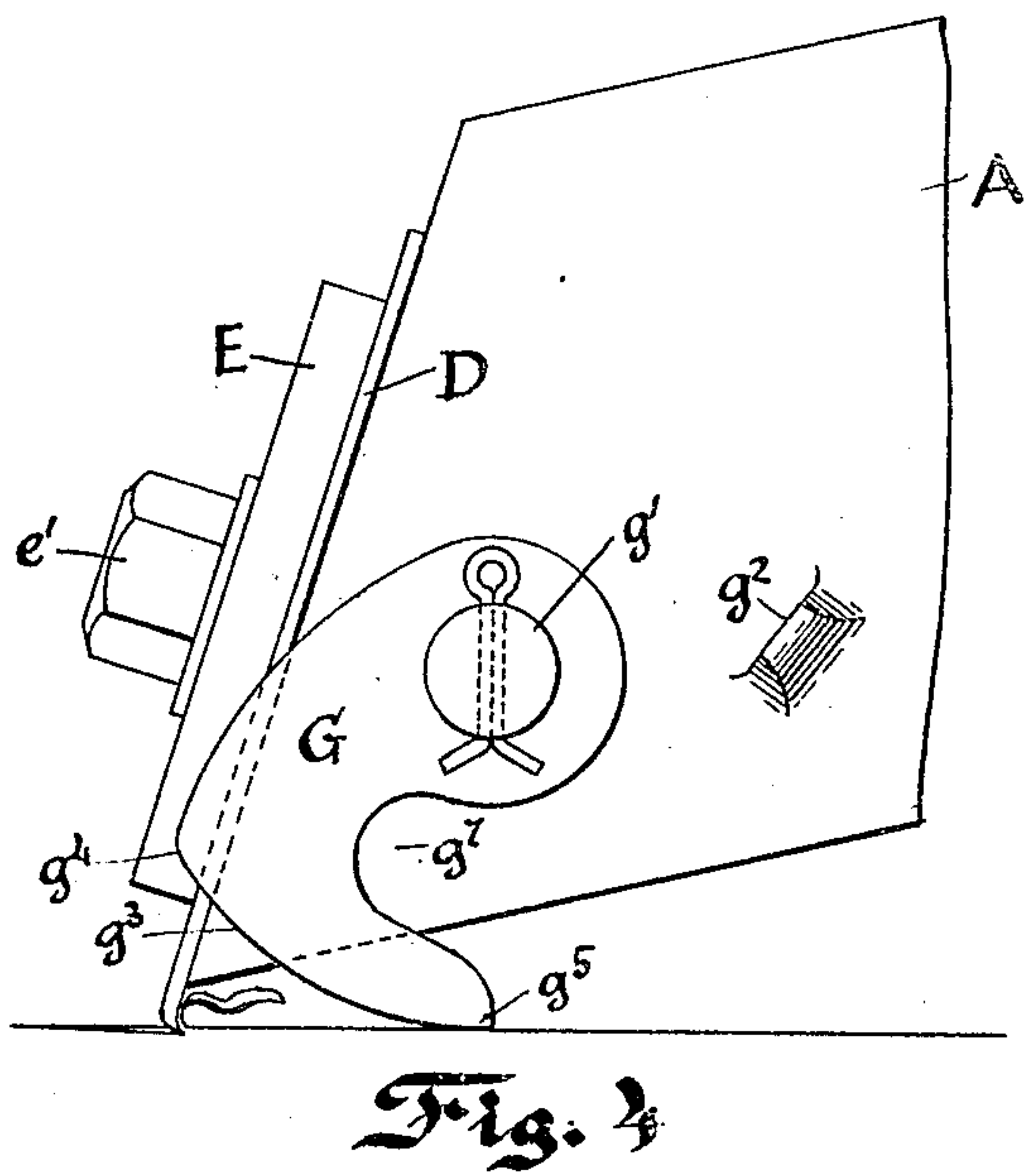
