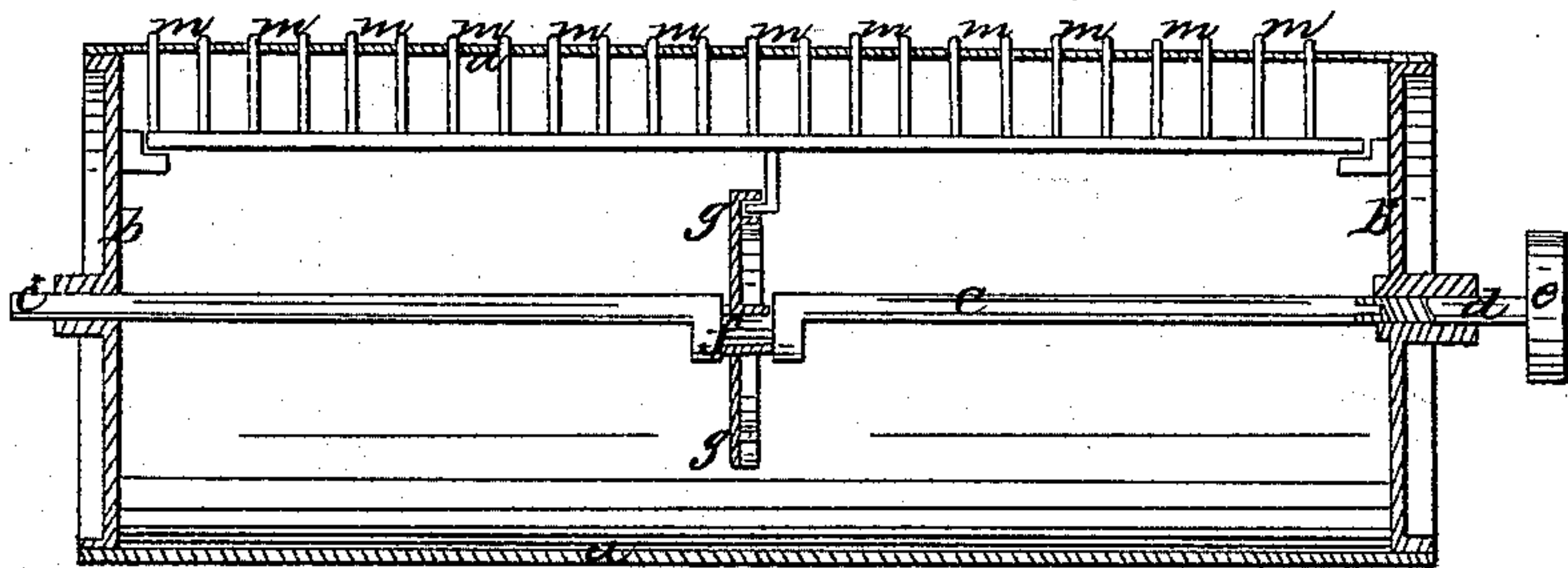
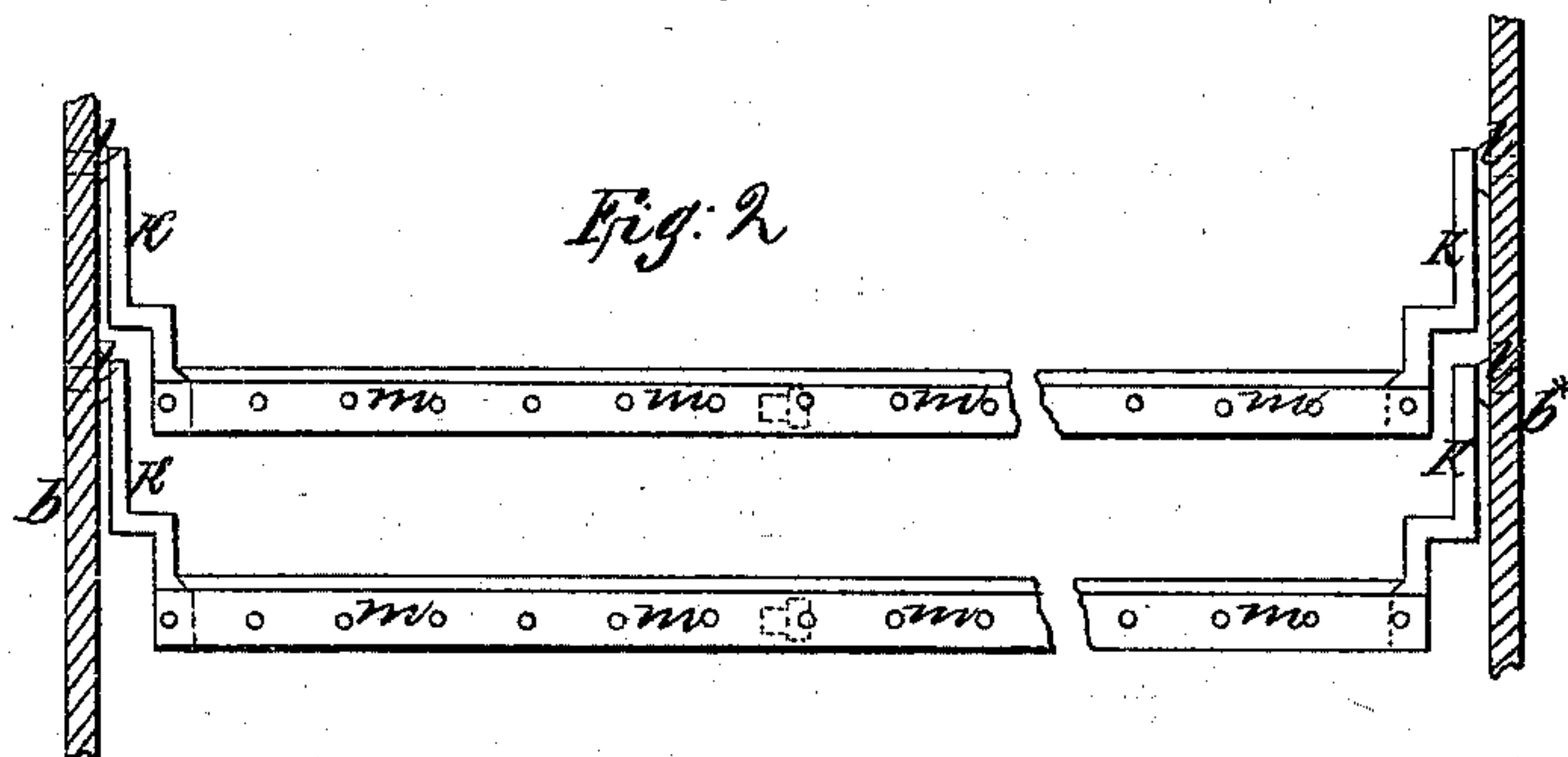
