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R. M. Linn's Photographic Filtering Machine.

No. 119,375.

Patented Sep. 26, 1871.

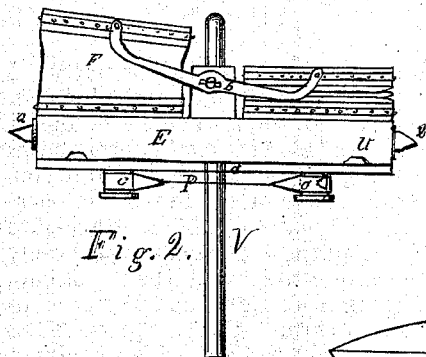


Fig. 2.

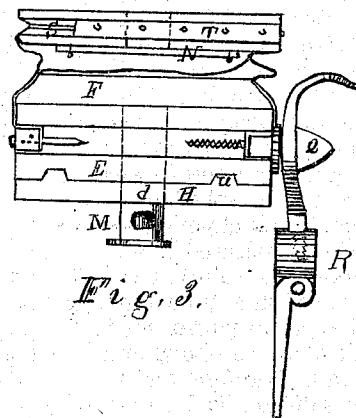


Fig. 3.

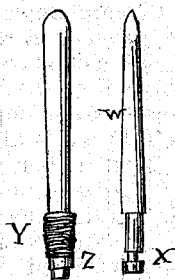


Fig. 4.

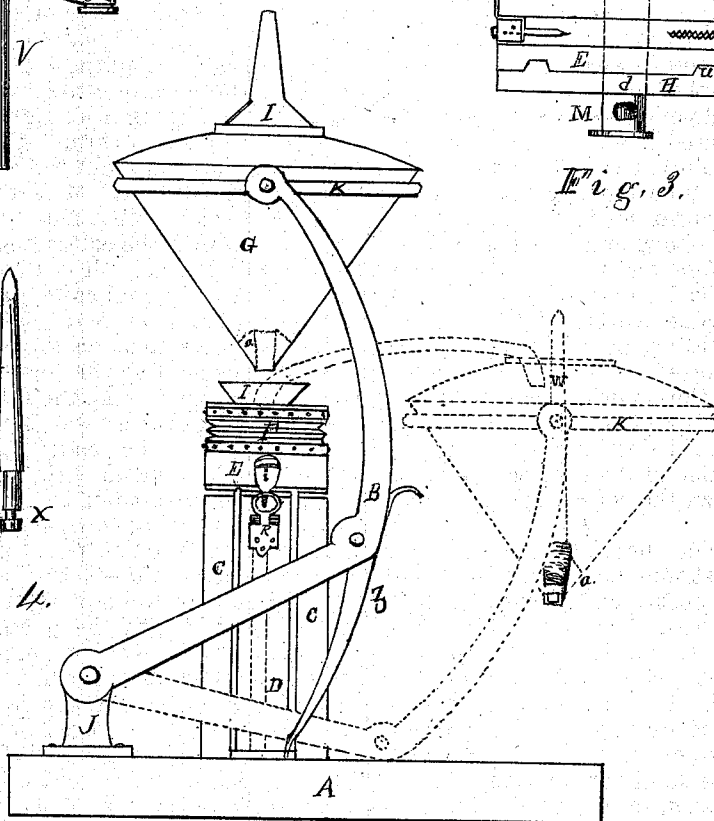


Fig. 1.

Inventor:

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Witnesses:

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UNITED STATES PATENT OFFICE

ROBERT M. LINN, OF LOOKOUT MOUNTAIN, TENNESSEE.

IMPROVEMENT IN PHOTOGRAPHIC FILTERING APPARATUS.

Specification forming part of Letters Patent No. 119,375, dated September 26, 1871.