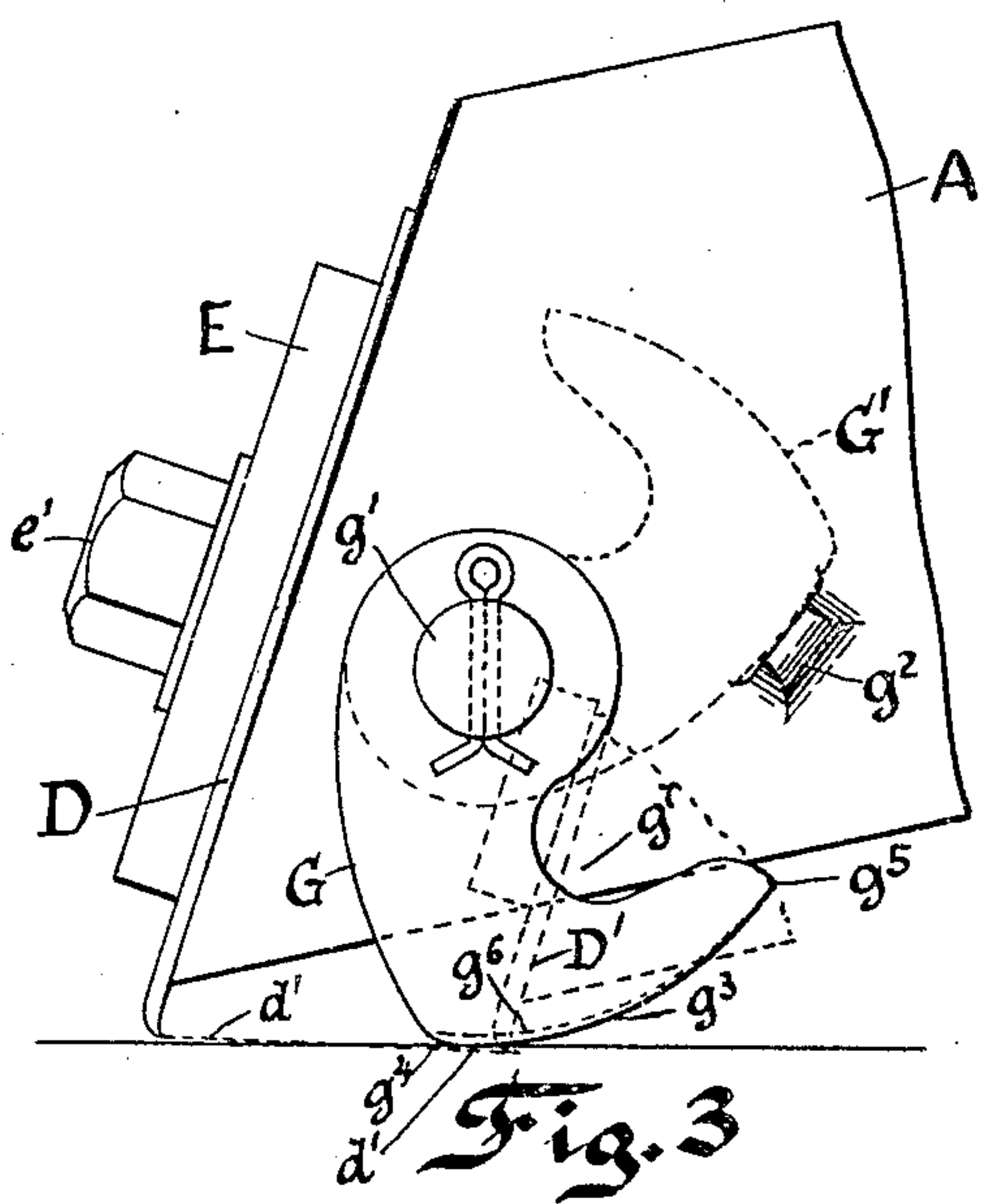
