

No. 743,955.

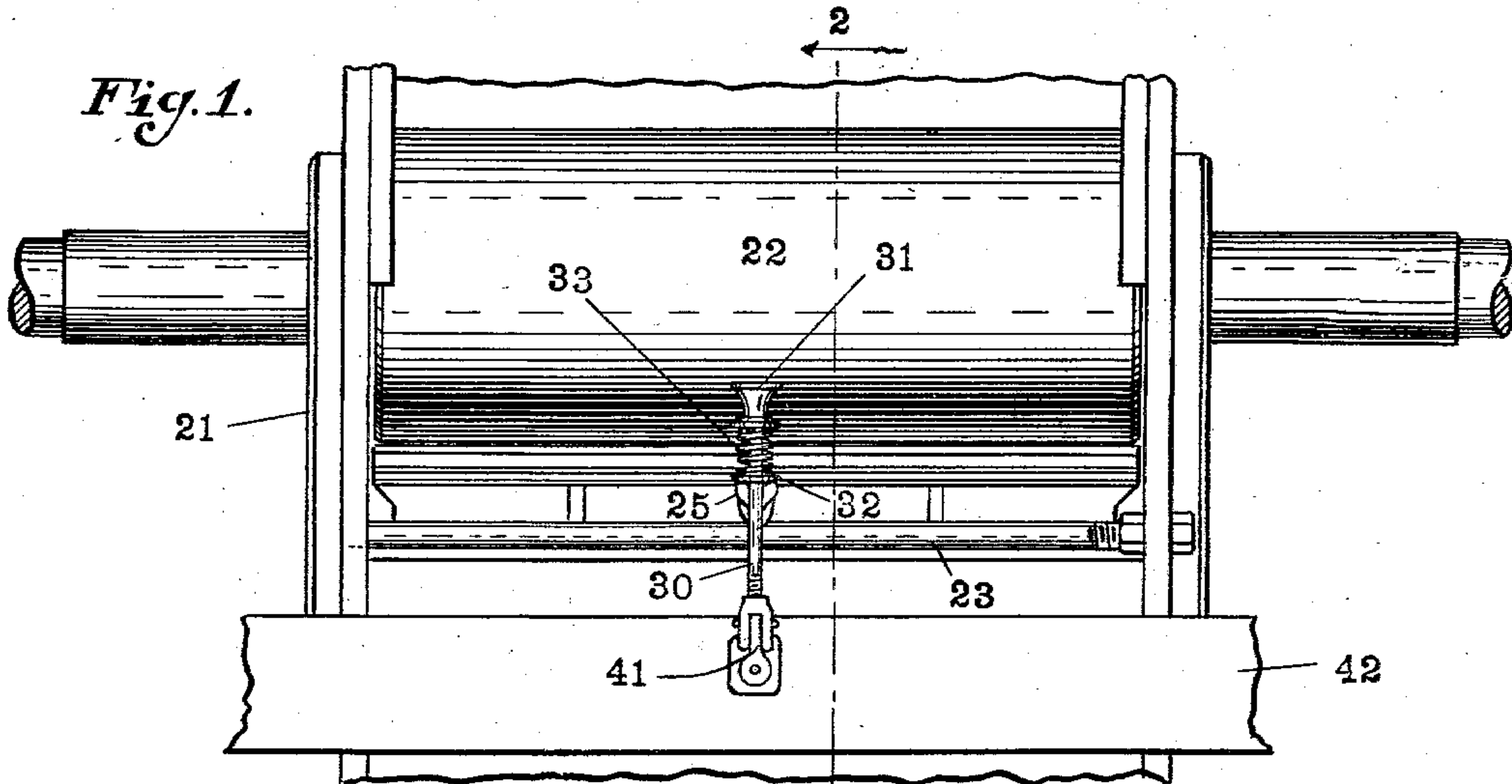
PATENTED NOV. 10, 1903.

