

THOMAS H. BURRIDGE.

Improvement in the Manufacture of White-Lead.

No. 114,405.

Patented May 2, 1871.

Fig. 1.

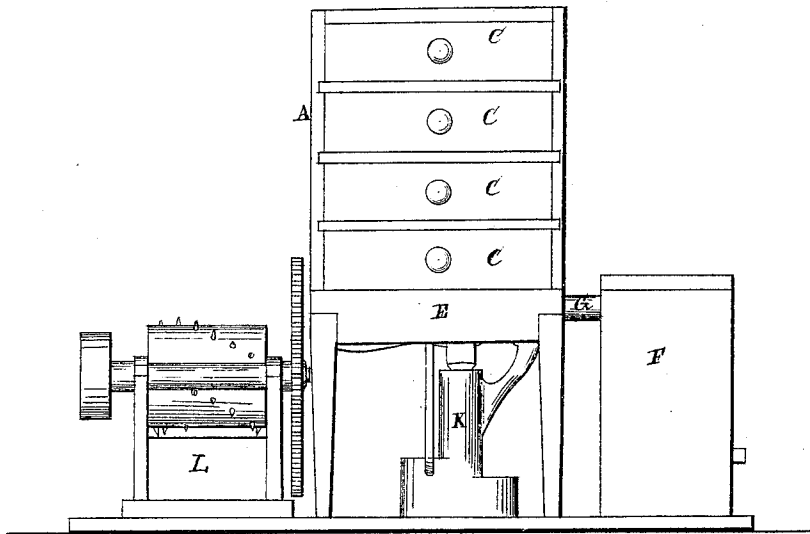
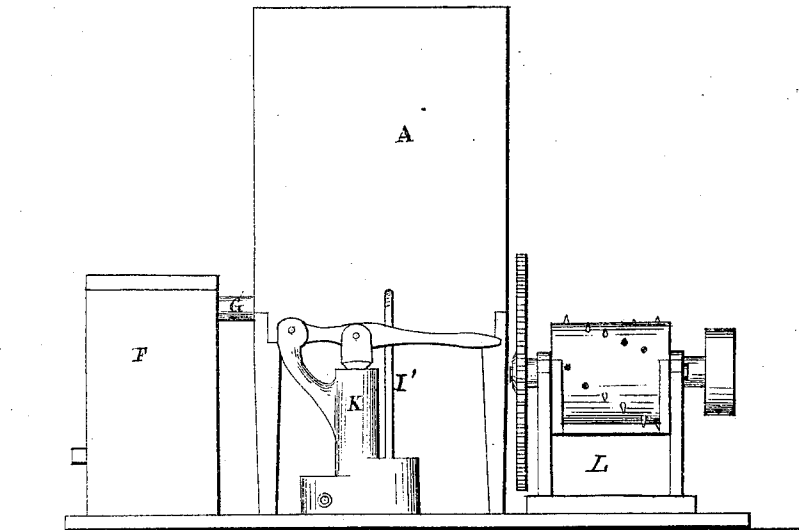


Fig. 2.



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Fig. 3.

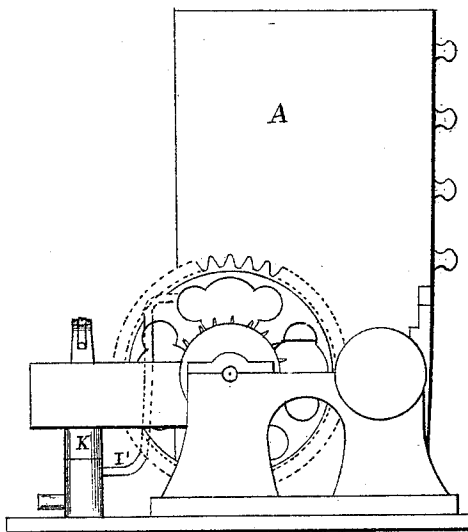


Fig. 4.

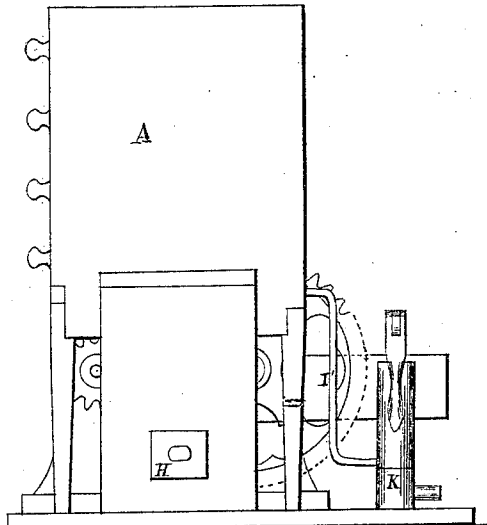


Fig. 5.

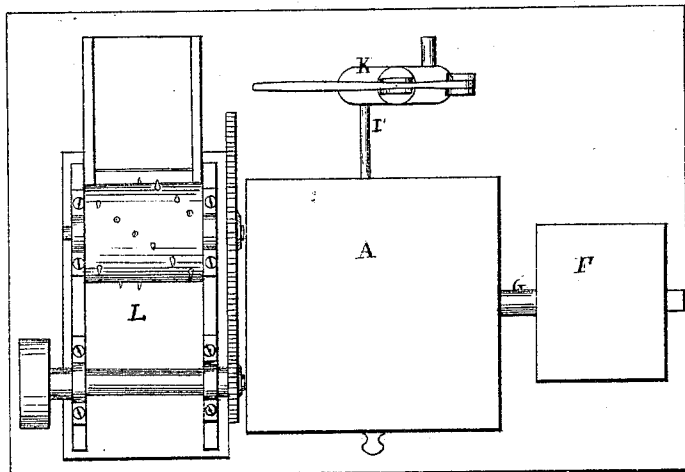


Fig. 6.