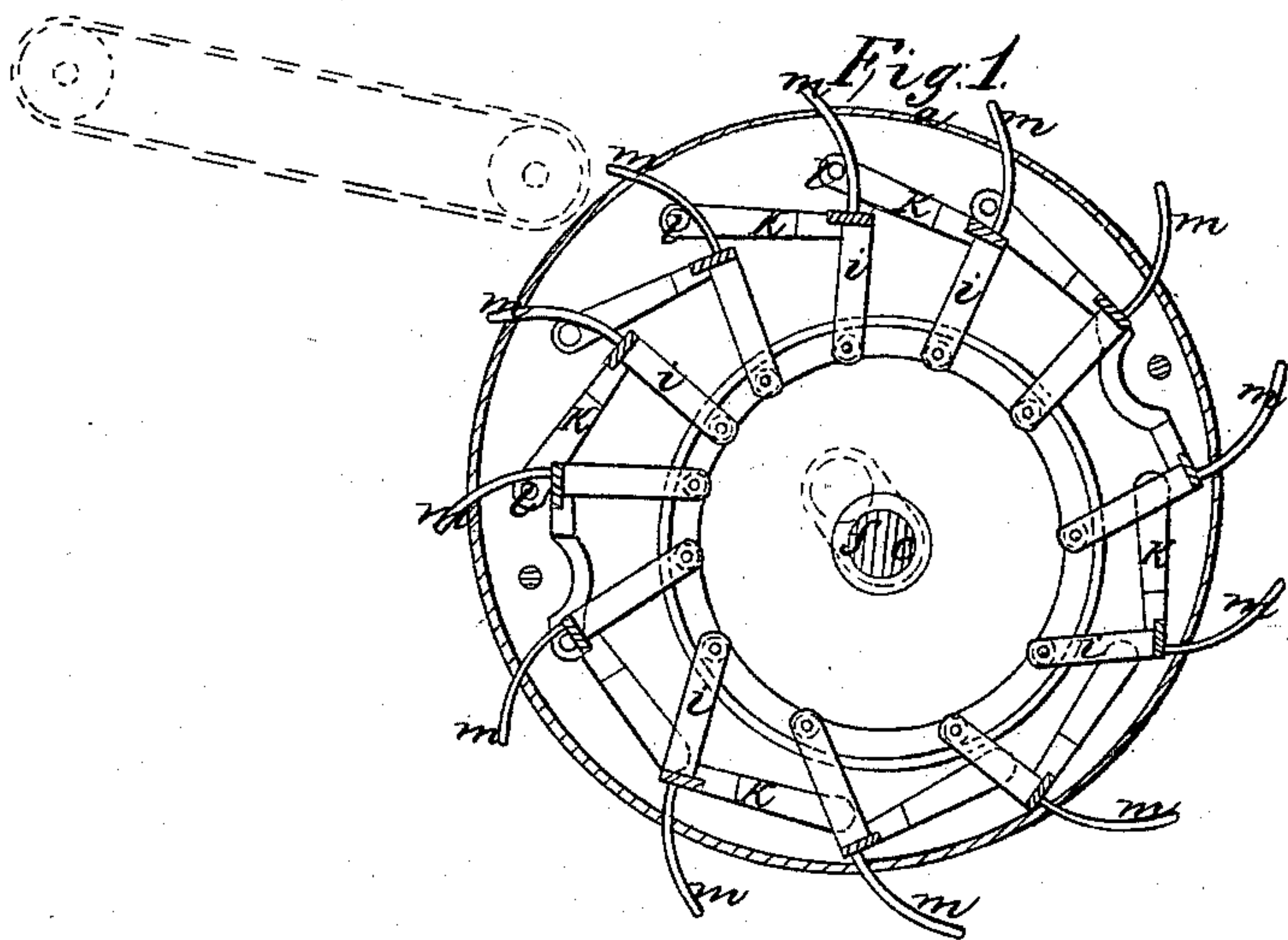


