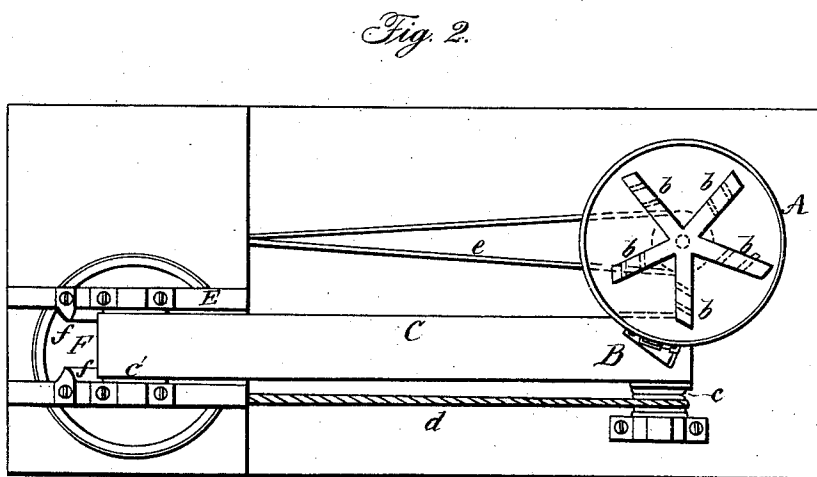
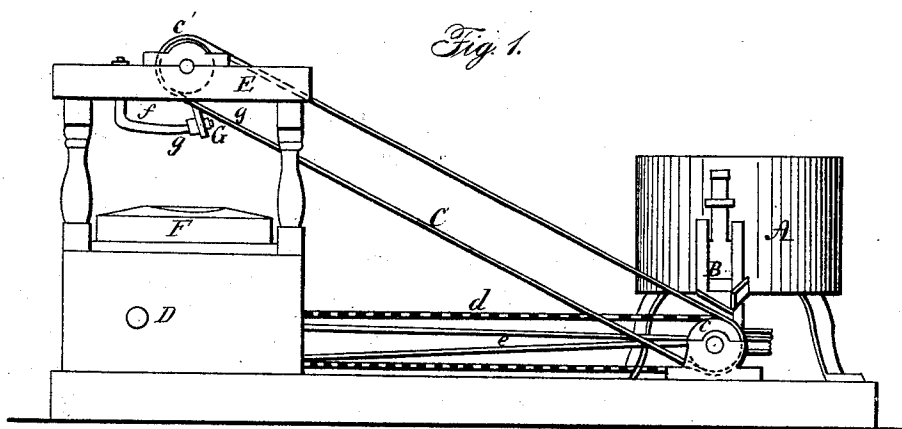


W. H. DOLSON.

Conveying White Lead to Millstones.

No. 18,538.

Patented Nov. 3, 1857.



UNITED STATES PATENT OFFICE.

WILLIAM H. DOLSON, OF NEW YORK, N. Y.

APPARATUS FOR MIXING AND GRINDING OIL-PAINTS.

Specification of Letters Patent No. 18,538, dated November 3, 1857.

To all whom it may concern:

Be it known that I, WILLIAM H. DOLSON, of the city, county, and State of New York, have invented a new and useful Improvement in Apparatus for Mixing Pigments with Oil and Grinding Them; and I do hereby declare the following to be a full, clear, and exact description of the same, reference being had to the accompanying drawing, which makes part of this specification, and in which—

Figure 1 represents a side view of a mixing and grinding apparatus containing my improvements, and Fig. 2 represents a plan or top view of the same.

My invention consists in combining with a vat and stirrer for mixing pigments with oil, and the grinder for comminuting the pigments thus mixed, an endless conveyer and a scraper, the former to receive the pigments to be ground, as it issues from the mixing vat and draw it in a continuous stream to the latter, which detaches the stream or rope of pigment from the conveyer and directs it, in a steady stream, into the eye of the grinder, thus insuring the feeding of the pigment into the grinder with regularity.

In the accompanying drawing A represents the usual mixing vat, in which the white lead, or other pigment, is placed with a quantity of oil sufficient to make a thin paste. This vat is provided with a series of vertical beaters which are secured to horizontal arms (b) on a vertical shaft within the vat. The beaters are set obliquely upon the arms, as shown by the dotted lines in Fig. 2 of the drawing, so that when the arms are rotated, the pigment will be thoroughly mixed with the oil by the action of the beaters and forced toward the periphery of the vat. A gate (B) is placed in the side of the vat (A), through which the mixed pigment is discharged in a stream, the volume of which will be regulated by the extent to which the gate (B) is opened.

An endless belt (C) which runs from a pulley (c) beneath the gate in the side of the vat to another pulley (c') over the grinder is employed to draw the pigment from the mixer and carry it to the grinder. This belt (C) may be driven by motion derived from a band (d) which passes around

the lower pulley (c) and around a shaft (D) and the shaft of the beaters in the tub or vat (A) may be rotated by a band (e) from the same shaft (D). The upper pulley (c') of the endless belt (C) is supported in a frame (E) directly over a pair of grinding stones (F). Two rods (f f) are attached, each by one of its ends, to this frame (E) and the other ends of these rods pass through and support a thin narrow plate of metal which forms a scraper (G). This scraper bears with one of its edges transversely against the under side of the belt (C), and the ends of the rods (f f) which pass through the ends of the scraper have nuts (g) upon them by which the scraper may be adjusted to bear with greater or less pressure against the belt.

The operation of the machine is as follows: The pigment and oil being placed in the vat (A) and the gate (B) in the side of the vat being shut, motion is given to the shaft (D) in any suitable manner and the belt (C) and the beaters in the vat are rotated by the bands (d) and (e) until the pigment and oil are thoroughly mixed. The grinding stones are now put in motion, the gate (B) is raised to a suitable height and a stream of the mixed pigment is forced out by the action of the beaters upon the belt (C), by which it is promptly drawn away from the gate and conveyed to the scraper (G) which detaches it from the belt and permits it to run into the eye of the upper stone of the grinder in a continuous stream. The rate at which the pigment is thus fed into the grinder may be regulated by varying the height to which the gate (B) is raised.

Having thus described my improved apparatus for grinding pigments what I claim therein as new and desire to secure by Letters Patent is—

The combination of the mixer (A) and grinder (F) with an intermediate endless belt (C) and scraper (G), the whole arranged substantially as herein set forth.

In testimony whereof, I have hereunto subscribed my name.

WM. H. DOLSON.

In presence of—

JAMES MILLER,
GEO. BRODHEAD.