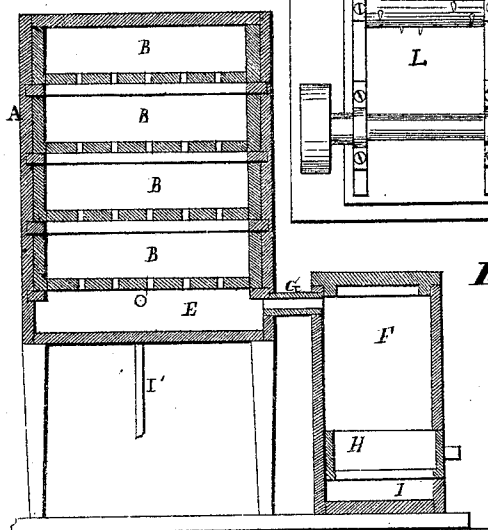
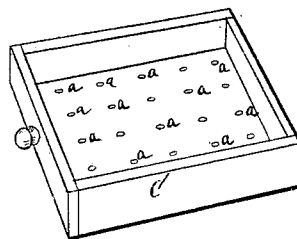


Fig. 7.



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THOMAS H. BURRIDGE, OF ST. LOUIS, MISSOURI.

Letters Patent No. 114,405, dated May 2, 1871.

IMPROVEMENT IN THE MANUFACTURE OF WHITE LEAD.

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

To all whom it may concern:

Be it known that I, THOMAS H. BURRIDGE, of St. Louis, in the county of St. Louis and State of Missouri, have invented a certain new and improved Lead-Machine; and I do hereby declare that the following is a full, clear, and complete description of the same, reference being had to the accompanying drawing making part of this specification, in which—

Figure 1 is a front elevation of the apparatus.

Figure 2 is a rear elevation.

Figures 3 and 4 are side elevations.

Figure 5 is a plan view

Figure 6 is a vertical section.

Figure 7 is a detached section.

Like letters of reference refer to like parts in the several views.

The nature of this invention relates to an apparatus for the manufacture of white lead and other metallic pigments; and

The object of said invention is to produce carbonate of lead and other metallic pigments in a much shorter period of time than is required in the ordinary process, and of as good a quality, thereby reducing the cost of said pigments.

In the drawing, fig. 1—

A represents a chamber, which may be constructed of any material unaffected by the presence of acids used, and which also may be of any desirable shape and of any capacity.

Said chamber is divided into compartments, B, fig. 6, more or less in number, in which are fitted drawers, C, fig. 1. A detached view of one of said drawers is shown in fig. 7, in which it will be seen that the bottom thereof is perforated with holes *a*.

Instead of said drawers there may be a series of perforated shelves; practically, however, the drawers are found to be the most convenient.

Immediately below said drawers is a vapor-chamber, E, fig. 6, which is put in communication with a gas-generator, F, by means of a pipe, G.

In said generator is fitted a drawer, H, fig. 6, underneath which is a fire-place or furnace, I. Said generator is also constructed of any material not readily affected by the action of acids engaged for this purpose.

K, fig. 4, is a force-pump or injector, connected to the chamber E by a pipe, I', the purpose of which will hereinafter be shown.

The practical operation of the above-described apparatus is as follows, viz.:

Granulated lead or other metal of which the pigment is to be made (the product of the granulating-machine L, shown at the side of the apparatus, and which is used in connection therewith for the granulation of the metal) is placed in the drawers C, which are then pushed into their respective places in the chamber A.

In the drawer H of the generator F is conveyed acetic acid, carbonic-acid gas or material from which carbonic-acid gas may be evolved, and below which, in the furnace I, is kindled a charcoal-fire, and whereby the acid in the drawer above is vaporized. The vapor thus generated fills the chamber E, from which it passes through the pipe G into the gas-receiver or chamber E below the drawers.

By means of the force-pump or injector K the vapor is forced from said chamber through the series of drawers or shelves into and among the granulated lead therein, which is immediately attacked by the vapor and reduced to a carbonized condition, or carbonate of lead.

This process occupies but from three to five days, and the result of which is a carbonate of lead equal in purity and fineness to that produced in the old process, occupying a much longer period of time.

The necessary heat for vaporizing the acetic acid or other material for the production of carbonic-acid gas can be obtained by the use of steam.

The gas, however, from the burning charcoal-assists in the carbonizing process, and therefore can be used with better results than can be obtained by the use of steam for vaporizing the acids.

Claims.

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

1. The generator F, drawer H, and furnace or fire-place I, in combination with the chamber A, vapor-chamber E, and drawers C, arranged and operating in relation to each other as and for the purpose substantially as set forth.

2. The pump K, pipe I', and chamber E, in combination with the chamber A and drawers C, arranged and operating as and for the purpose substantially specified.

THOMAS H. BURRIDGE.

Witnesses:

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