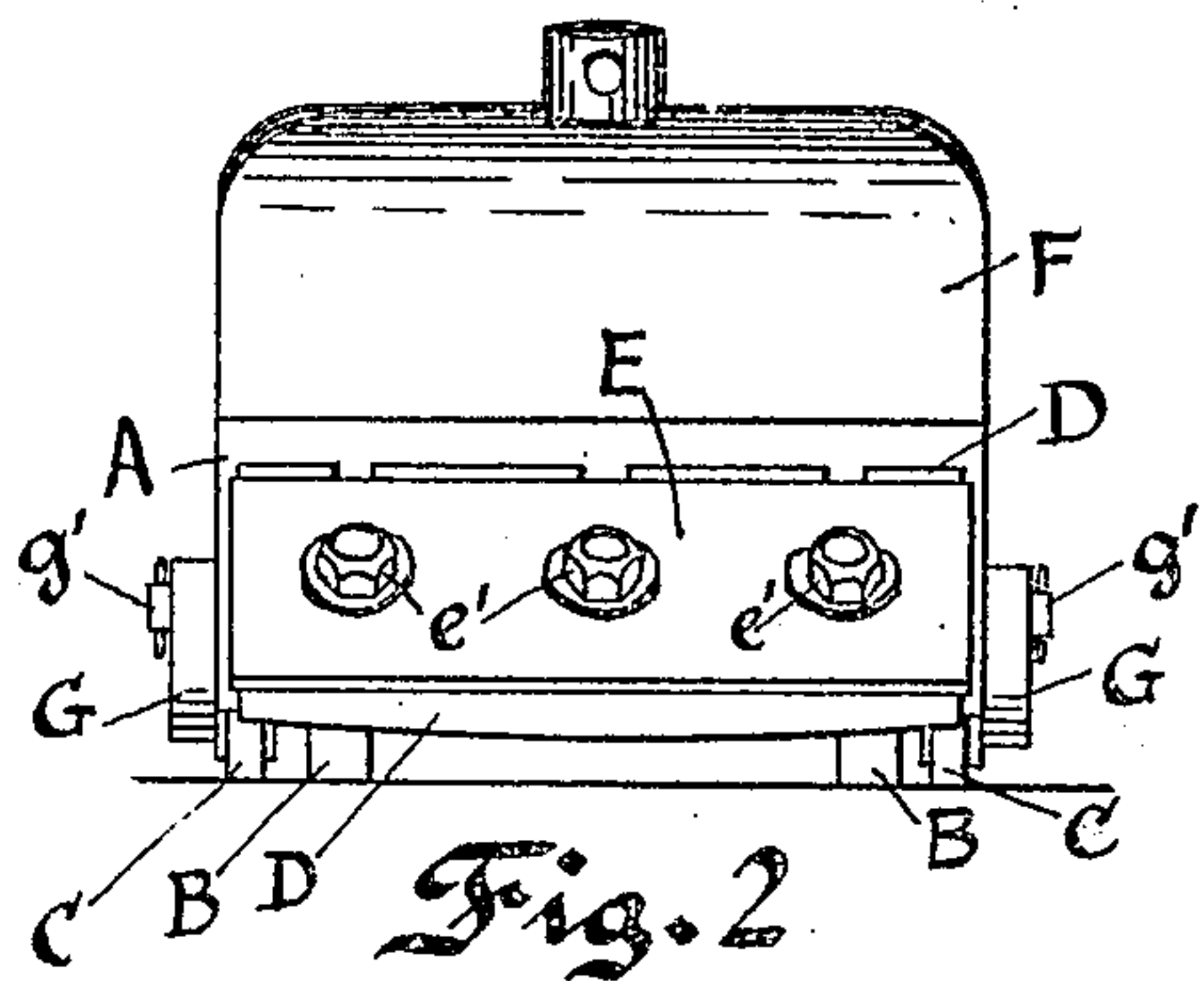
