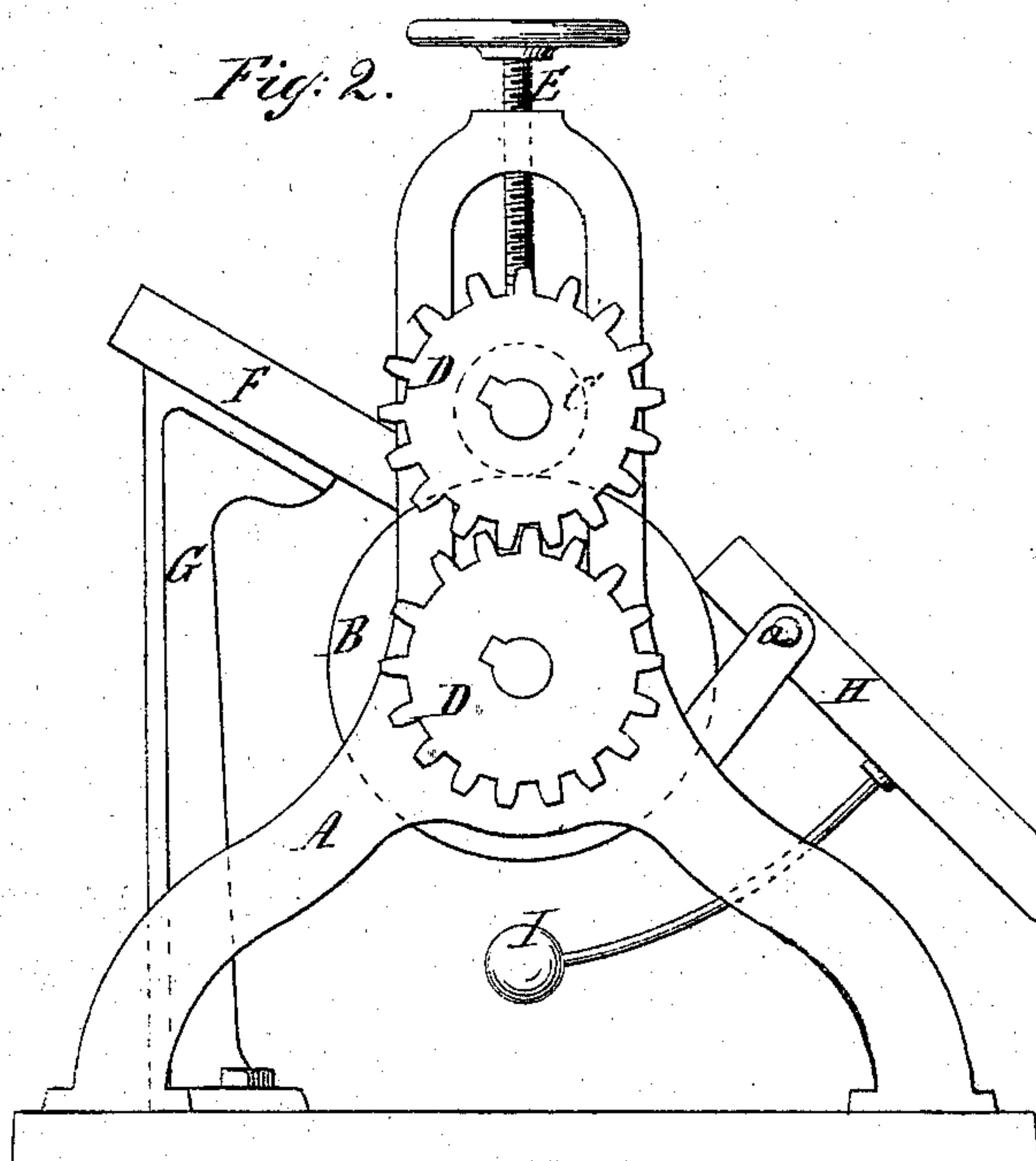
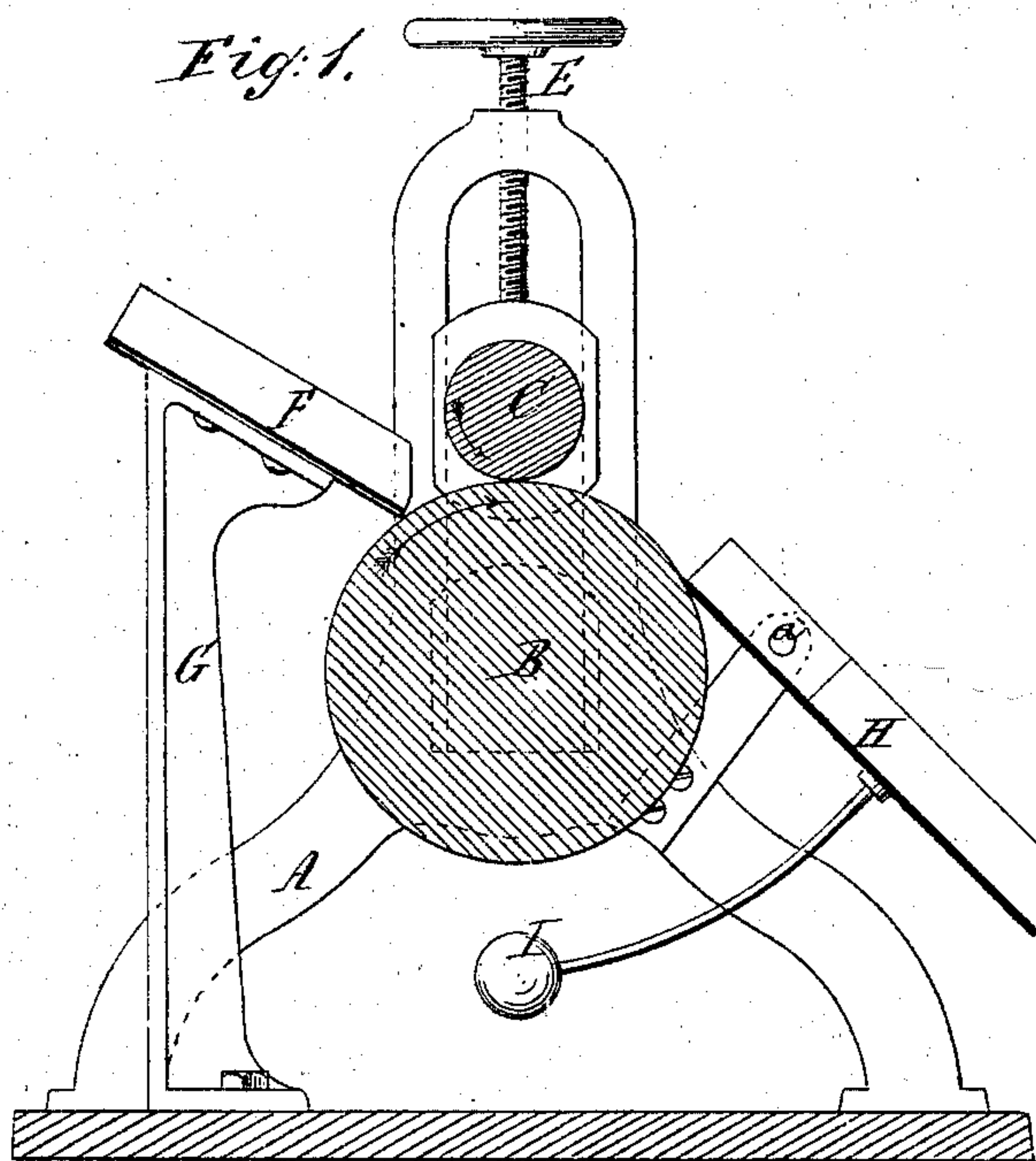