To all whom it may concern:

Be it known that I, ROBERT M. LINN, of Lookout Mountain, in the county of Hamilton and State of Tennessee, have invented certain Improvements in Photographic Filtering Apparatus, of which the following is a specification:

The first part of my invention relates to the combination of a photographic dipping-bath for holding silver in solution and a pneumatic arrangement firmly clamped upon the top of the bath-cup, and operated in a manner to compress the air above the solution and cause it to be discharged through a tube into a funnel or reservoir. The second part of my invention relates to the use of a filtering-bowl and for the purpose of filtering in a thorough and convenient manner the silver solution back into the bath-cup.

Figure I is an end elevation of the machine embodying my invention, and shows the position for filtering; the dotted lines give the position when transferring the solution to the filtering apparatus. Fig. II is a plan of the compressing arrangement. Fig. III details more clearly the parts and construction of the compressing apparatus. Fig. IV shows the construction of the filtering-plug.

A is the base, which should be constructed of wood, upon which should be attached the supporting-arms B, the post J, and the box C C containing the bath-cup D. These parts should be made of iron or brass, in a light but substantial manner. G is the filtering-bowl, which should be large enough to hold the contents of the bath-cup, and should be made of glass, photographic ware, or hard rubber, or any firm substance that will not contaminate the silver solution. It is to be made, as shown at *a*, to receive the filtering-plug and to prevent the sediment from clogging the filtering material. K is a metal ring attached to the arm B for supporting the filtering-bowl. I is a glass or hard-rubber funnel, to convey the solution into the bath-cup. F are bellows for compressing the air, to be made of strong pliable leather or vulcanized rubber. S is a grooved block, upon which the leather or rubber is attached. T shows a binding-strip, nailed in the groove S and binding the bellows firmly to the block to make the joint air-tight; it should be

cemented with, glue, varnish, lead, or putty. L is a slotted double arm for actuating the bellows. N is a strap valve. E, the lower bellows-block, with grooves on the face of it of the form shown at *u*, and extending around the edges of it to conform to the exact shape of the top of the bath-cup. H is a flexible plate of rubber, attached to the block for the purpose of firmly and closely packing the point of contact with the top of cup, and thus rendering it air-tight, and the grooves are intended, also, to firmly support the top of the cup from the pressure of the air. *d* is a packing-joint for the tube *v*. M is a valve, of wood or other material, with a flute-like hole; this is to be covered with the soft-rubber strap C or band of suitable tension. R is a compression-loop, of metal, so constructed as to lessen or increase the tension with a screw-eye. Q is a catch, of metal, sloped and fastened on the end of the bellows-block E, for holding the compression-loop R. V is a tube for conveying the solution to filter, and should be made of glass or hard rubber. W is a filtering-plug, to be made of glass, hickory, or rubber, and provided with the shoulder X, and capped with a band of soft rubber to shut the opening of filtering-bowl, and wrapped with cotton, as represented at Y and Z.

I claim as my invention—

1. The combination of the compressing apparatus F and E with the photographic bath-cup D, substantially in the manner and for the purpose hereinbefore set forth.
2. The construction and arrangement of the arms B, supports *z*, posts T, and the ring K.
3. The construction of the filtering-bowl in the manner and of the material, as described, with the attachment *a* at the bottom.
4. The discharge-pipe V, of rubber or glass, and the method of inserting it through rubber packing, as at *d*.
5. The valve M, in combination with a rubber strap or band and tension-cord P.
6. The valve-strap N, when used for the purpose hereinbefore set forth.
7. The bellows F, made and used substantially as hereinbefore set forth.
8. The grooved blocks E and S, and the manner of binding the material to the same, as rep-

esented at S and T, and the groove S and U, substantially in the manner and for the purpose hereinbefore set forth.

9. The flexible-rubber plate H, for the purpose hereinbefore set forth.

10. The slotted double arm b, for the purpose hereinbefore set forth.

11. The adjustable clamping device, substantially as and for the purpose hereinbefore set forth.

12. The catch Q, for the purpose hereinbefore set forth.

13. The filtering-plug W, constructed as shown at X, combined with the wrapping Y and the rubber band Z, substantially in the manner and for the purpose hereinbefore set forth.

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Witnesses:

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