G. F. THOMPSON.  
SCRAPER FOR ROLLER MILLS.

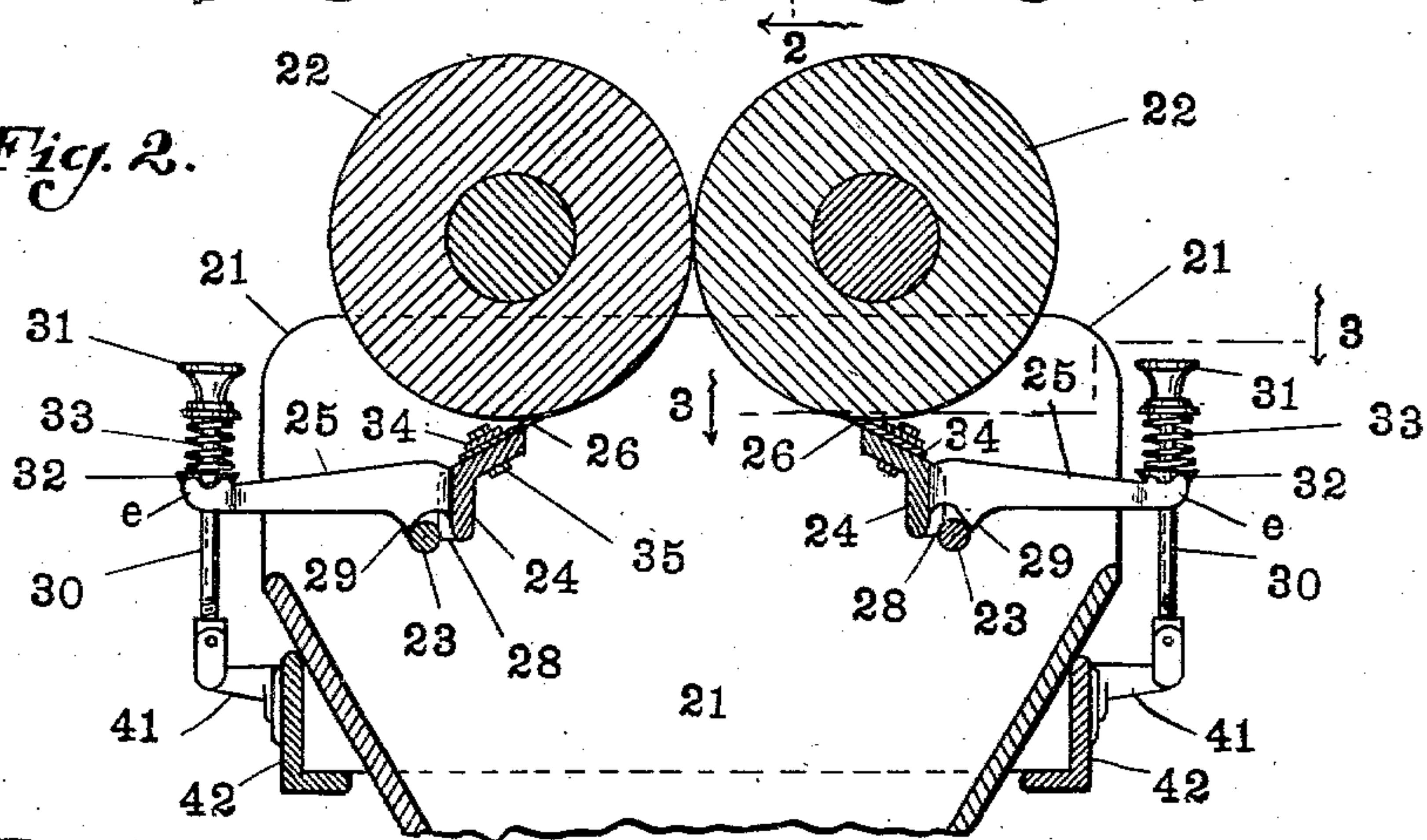
APPLICATION FILED APR. 23, 1903.

NO MODEL.

