a cone-pointed thumb-screw, G, turning in a nut, I, fastened to the top of the chamber B. A conduit, H, is attached to the bottom of the chamber B under the orifice C, and within capillary-attracting distance of the same, whereby a small stream, instead of drops or jets, is caused to flow regularly and uniformly into the common ruling-pens J. A wick or siphon-thread may likewise be used, extending from the chamber B to the pens; but I prefer to use the valved orifice C with its conduit H.

The reservoir A is charged with the colored fluid through an aperture, K, near the top, which is closed and regulated by a stopper, L. This arrangement constitutes a single fountain, being filled with colored fluid and having a pen attached to execute the ruled line in its respective color.

Any number of fountains are arranged along an ordinary or common pen-beam, M, and each fountain discharges its respective colored fluid into its appropriate pen J, and rules its respective colored line. I have a square loop or clip, P, made of wire, fastened permanently to the bottom of the reservoir A, which is let down through a slot in the beam M, and tightened by a square wooden wedge, R, underneath. By loosening the wedge R, I can then move each reservoir to the right or left, by which I adjust the reservoirs A close together, or any distance apart, to regulate the width between the ruling lines.

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

A series of adjustable reservoirs of any shape or material, with atmospheric fountain-feeders, each containing a colored ruling-fluid, (to be attached to ruling-machines,) for the purpose of ruling colored lines.

ADDISON SMITH.

Witnesses:

J. FRANKLIN REIGART,  
JOHN S. HOLLINGSHEAD.