

(No Model.)

W. F. SHAFFER.
OIL PRESS MAT AND COMPRESSOR.

No. 331,162.

Patented Nov. 24, 1885.

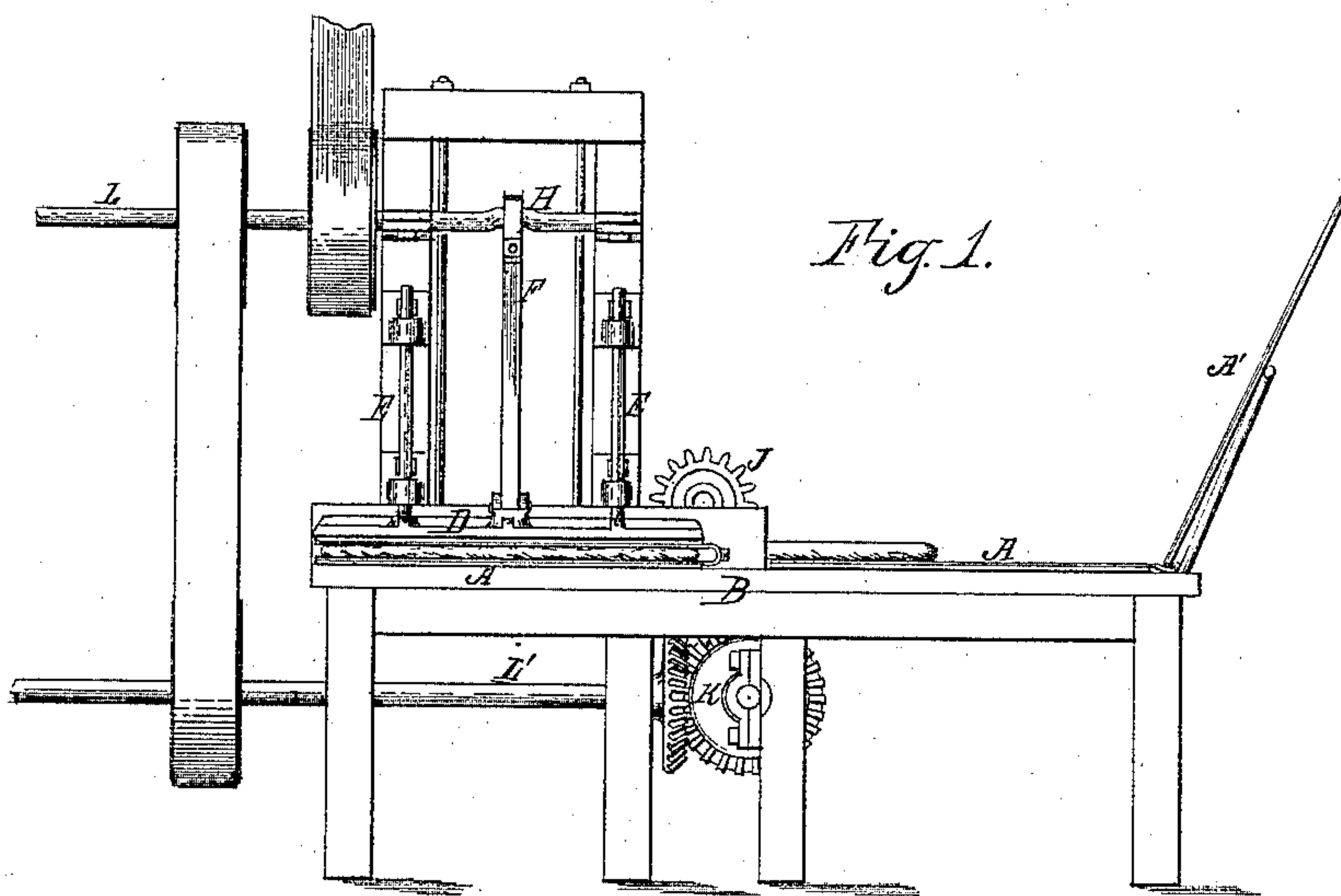


Fig. 1.