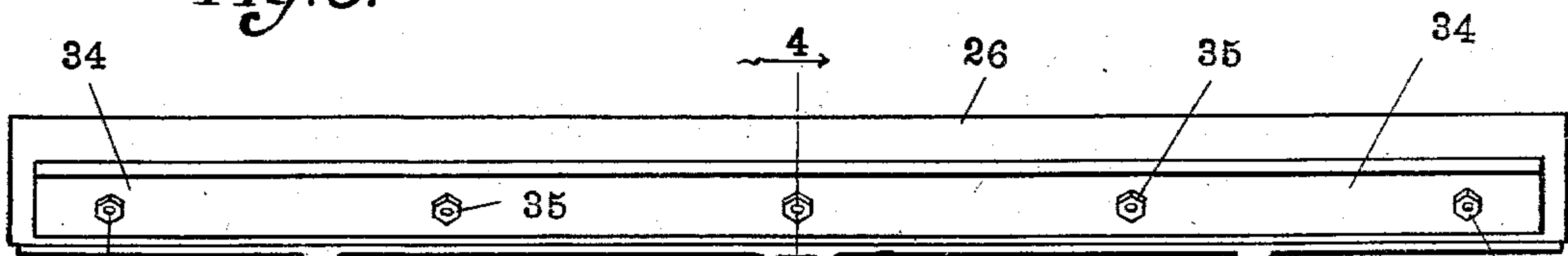
*Fig. 1.*



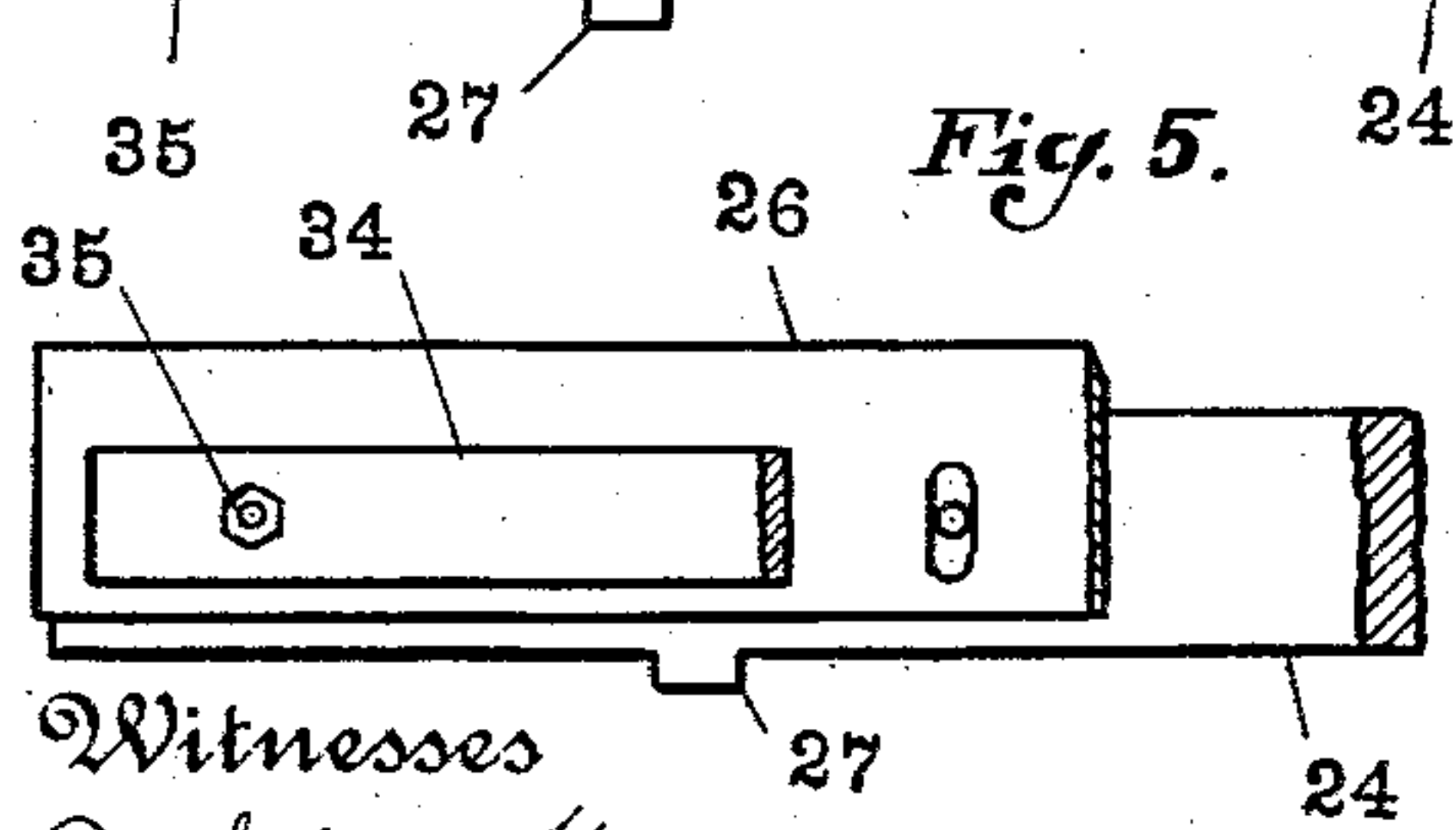
*Fig. 2.*



*Fig. 3.*



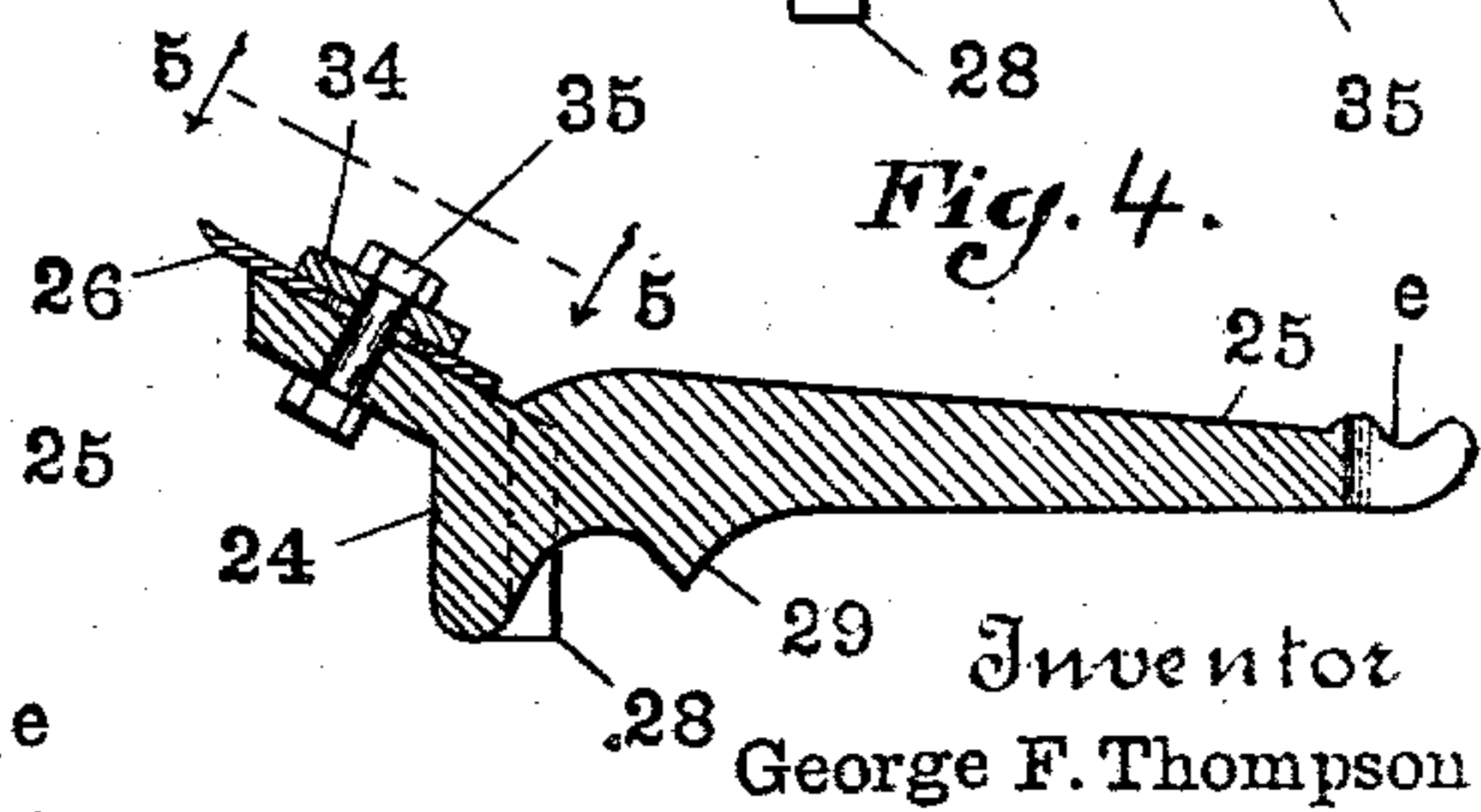
*Fig. 5.*



Witnesses  
Adelaide Kearns.

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*Fig. 4.*



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# UNITED STATES PATENT OFFICE.

GEORGE FREDERICK THOMPSON, OF PHILADELPHIA, PENNSYLVANIA,  
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## SCRAPER FOR ROLLER-MILLS.

SPECIFICATION forming part of Letters Patent No. 743,955, dated November 10, 1903.

