

Schrag & Hufeland,

Lead Pencil Machine.

No. 103241.

Patented May 17, 1870.

Fig. 1.

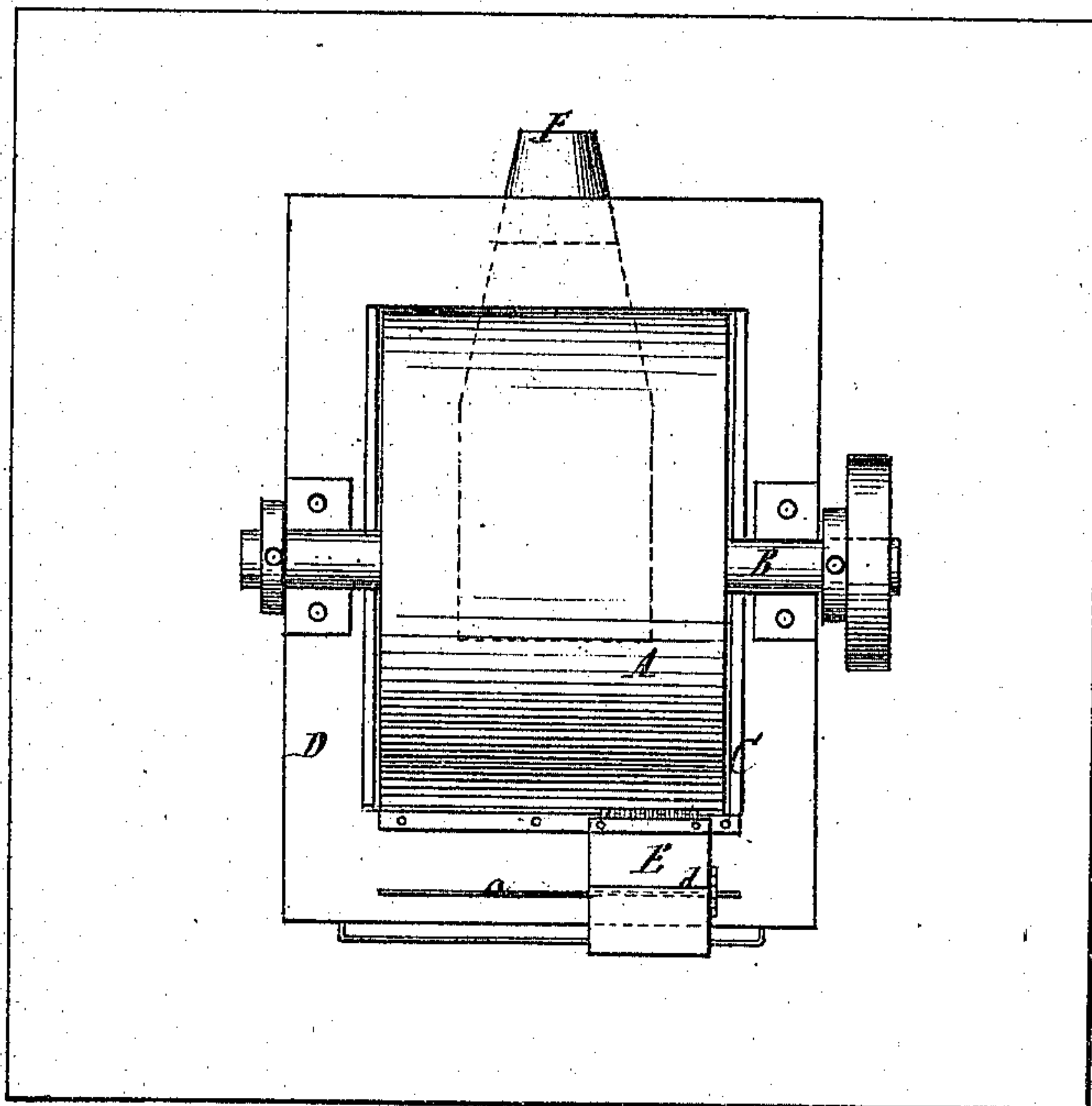


Fig. 3.

