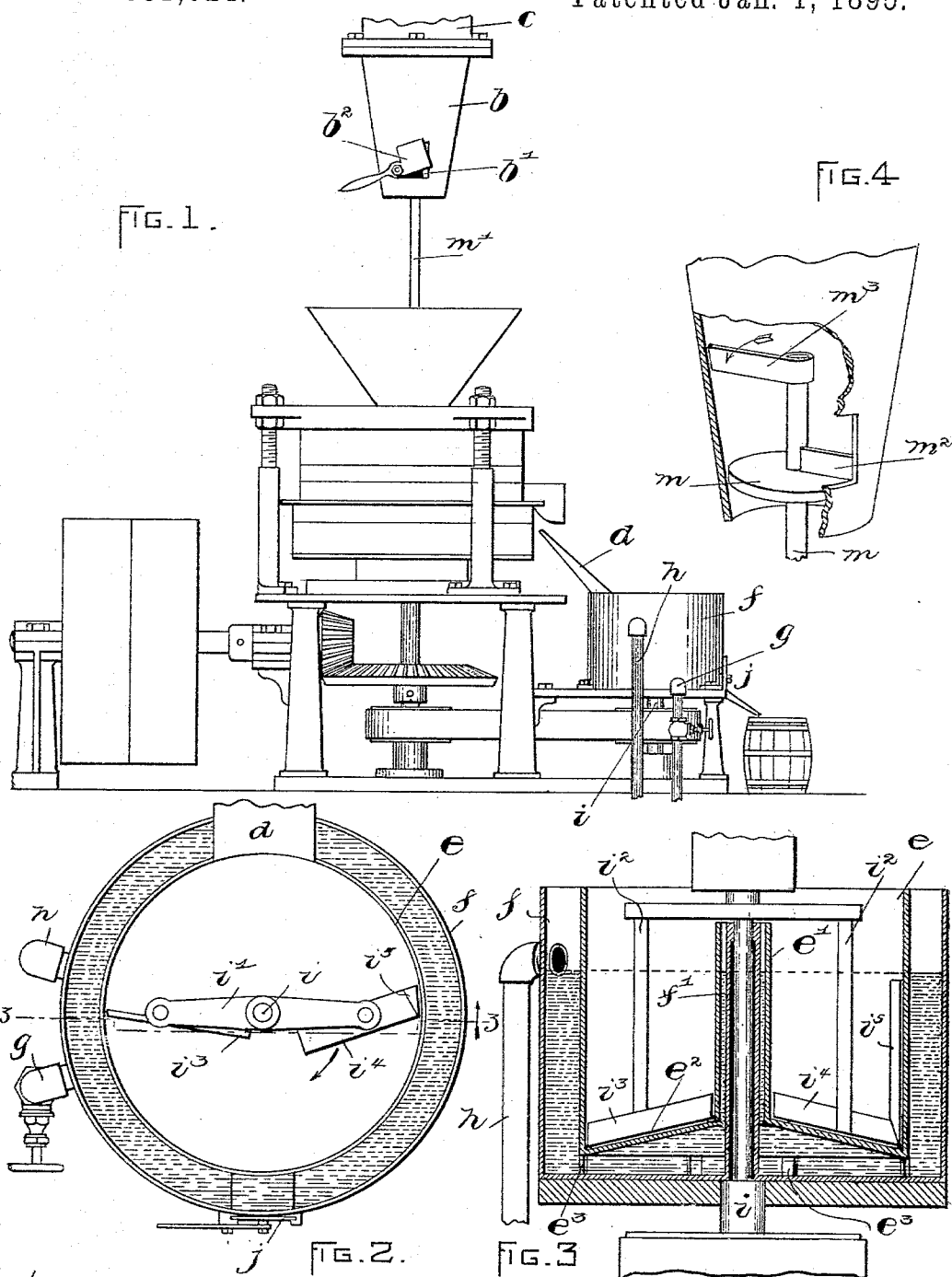


(No Model.)

C. P. ANDERSON.
PAINT MILL.

No. 531,824.

Patented Jan. 1, 1895.



WITNESSES:

A. D. Harrison.
J. Davis.

INVENTOR:

C. P. Anderson
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Attys.

UNITED STATES PATENT OFFICE.

CARL P. ANDERSON, OF EVERETT, MASSACHUSETTS.

PAINT-MILL.

SPECIFICATION forming part of Letters Patent No. 531,824, dated January 1, 1895.

Application filed March 20, 1894. Serial No. 504,429. (No model.)

To all whom it may concern:

Be it known that I, CARL P. ANDERSON, of Everett, in the county of Middlesex and State of Massachusetts, have invented certain new and useful Improvements in Paint-Mills, of which the following is a specification.

This invention relates to paint mills and the object is to provide means for more advantageously treating the paint, both in feeding it to the mill and in delivering it therefrom.

To this end the invention consists in certain novel features of construction and combinations of parts pointed out in the appended claims and specifically described in the following specification.

The accompanying drawings which form part of the specification illustrate a construction embodying the invention.

Of the drawings—Figure 1 shows a side elevation of a paint mill having my improvements. Fig. 2 shows a top plan view on an enlarged scale of the cooling apparatus. Fig. 3 shows a vertical central section of the cooling apparatus. Fig. 4 shows a perspective detail of a funnel through which the paint is supplied to the mill said funnel being represented as broken away to disclose parts inclosed within it.