Application filed April 23, 1903. Serial No. 153,953. (No model.)

*To all whom it may concern:*

Be it known that I, GEORGE FREDERICK THOMPSON, a subject of the King of Great Britain, residing at Philadelphia, in the county of Philadelphia and State of Pennsylvania, have invented certain new and useful Improvements in Scrapers for Roller-Mills, of which the following is a specification.

The object of my said invention is to produce an easily-manipulated self-adjusting scraper for roller-mills whereby the material being treated will be kept cleaned from the rolls.

A mill equipped with said invention will be first fully described and the novel features thereof then pointed out in the claims.

Referring to the accompanying drawings, which are made a part hereof, and on which similar reference characters indicate similar parts, Figure 1 is a side elevation of so much of a roller-mill as is necessary to illustrate my invention, the inclosing casing being partially removed to show the interior; Fig. 2, a transverse vertical sectional view as seen when looking in the direction indicated by the arrows from the dotted line 2 2 in Fig. 1; Fig. 3, a plan view of one of the scrapers; Fig. 4, a detail sectional view through the scraper and its arm at the point indicated by the dotted line 4 4 in Fig. 3; and Fig. 5, a fragmentary plan view as seen when looking in the direction indicated by the dotted line 5 5 above Fig. 4, the upper parts being partially broken away to show the construction beneath.

The mill in itself may be of any ordinary or desired construction. In an appropriate framework 21 are mounted the grinding or reducing rolls 22. Extending longitudinally through the casing of the mill are fulcrum-rods 23.

The scraper is composed of a suitable body 24, embodying an arm 25, preferably formed integrally, generally of cast-iron, and a suitable blade 26, secured to said scraper-body and adapted in operation to bear against the surface of the rolls 22. Upon the edge of the scraper-body are two ribs or bearing-spots 27 and 28, and a third bearing or projection

29 is formed upon the under side of the arm. These three points 27, 28, and 29 when the scraper is in position bear upon the pivot-rod 23, which thus supports the scraper in place. The arm from each scraper extends to outside the machine, where it is bifurcated and engages with a rod 30, suitably pivoted to the frame of the machine (it is shown as carried by a bracket 41 on a frame-bar 42) and extending upwardly and having a nut 31 upon its upper end; between which and the upper surface of the arm or a washer 32 resting thereon is a spring 33. Obviously by tightening or loosening the nut greater or less pressure will be exerted upon the scraper-arm and its blade will be held with more or less force against the corresponding roll of the machine, the rod 23 acting as a fulcrum, over which the arm as a lever will operate. The bifurcated end *e* of the arm permits the rod 30 to swing into and out of engagement therewith without removing the nut.

As will be readily understood, the single central bearing-support at the base of the arm enables the ends of the scraper to bear yieldingly against the surface of the roll, the ribs forming the other bearing-points being arranged substantially as at right angles with the direction of force on the scraper, permitting said scraper to rock on its bearings, and thus adapt itself to the surface of the roll without difficulty.

The blade 26 is secured to the scraper-body 24 by means of a bar 34 and bolts 35, which pass through holes in said bar, said blade, and said body 24. The holes in the blade are elongated somewhat, and it is therefore adjustable as may be desired. It is also easily removable for purposes of sharpening, repair, or replacement, as will be readily understood.

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

1. The combination with the rolls of a mill, of a scraper composed of a body, an arm and a scraping-blade, a fulcrum-rod by which said scraper is supported, and a spring-tension connection attached to the outer end of said arm, substantially as set forth.



2. The combination, in a scraper for mills, of the body 24, the arm 25, the bearing-points 27 28 and 29, a suitable fulcrum-rod upon which the same is mounted and upon which  
5 said bearing-points rest, and a yielding attachment for said scraper.

3. The combination with a roll of a grinding-mill, of a scraper, a fulcrum-rod whereon said scraper is mounted, and three bearing-  
10 points on the scraper structure which come in contact with said rods, one of said bearing-points being centrally disposed to support

the scraper against downward force, and the others being disposed on each side of the central point and arranged to support the scraper  
15 against backward thrust.

In witness whereof I have hereunto set my hand and seal, at Philadelphia, Pennsylvania, this 18th day of April, A. D. 1903.

GEORGE FREDERICK THOMPSON. [L. S.]

Witnesses:

J. S. COCHRAN,

VALENTINE J. HUEGLE.