*J. Petrie, Jr. & J. Teal,*  
*Wool-Washing Machine,*  
*N<sup>o</sup> 58,359. Patented Sep. 25, 1866.*



*Witnesses*  
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# UNITED STATES PATENT OFFICE.

JOHN PETRIE, JR., OF ROCHDALE, COUNTY OF LANCASTER, AND JAMES TEAL, OF SOWERBY, COUNTY OF YORK, ENGLAND.

## IMPROVEMENT IN LIFTING-CYLINDERS OF WOOL-WASHING MACHINES.

Specification forming part of Letters Patent No. 58,359, dated September 25, 1866.

*To all whom it may concern:*

Be it known that we, JOHN PETRIE, Jr., of Rochdale, and JAMES TEAL, of Sowerby, both in England, have invented certain new and useful Improvements in Machinery for Washing Wool and other fibrous materials; and we do hereby declare that the following is a full, clear, and exact description thereof, which will enable others skilled in the art to make and use the same, reference being had to the accompanying drawings, forming part of this specification, in which—

Figure 1 represents a transverse section of our invention. Fig. 2 is a partial longitudinal section of the same. Fig. 3 is a similar section in a smaller scale than the previous figures, showing the internal mechanism of the lifting-cylinder.

Similar letters of reference indicate like parts.

This invention relates to certain improvements in that class of machines for washing wool and other fibrous materials in which the said materials are placed upon a feed-apron, by which they are delivered into a vat or other vessel, and are agitated therein at the same time being moved forward to the other end of said vessel, where they are lifted out of the fluid by a drum armed with movable prongs, which at the proper moment retreat, so as to deliver the material into an endless apron, from whence they are taken by a pair of squeezing-rollers.

Our lifting-cylinder *a* is made of sheet metal or any other suitable material, and it is provided with two heads, *b b\**, which are secured in the ends of the cylinder in any suitable manner. The end *b* is mounted so as to turn upon a shaft, *c*, which does not revolve, its end *c\** being fixed in the frame-work of the machine to which the lifting apparatus is applied. The other end, *c\*\**, projects into a socket formed within a short shaft, *d*, which is sup-

ported by a bearing, (not shown in the drawings,) and upon this shaft the head *b\** of the cylinder *a* is mounted fast. On the shaft *d* is also secured a pulley, *e*, which serves to communicate a rotary motion to the shaft *d*, and, consequently, to the cylinder *a*. The shaft *c* is provided with a crank, *f*, upon which is mounted a grooved disk, *g*. *i i* are right-angular arms, the shorter arms of which move in the groove of the disk *g*. These short arms may have a roller secured to them to assist in overcoming friction. These are attached to bars *m*, which are carried by levers *k*, mounted so as to turn upon centers *l* in the heads of cylinder *a*.

The operation is as follows: On imparting to the pulley *e* a rotary motion, the cylinder *a* is caused to revolve, carrying with it the angular arms *i*, the short arms of which are situated within the groove *g*, and, as that groove is eccentric to the said cylinder, the levers *k* will turn upon their centers, withdrawing the prongs, and again protruding them as they advance toward the point where they are to lift the material to be washed.

By this means the operation of removing the material is considerably facilitated, and the process of washing wool or other fibrous materials is rendered simple and easy.

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

The grooved disk *g*, right-angular arms *i*, and levers *k*, in combination with the crank *f*, shaft *c*, prongs *m*, and cylinder *a*, constructed and operating substantially as and for the purpose described.

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