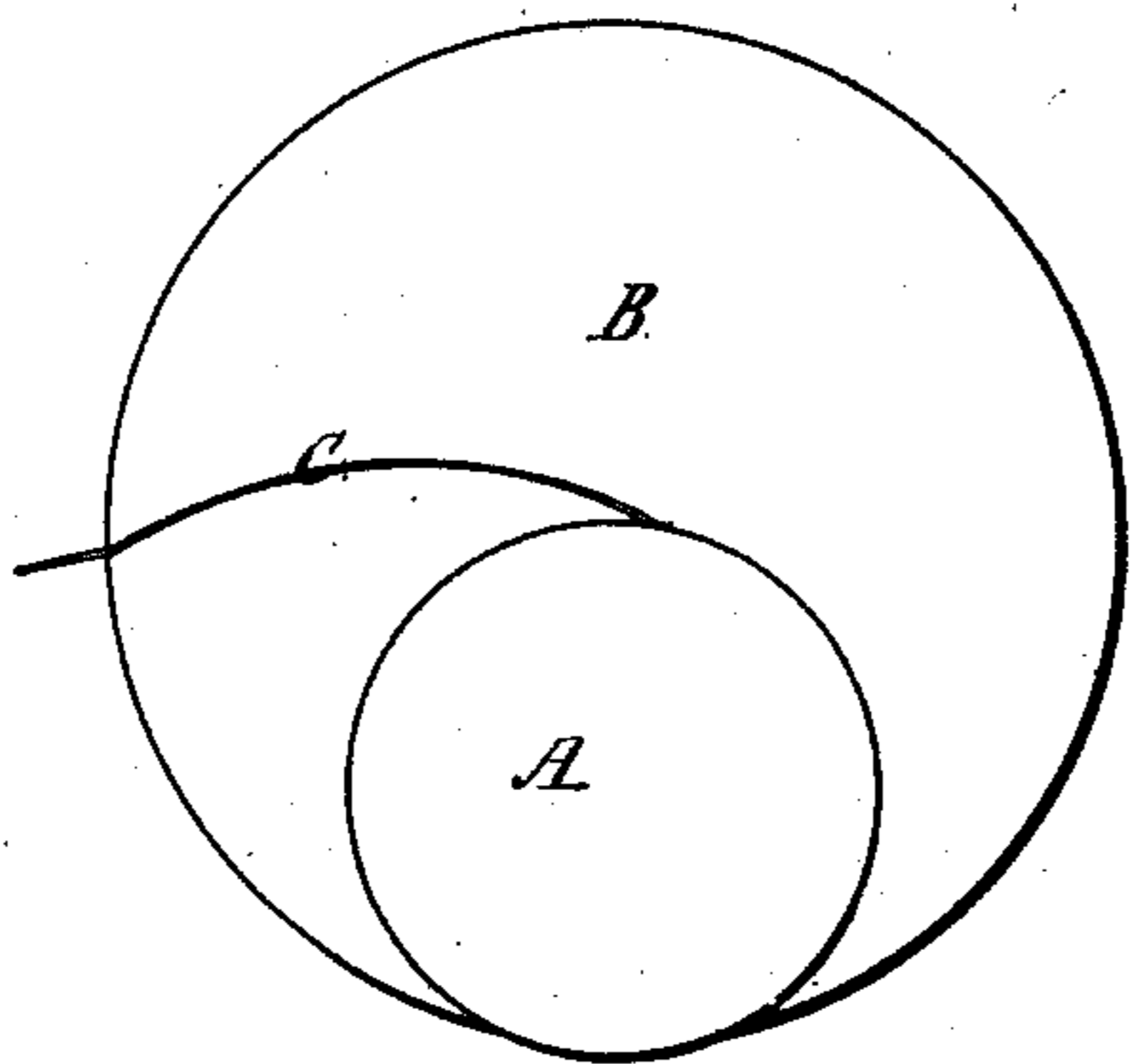
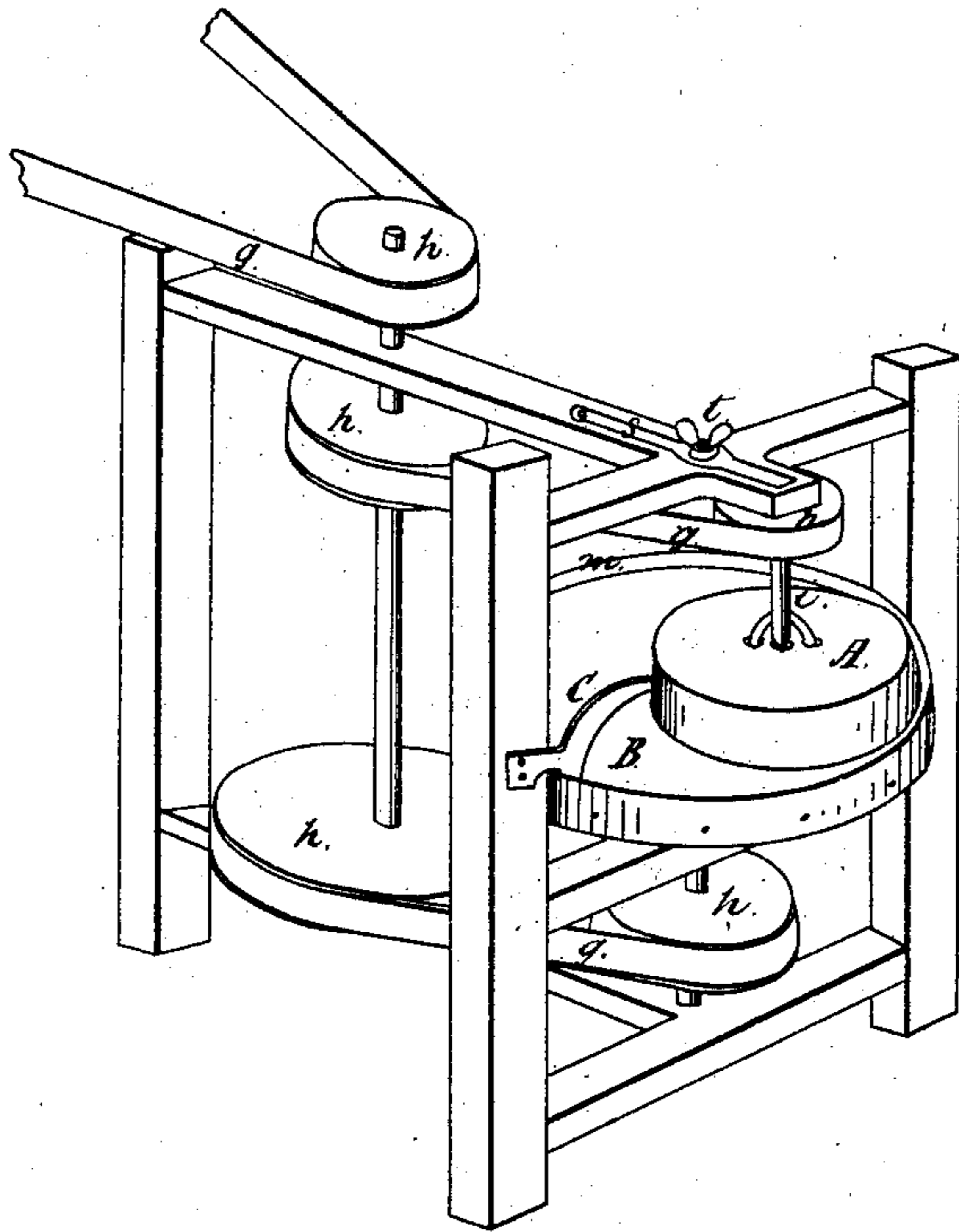