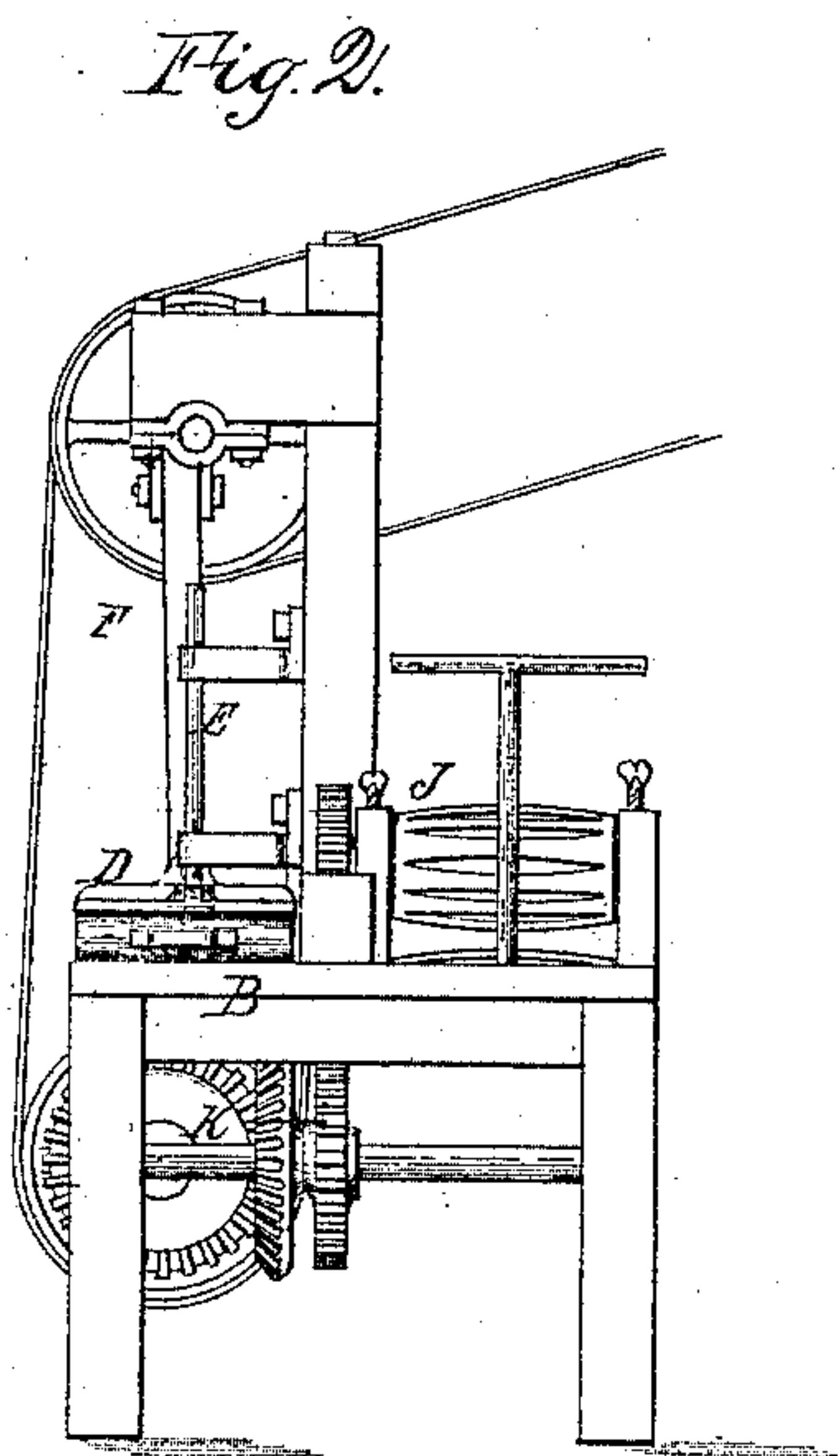


Fig. 2.