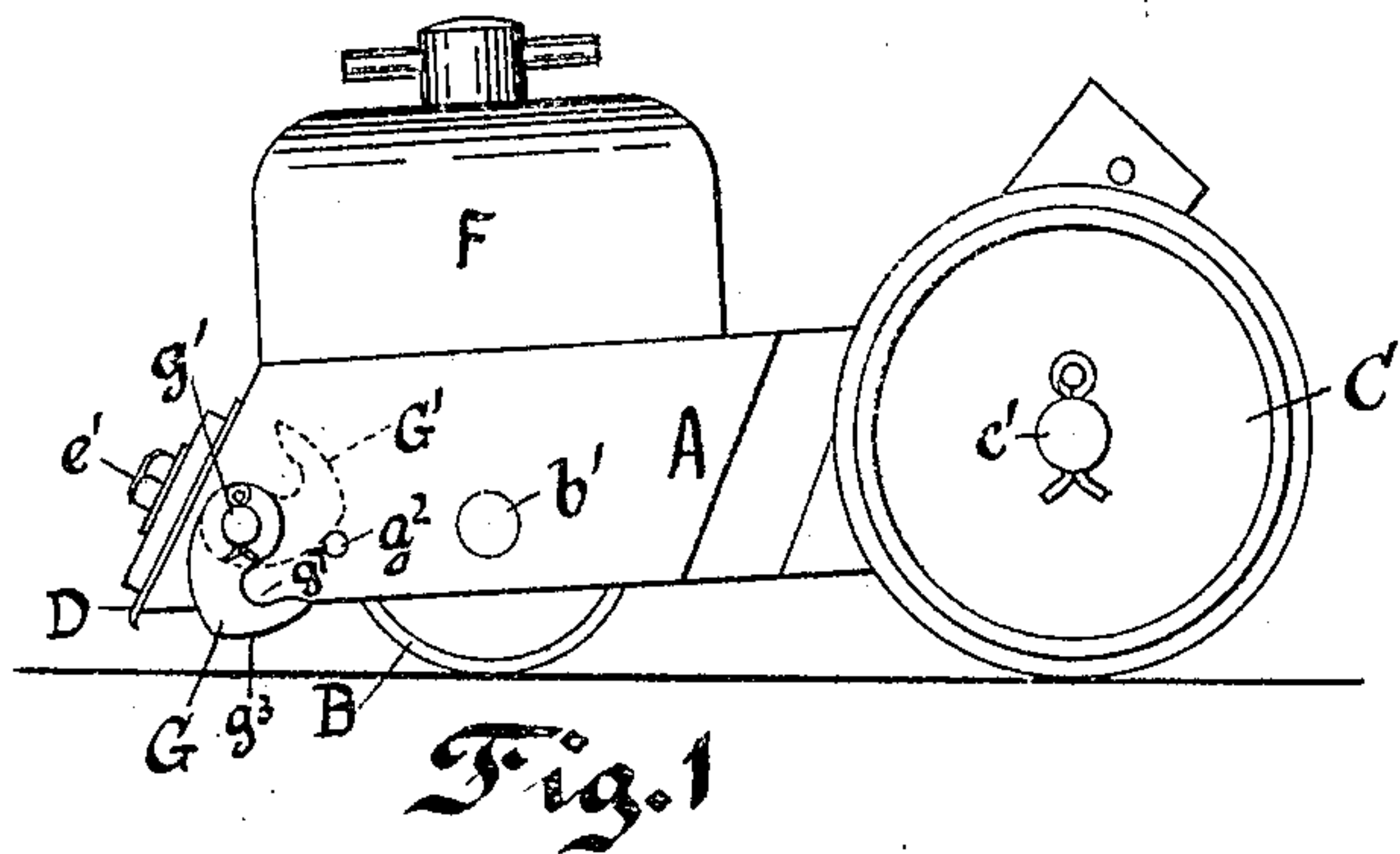