T. R. KINGDON & L. P. DODGE.

Mills for Grinding Paint.

No. 136,838.

Patented March 18, 1873.



Witnesses:
Ernst Bilhuber.
E. F. Kastenhuber

Inventors:
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UNITED STATES PATENT OFFICE.

THOMAS R. KINGDON AND LEMUEL P. DODGE, OF NEW YORK, N. Y.

IMPROVEMENT IN MILLS FOR GRINDING PAINTS.

Specification forming part of Letters Patent No. 136,838, dated March 18, 1873.

To all whom it may concern:

Be it known that we, THOMAS R. KINGDON and LEMUEL P. DODGE, both of the city, county, and State of New York, have invented a new and useful Improvement in Mills for Grinding Paint and other Materials; 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 represent a transverse vertical section of this invention. Fig. 2 is an end view of the same.

Similar letters indicate corresponding parts.

This invention consists in the combination of two rollers of unequal diameter, which are geared together by cog-wheels of equal diameter, and of a feed-apron and a discharge-trough, in such a manner that the material to be ground, on being fed to the rollers, rests upon the lower large roller, which revolves with a greater superficial velocity than the upper small roller, and, consequently, has a tendency to carry said material up between the rollers, where it is ground with great economy in time. The upper edge of the discharge-trough is pressed up against the surface of the large roller by a weight or spring, so that it serves to keep the surface of said roller clean.

In the drawing, the letter A designates a frame, which forms the bearings for two rollers, B C, which are of different diameter, the lowest roller B being about three times as large as the upper roller C. These two rollers are geared together by cog-wheels D D, Fig. 2, which are of equal diameter, and if a rotary motion is imparted to said rollers the superficial velocity of the lower roller is about three times larger than that of the upper roller, or in proportion to the difference in the diameter of the two rollers. The journal-boxes of the upper roller C are exposed to adjusting-screws E, so that the two rollers can be set

close together, and that they can be compressed one upon the other with more or less pressure, according to the nature of the material to be ground. This material is fed to the rollers over an apron, F, which is supported upon a standard, G, and the edge of which comes close up to the surface of the lowest roller at some distance from the upper roller. On the opposite side of the lowest roller B is secured a discharge-trough, H, which swings on pivots *a* secured in arms which project from the frame A, and with this discharge-trough is combined a weight, I, which keeps the upper edge of said trough in contact with the roller B, so that this edge forms a scraper or doctor, keeping the roller B clean. If desired, a spring might be substituted for the weight.

When the two rollers are rotated in the direction of the two arrows marked thereon in Fig. 1, the lowest roller, which revolves at a greater superficial velocity than the upper roller, carries the material which rests on it in between the rollers, and in passing through between these rollers the material is ground up and gradually delivered to the discharge-trough.

By this peculiar arrangement of the two rollers B C the operation of grinding paint or other material can be effected with great economy in time and in labor.

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

The combination of a large lower roller, B, and of a small top roller, C, both rollers being geared together by cog-wheels of equal diameters, and operating in conjunction with a feed-apron and with a discharge-trough, substantially in the manner and for the purpose herein shown and described.

THOMAS R. KINGDON.
LEMUEL P. DODGE.

Witnesses:

W. HAUFF,
E. F. KASTENHUBER.