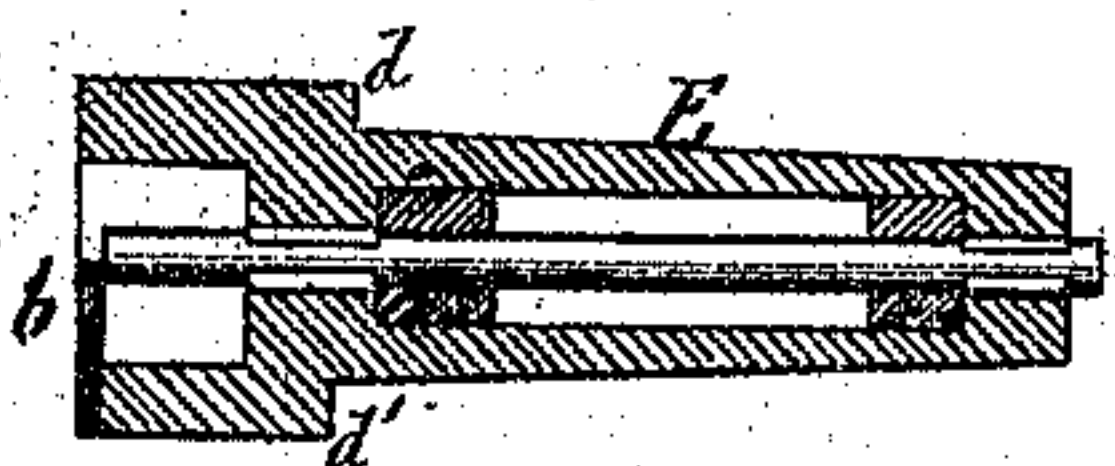
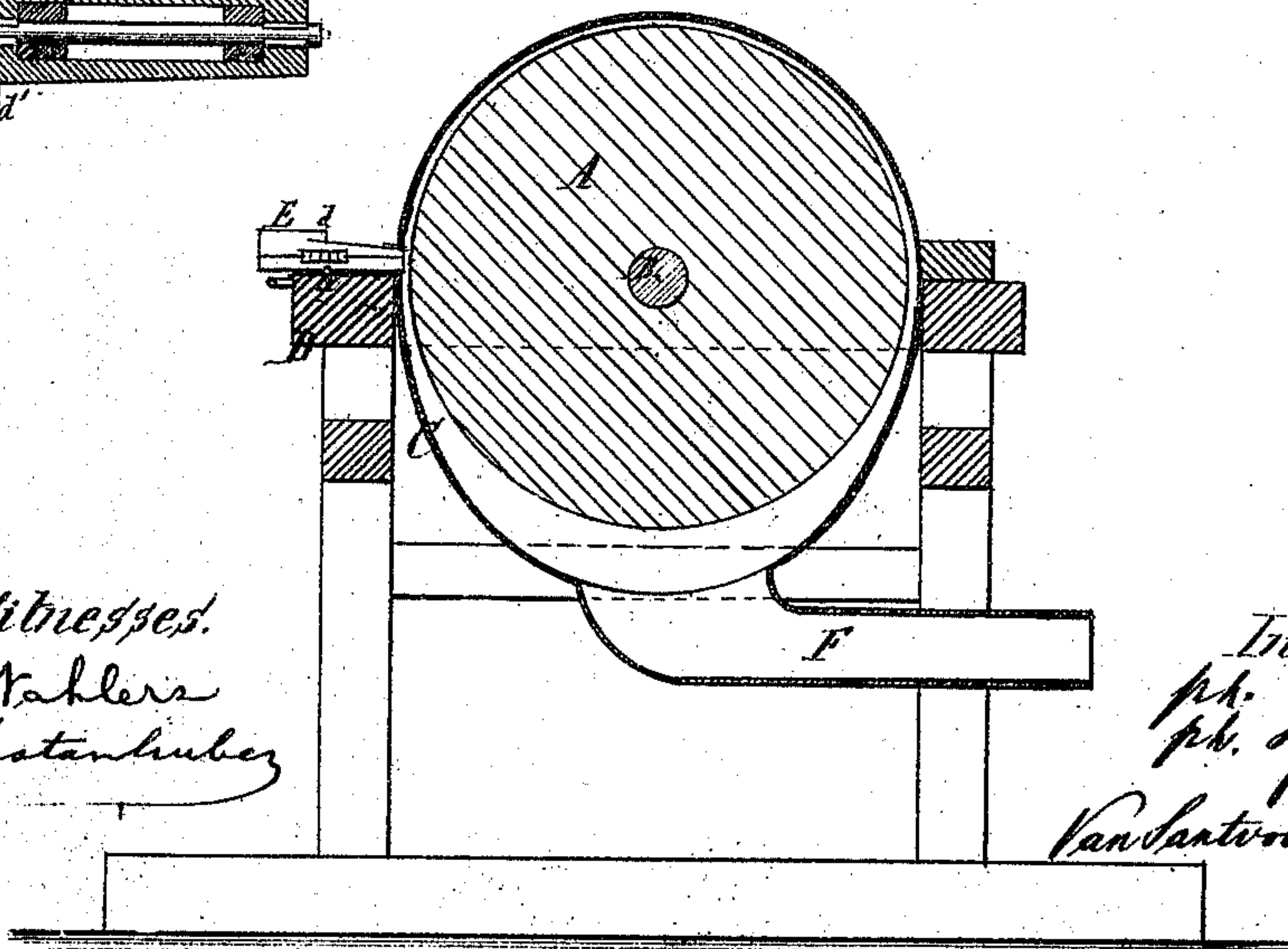


Fig. 2.



