

No. 847,861.

PATENTED MAR. 19, 1907.

W. R. WARREN.  
ROTARY KILN.

APPLICATION FILED NOV. 11, 1905.

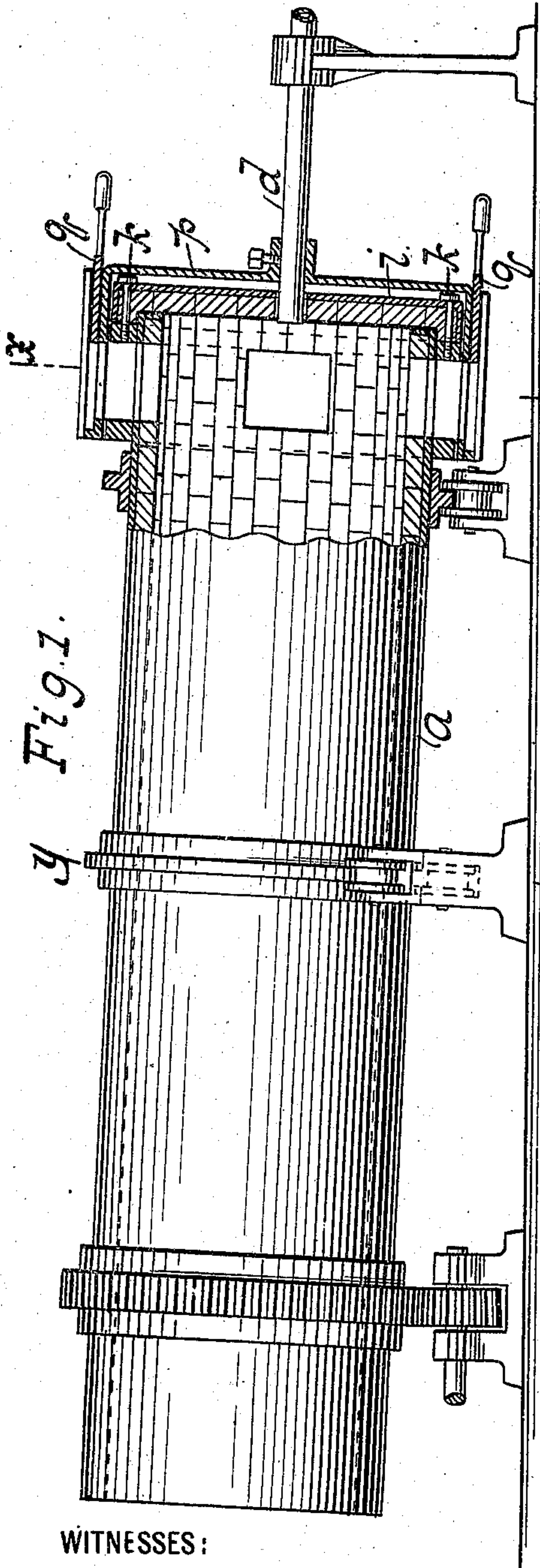


Fig. 1.

Fig. 2.