J. MIOTKE.
ATTACHMENT FOR FLOOR SCRAPERS.
APPLICATION FILED JAN. 4, 1908.

927,742.

Patented July 13, 1909.



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ATTACHMENT FOR FLOOR-SCRAPERS.

No. 927,742.

Specification of Letters Patent.

Patented July 13, 1909.

Application filed January 4, 1908. Serial No. 409,286.

To all whom it may concern:

Be it known that I, JOSEPH MIOTKE, of Milwaukee, Wisconsin, have invented an Attachment for Floor-Scrapers, of which the following is a specification.

This invention has for its object to obviate an imperfection which exists in all machine floor-scrappers up to the present time, namely the cutting into the floor by the scraper-blade when it first touches the floor on its cutting stroke, consequently leaving upon the floor a cut or mark which has subsequently to be removed by hand scraping. I have found that this is caused by the scraper-blade being brought suddenly down upon the floor at the commencement of the stroke, there being the entire weight of the machine behind it and the momentum of the impact causes the blade to sink farther into the floor at this point than it can remain while taking off a shaving. The disadvantage can be to some extent avoided by the use of skill and care in manipulating the scraper, taking care to begin the cutting stroke gently and smoothly, but operators who are not skilled in the use of the scraper will not succeed in doing this, and even careful manipulation fails to avoid entirely the making of the unsightly cuts and marks referred to, with the result that the boundary between two cutting-laps is marked across the floor by a multitude of such cuts which require much hand-work to remove.

The scraper which is described and claimed by me in my copending application, Serial No. 373,819, filed May 15, 1907, is less subject to this difficulty than other scrapers, and with great care in the use of it, can avoid the cutting altogether, for the reason explained in said application that the cutting-stroke is accompanied by a downward movement of the handle, and not an upward movement as in other scrapers, and the downward movement can be carried so far as to relieve the weight of the scraper from the blade altogether; but even here it requires some one skilled in the use of this particular scraper to avoid cutting altogether.

In my present invention, therefore, I aim to provide such an attachment for floor-scrappers as will positively and absolutely prevent the aforesaid cutting of the floor, even when an unskilled operator is using the machine; and not merely with the particular form of scraper shown with my copending application above referred to, but with all

scrapers, to which it is equally applicable. This attachment comprises a slightly eccentric cam or roller pivoted upon the scraper-frame at the front end and just behind the blade, the front of this roller or cam being slightly more distant from its pivot than the rear end, and the scraper-blade being so set that it will be a minute distance (say the thickness of a sheet of paper) from the floor when said cam or roller rests thereon at its forward end. The scraper being pulled backward upon its cutting stroke causes said cam or roller to roll upon the floor and to gradually lower the blade as it proceeds until the edge thereof has reached the point where it takes off the necessary shaving.

My invention may take various forms, and as above mentioned, may be applied to substantially any kind of wheeled scraper and possibly some others; but as herein shown it is in its simplest and most approved form, and is applied to the scraper described and claimed in my aforesaid copending application.

In the accompanying drawings, Figure 1 is a side elevation of the scraper (except the handle thereof which is omitted) showing my attachment applied thereto; Fig. 2 is a front elevation of the same; Fig. 3 is a side elevation on an enlarged scale of the forward end of the scraper showing the cam or roller in the position which it occupies at the beginning of the cutting stroke; Fig. 4 is a similar view showing the position which the roller and scraper-blade occupies when the scraper has advanced a certain distance in the cutting stroke.

In the accompanying drawings every reference letter and numeral refers always to the same part.

The scraper-frame, designated A, is mounted on wheels B and C, and carries on its front end as usual a scraper-blade D which is secured thereto by means of a plate E and cap-screws e' ; while a weight F is mounted over the front end for assisting to press the blade down during the cutting operation. In this scraper the frame is tilted about the front axle b' by a lever connection of the handle with the rear axle c' , as explained in the aforesaid copending application.

The cam or roller forming the essential element of this invention is shown at G pivoted on the pin g' , preferably mounted as closely as practicable to the scraper-blade. Two of these cams G are shown in the draw-

ings (see Fig. 2), one being at each side of the frame; and while it would be consistent with the spirit of the invention to use only one, which might be mounted in the center if otherwise practicable, the arrangement shown is deemed preferable, because said cams or rollers G can be easily turned up when not in use into the position G' shown in dotted lines, in which the roller rests upon a small pin or lug g^2 .