It has been the practice heretofore to supply the hopper of the mill with the paint en masse, and this has been found objectionable for the reason that the paint is inclined to settle, and to feed to the mill with its ingredients not properly intermixed.

One feature of my invention resides in means for regulating the feed of the paint so that it may be supplied to the mill only in proportion as it is disposed of thereby. The devices illustrated in the drawings for accomplishing this object comprise a funnel, *b*, depending from the supply pipe, *c*, over the hopper, *a*, of the mill, and having an outlet opening, *b'*, formed in one side, and a gate, *b²*, at one side of said opening and controlling the egress of the paint therethrough. The volume of the stream of paint issuing from the opening, *b'*, is regulated by means of the gate, *b²*, in accordance with the capacity of the mill, and therefore, the paint does not collect in the hopper, *a*, as heretofore, but the latter simply serves to conduct the paint into the

mill. The bottom of the funnel, *b*, is formed by a disk, *m*, which is affixed to a shaft, *m'*, connected with the driving mechanism so that said disk is constantly rotated. An arm, *m²*, is fastened to the side of the funnel, *b*, and extends over the disk, *m*, and the paint carried around by said disk encounters said fixed arm, *m²*, and is thus agitated and kept properly mixed. The shaft, *m*, carries affixed to it at its upper end a stirrer blade or arm, *m³*, which also agitates the paint in the funnel.

Heretofore the paint has been taken directly from the mill into the barrels, kegs or other receptacles in which it is to be stored, and is still hot when delivered to such receptacles. This is objectionable for many reasons, and it is highly desirable that the paint be cooled before filling the receptacles with it.

My invention provides means for expeditiously cooling the paint as it issues from the mill and before it is delivered to the barrels, casks, or other receptacles. The paint passes from the mill onto a chute, *d*, which conducts it into a basin or receptacle, *e*, of annular form having a central stand-pipe, *e'*, and a conical bottom, *e²*. This receptacle, *e*, is surrounded by a water jacket, *f*, which is a receptacle of similar form to the receptacle, *e*, having a central stand-pipe, *f'*, which extends up into the stand-pipe, *e'*, a suitable space being left for the water. The receptacle, *e*, is provided with feet, *e³*, which rest on the bottom of the receptacle, *f*, and provide a space between the bottoms of the two receptacles for the water. The water is fed into the jacket, *f*, through a supply-pipe, *g*, which enters the lower portion of the same and rises around the sides of the receptacle, *e*, and in the space between the stand-pipes, *e'*, and *f'*. An outlet or overflow pipe, *h*, communicates with the upper portion of the jacket, *f*, and the design is to maintain a constant circulation of cold water around the receptacle, *e*, so that the paint within the same will be subjected to the cooling effect thereof to the best advantage. In order to promote the cooling of the paint, and also keep the same properly mixed, the following means are employed to agitate the paint within the receptacle, *e*: A shaft, *i*, operatively connected with the driving mechanism, extends up through the stand-pipe, *f'*, and carries a cross-head, *i'*, to

the two opposite ends of which are affixed pendent arms, i^2 . Stirring and scraping blades, i^3 and i^4 , are fastened to the lower ends of the arms, i^2 , and extend over the inclined bottom of the receptacle, e . The said blades are set obliquely and the angle of the blade, i^3 , is such as to cause said blade under rotation to work the paint toward the middle of the receptacle. The blade, i^4 , is arranged reversely with respect to the blade, i^3 , so that it has the opposite effect on the paint, viz: to work the same outwardly from the center of the receptacle. By this arrangement the paint is thoroughly agitated within the receptacle, e . The blades, i^3 , and i^4 , scrape over the bottom of the receptacle so that different portions of the paint are constantly subjected to the cooling effect of the water under the receptacle. The blade, i^4 , has an upward projecting arm, i^5 , which extends over the side of the receptacle, e , and scrapes the paint therefrom as it revolves, and thus causes different portions of the paint to be subjected to the cooling effect of the water surrounding the receptacle.

It will be seen that by the arrangement described the paint will be quickly cooled. It is delivered from the receptacle, e , to the barrels, casks, or other receptacles in which it is to be stored through an outlet which is controlled by a gate, j .

Having thus described my invention, what I claim as new, and desire to secure by Letters Patent, is—

1. In a paint-mill, a supply funnel having an outlet opening in one side only, a gate controlling egress from said opening, a shaft ex-

tending up into the funnel and carrying a stirrer-blade, a disk on the shaft and forming a rotating bottom for the funnel, and a fixed arm projecting from the side of the funnel at one side of the opening and extending over the said disk below the plane of the stirrer-blade.

2. A paint mill comprising in its construction a supply funnel, a stationary annular receptacle for the paint below said funnel, a water jacket extending around the outer sides and under the bottom of said receptacle and connected with a central stand-pipe, an outlet from the paint receptacle through the water jacket and means for agitating the paint in the receptacle.

3. A paint mill comprising in its construction a supply funnel, an annular receptacle for the paint below said funnel, a water jacket extending around the outer sides and under the bottom of said receptacle and connected with a central stand-pipe, stirring mechanism comprising the shaft i extending up through the stand-pipe and having the cross-head i' at its upper end, said cross-head having the pendent arms i^2 provided with scraping and stirring blades at their lower ends, and means for rotating the shaft, substantially as described.

In testimony whereof I have signed my name to this specification, in the presence of two subscribing witnesses, this 19th day of March, A. D. 1894.

CARL P. ANDERSON.

Witnesses:

A. D. HARRISON,
ROLLIN ABELL.