C. Belcher,

Paint Mill.

No. 76,386.

Patented Apr. 7. 1868.



Witnesses
W. M. Gooding
Sidney W. Edwards.

Inventor.
Charles Belcher

United States Patent Office.

CHARLES BELCHER, OF NEWARK, NEW JERSEY.

Letters Patent No. 76,386, dated April 7, 1868.

IMPROVEMENT IN PAINT-MILLS.

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, CHARLES BELCHER, of the city of Newark, in the county of Essex, and State of New Jersey, have made certain Improvements in Mills for Fine Grinding of Colors, Enamels, and all articles of that kind; and I do hereby declare the following to be a full and exact description of the same, reference being herein had to the drawings that accompany this specification, and make part of the same.

It has been a great desideratum, not heretofore perfectly attained, to have a mill so constructed that the grinding-surfaces should preserve a face with the plane unaltered by the wear of its work. The need of a quickly-produced uniformity of fineness in the material subjected to the grinding process, and of preventing the waste of the very costly articles requiring fine grinding for use in the various arts, has not been fully met by any of the really good mills in common use. The improvement made will appear to be but slight, although its effects are of great importance. It consists in so arranging or adapting two grinding-surfaces that the constant tendency of their wear shall be to produce and preserve plane surfaces as near to perfection as possible, the consequence being a uniformity in fineness in the material under process of disintegration, with less waste of stock than otherwise is attainable, much time being saved not only in grinding, but also in the time lost in correcting their regular grinding-surfaces caused by wear from use in all other mills.

These important results are attained by having two grinders, A and B, (in the drawings,) A being about half the size of B, both revolving, A being made to cover the entire space between the centre and the circumference of the larger grinder, B, every portion of the entire surface of A giving precisely the same amount of friction to the whole of the face of B, rendering any inequality from wear nearly or quite impossible. By means of the guide C, and the upward-projecting rim *m*, the material is confined to the grinding parts and place.

A spring, *s*, is placed over the top of the driving-shaft *i* of the grinder A, that, by means of the thumb-screw *t*, regulates the pressure of the grinder A upon the material under process of grinding. The driving-shaft *i* is not fast to the grinder A, being loose, to allow of perfectly parallel contact of the faces of the grinders.

This mill being intended for the finer kind of material used in the fine arts, is not confined to the use of any particular kind of grinders. Stone, porcelain, glass, or metal can be employed with the same results of uniform disintegration.

Motion is given by pulleys *h*, and belts *g*, as may be desirable.

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

The two revolving grinders, A and B, the one about half the size of the other, when combined with the scraper C, arranged and operated relatively to each other, as above described, and for the purpose set forth.

CHARLES BELCHER.

Witnesses:

W. M. GOODING,

SIDNEY U. EDWARDS.