Witnesses.
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PHILIP SCHRAG AND PHILIP HUFELAND, OF NEW YORK, N. Y.

Letters Patent No. 103,241, dated May 17, 1870.

IMPROVEMENT IN MACHINES FOR CUTTING OFF LEAD-PENCILS.

The Schedule referred to in these Letters Patent and making part of the same.

To all whom it may concern:

Be it known that we, PHILIP SCHRAG and PHILIP HUFELAND, of the city, county, and State of New York, have invented a new and useful Improvement in Machinery for Cutting off Lead-Pencils; and we do hereby declare the following to be a full, clear, and exact description thereof, which will enable those skilled in the art to make and use the same, reference being had to the accompanying drawing forming part of this specification, in which drawing—

Figure 1 represents a plan or top view of this invention, the top of the inclosing-jacket having been removed to expose the working parts.

Figure 2 is a transverse vertical section of the same.

Figure 3 is a detached section of the frame used for holding the lead-pencils while the same are being cut.

Similar letters indicate corresponding parts.

This invention consists in the arrangement of a frame capable of containing a series of lead-pencils, and provided with two shoulders, situated on opposite sides, and one slightly in advance of the other, in combination with a guide-rail and with a moving surface covered with sand-paper, or other equivalent material, in such a manner that, by the combined action of the frame, the guide-rail, and the moving surface, the pencils can be readily cut off to the required length, and the labor and expense required for this purpose are materially reduced.

The drum or moving surface is inclosed in a tight box, which connects with an exhaust-fan in such a manner that the dust created by the operation is drawn off, and prevented from interfering with the health of the operator.

In the drawing—

The letter A designates a drum, made of wood or any other suitable material, and covered with sand-paper or other material of a similar nature, capable of producing a cutting or grinding-surface.

Said drum is mounted on a shaft, B, which has its bearing in the sides of a frame, D, supporting a box, C, which completely incloses the drum, with the exception of a narrow space, through which the pencils to be cut are introduced and pressed up against the cutting-surface of the drum.

On the frame D, and opposite the open space in the box C, is secured a rail, *a*, which forms the guide for the frame E, carrying the pencils to be cut.

This frame is made of halves, which are connected by a hinge, and each of which is provided with a series of semi-circular cavities to receive the pencils, so that, when the frame is opened, a number of pencils can be placed in the cavities of one half, and, by closing the frame, said pencils are firmly clamped and retained.

When clamped in the frame, the pencils bear with their rear ends against an abutment, *b*, as shown in

fig. 3 of the drawing, while their front ends project beyond the frame, so that they can be brought to bear against the cutting-surface of the drum.

The frame E is provided with two shoulders *d d'*, one of which is slightly in advance of the other, and in cutting off the first ends of the pencils the forward shoulder *d* is turned down, and the frame, being situated on the rail *a*, is pressed up against the drum until said shoulder *d* strikes the rail. The pencils are then turned in the frame, and the frame is also turned, so as to bring the rear shoulder *d'* down, and the second ends of the pencils are cut off as before.

This operation of turning the frame is necessary, because, if the pencils were simply turned in the frame, the shoulder *d* would not allow said frame to advance near enough toward the cutting-surface of the drum to cut off the second end of the pencils; but, by turning the frame, and by placing the shoulder *d'* in the rear of the shoulder *d*, the second ends of the pencils can be cut off, and all the pencils are thus cut to a uniform length.

From the bottom part of the case C extends a tube, F, which connects with an exhaust-fan, so that the dust created by the grinding operation is carried off, and prevented from annoying the operator.

By these means the operation of cutting off lead-pencils is materially simplified. No saw or files are required, the wood of the pencils is not liable to split, and the grinding-surface of the drum can be readily renewed, at comparatively small expense, and the pencils are brought in such a condition that a small shaving taken off from their ends, after the pencils have been varnished, leaves said ends in the required condition.

If desired, the cutting material may be applied to the side of the drum, or an endless belt might be used to produce a similar effect, but we use, by preference, a drum, as shown.

What we claim as new, and desire to secure by Letters Patent, is—

1. The clamping-frame E, provided with shoulders *d d'*, in combination with a guide-rail, *a*, and with a moving grinding-surface, substantially as herein shown and described.

2. The arrangement of a jacket or box, C, inclosing the cutting-drum A, with the clamping-frame E and the tube F, for connecting with an exhaust-fan, substantially as herein shown and described, and for the purpose set forth.

This specification signed by us this 14th day of March, 1870.

PHILIP SCHRAG.
PH. HUFELAND.

Witnesses:

W. HAUFF,
E. F. KASTENHUBER.