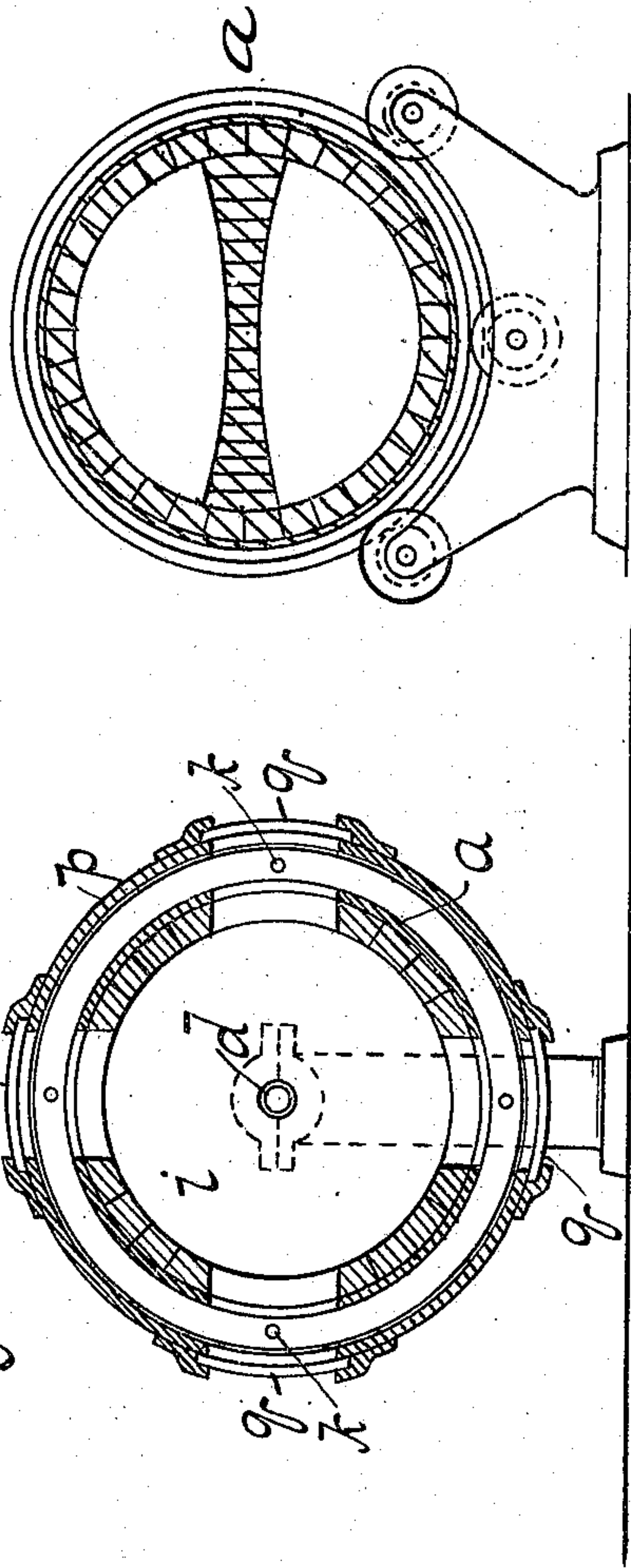


Fig. 3.

WITNESSES:

*William Miller*  
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# UNITED STATES PATENT OFFICE.

WILLIAM R. WARREN, OF NEW YORK, N. Y.

## ROTARY KILN.

No. 847,861.

Specification of Letters Patent.

Patented March 19, 1907.

Application filed November 11, 1905. Serial No. 286,937.

*To all whom it may concern:*

Be it known that I, WILLIAM R. WARREN, a citizen of the United States, residing at Manhattan borough, in the county of New York and State of New York, have invented new and useful Improvements in Rotary Kilns, of which the following is a specification.

This invention relates to means by which the operation of the kiln can be regulated.

This invention is set forth in the following specification and claims and illustrated in the annexed drawing, in which—

Figure 1 is a side elevation of a kiln embodying this invention. Fig. 2 is a section along *x x*, Fig. 1. Fig. 3 is a transverse vertical section on the line *y y*, Fig. 1.

In this drawing is shown a shell or body part *a*. The kiln can be made with or without partitions or divisions, as required. Fuel is suitably introduced, a fuel-intake being shown at *d*. A shield *i* is shown removably connected to the shell or kiln by suitable means, such as bolts *k*. The clinker to be discharged can pass out through exits, holes, or gratings in the shell. A shield-section *p* has one or more dampers *q* at suitable points, which can be slid or moved to close the exit holes or outlets more or less, as desired—for example, to regulate or vary the amount of air entering the kiln at this portion. The shield-section *i* does not cover the outlets. The shield-section *p* does not rotate with the kiln and is shown seated on the intake, and part of this shield is open or has the flange cut away at suitable points. The lower cut is arranged to allow exit of the material which comes from the outlets or outlet end of the

kiln. This shield-section *p* or its flange suitably surrounds the shield-section *i*. This shield-section *p* may be fastened to the intake or otherwise, as desired, and the material passing through the kiln may or may not pass through it. Each damper or regulator *q* can be arranged to be individually set or adjusted. The bottom regulator or slide *q* is always left open sufficiently to allow material leaving the kiln to pass off as required.

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

1. A rotary kiln having a shield detachably connected to and rotating with the kiln and a second shield independent of and made to closely surround the first shield.

2. A kiln having an outlet and rotary and non-rotary shields made separate from the kiln and from one another and located at the outlet end of the kiln.

3. A kiln having an outlet and a shield made separate from the kiln at the outlet and a second shield placed about and made to regulate the outlet.

4. A kiln having an intake, a shield detachably mounted on the kiln and a shield mounted on the intake.

5. A rotary kiln with rotary shield detachably connected to the kiln and a stationary shield having dampers or regulators.

In testimony whereof I have hereunto set my hand in the presence of two subscribing witnesses.

WILLIAM R. WARREN.

Witnesses:

GEORGE HULSBURG,  
EDWARD WIESNER.