As best shown in Fig. 3, the working-face g^3 of the roller is slightly eccentric, the front end g^4 thereof being very slightly (about one thirty-second of an inch) more distant from the center of rotation than the rear end g^5 ; as indicated by the dotted line g^6 , which is an arc of a circle about the axis of the pin g' as a center. Moreover the body of the cam or roller is given such shape, as for example by cutting out a recess g^7 therein, as to cause it to hang in the position of Fig. 3 when free to turn about its pivot; this position therefore is occupied by it at the beginning of the stroke, when the front end of the scraper is brought down upon the floor. The blade D is so set that in this position it does not strike the floor (being distant a few thousandths of an inch therefrom) so that the shock of the impact of the front end upon the floor is brought upon the face of the rollers G, which is made broad enough so that these do not indent the floor. As the cutting-stroke advances, the roller G turns about its pivot, rolling upon the floor, until it occupies the position shown in Fig. 4; and as in this position its resting point is nearer the pivot g' , the blade D will be brought farther and farther down until it cuts in the necessary distance to take off a shaving. The actual new position of the blade and its path are shown by the dotted line D', d' and it will be observed that this path is such as to cut the plane of the floor at a very acute angle whereby the thickness of the shaving increases gradually from nothing to the desired amount. Therefore it becomes absolutely impossible to bring the blade suddenly down upon the floor.

In setting the blade, the cap-screws e' are first loosened and then the scraper brought down into cutting position, the rollers G being in the position shown in Fig. 3. A sheet of paper is now inserted between the blade and the floor, so that the blade rests upon it, and in this position the screws e' are tightened up.

I wish it clearly understood that the particular form of the device is not essential to a carrying out of the invention, for it will be readily understood by the average skilled mechanic that various forms of the device may be constructed all acting upon the same principle, which is the providing of a rolling-

device initially taking the weight of the scraper-frame and moving out gradually therefrom as the cutting-stroke proceeds. In this respect therefore I do not consider the scope of my invention further restricted than may be inferred from a reasonable construction of my claims.

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

1. An attachment for scrapers comprising a slightly eccentric roller cam pivoted to the scraper near the blade thereof and normally occupying a position in which it projects slightly below said blade.

2. An attachment for scrapers comprising a slightly eccentric roller cam pivoted to the scraper near the blade thereof and normally occupying a position in which it projects slightly below said blade; the rear end of said cam being nearer the pivotal axis than the forward end, whereby the rolling action thereof produced by the cutting stroke causes the scraper-blade to move through a path forming a very slight angle with the floor and gradually sinking thereinto.

3. An attachment for floor-scrapers comprising, in combination with the frame, a pair of slightly eccentric cams or rollers mounted on opposite sides of the scraper blade, and normally projecting slightly below the latter, the rear ends of the axial faces thereof being slightly nearer the pivotal axis than the forward ends thereof.

4. An attachment for floor-scrapers and the like comprising a slightly eccentric cam or roller pivotally mounted near the front end of the scraper-frame and normally hanging with the front end of the active face directly below the pivot, the rear end of said face being slightly nearer to the pivotal axis than the forward face, and a projecting member at one side of said cam upon which the latter is adapted to rest when not in use.

5. A floor-scraper comprising, the combination with supporting-wheels of a scraping-blade carrying-frame tiltable with relation to said wheels to bring the blade into contact with the floor, and a pivoted roller-cam having an active face slightly eccentric to the circumference of a circle described about the pivot and which engages the floor-surface prior to the engagement thereof by the scraping-blade and turns upon its pivot to allow the engagement of the scraping-blade with the floor.

In witness whereof I have hereunto set my hand this thirty-first day of December, 1907.

JOSEPH MIOTKE.

Witnesses:

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MINNIE D. SCHIENBEIN.