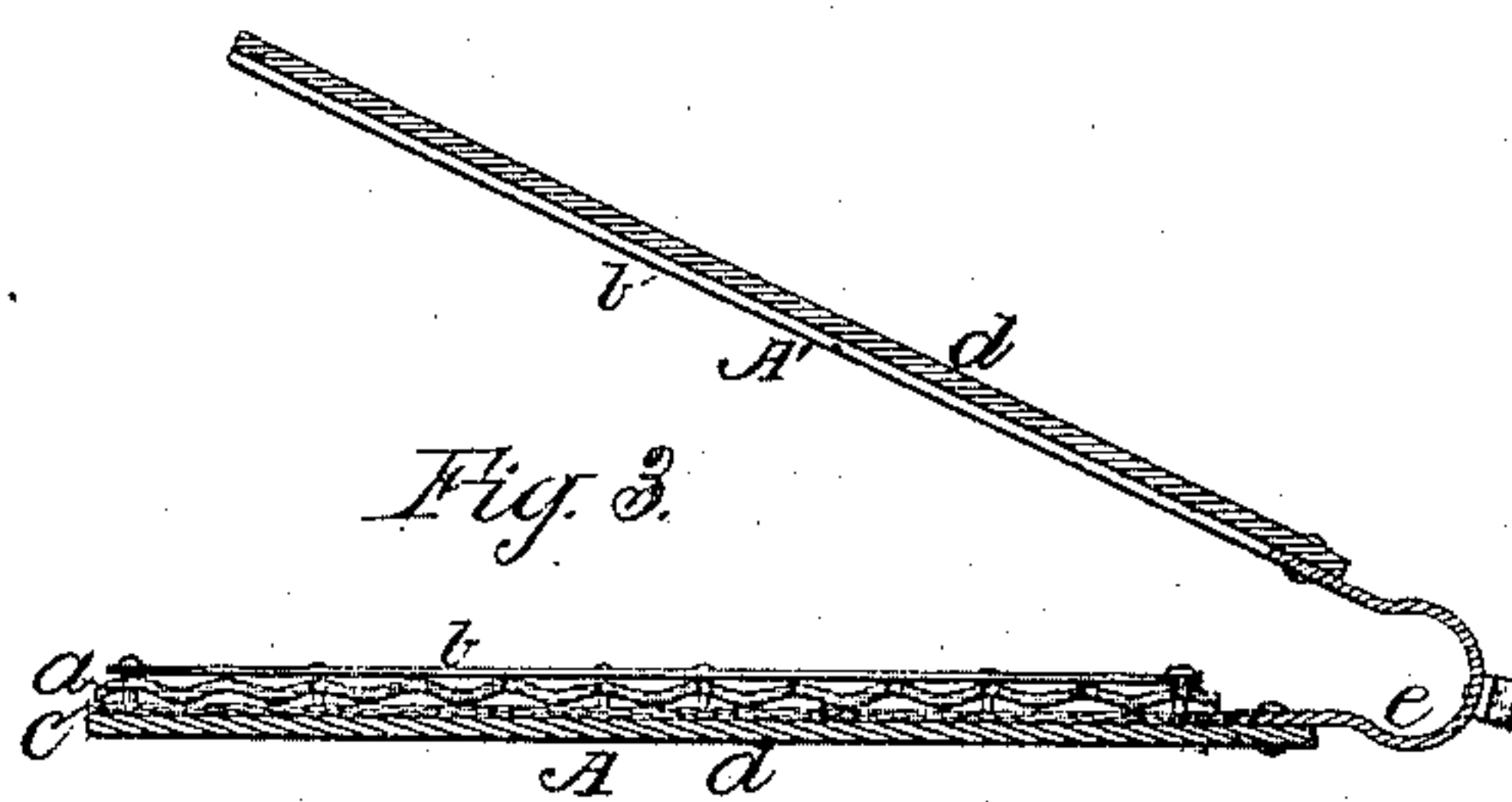


Fig. 3.

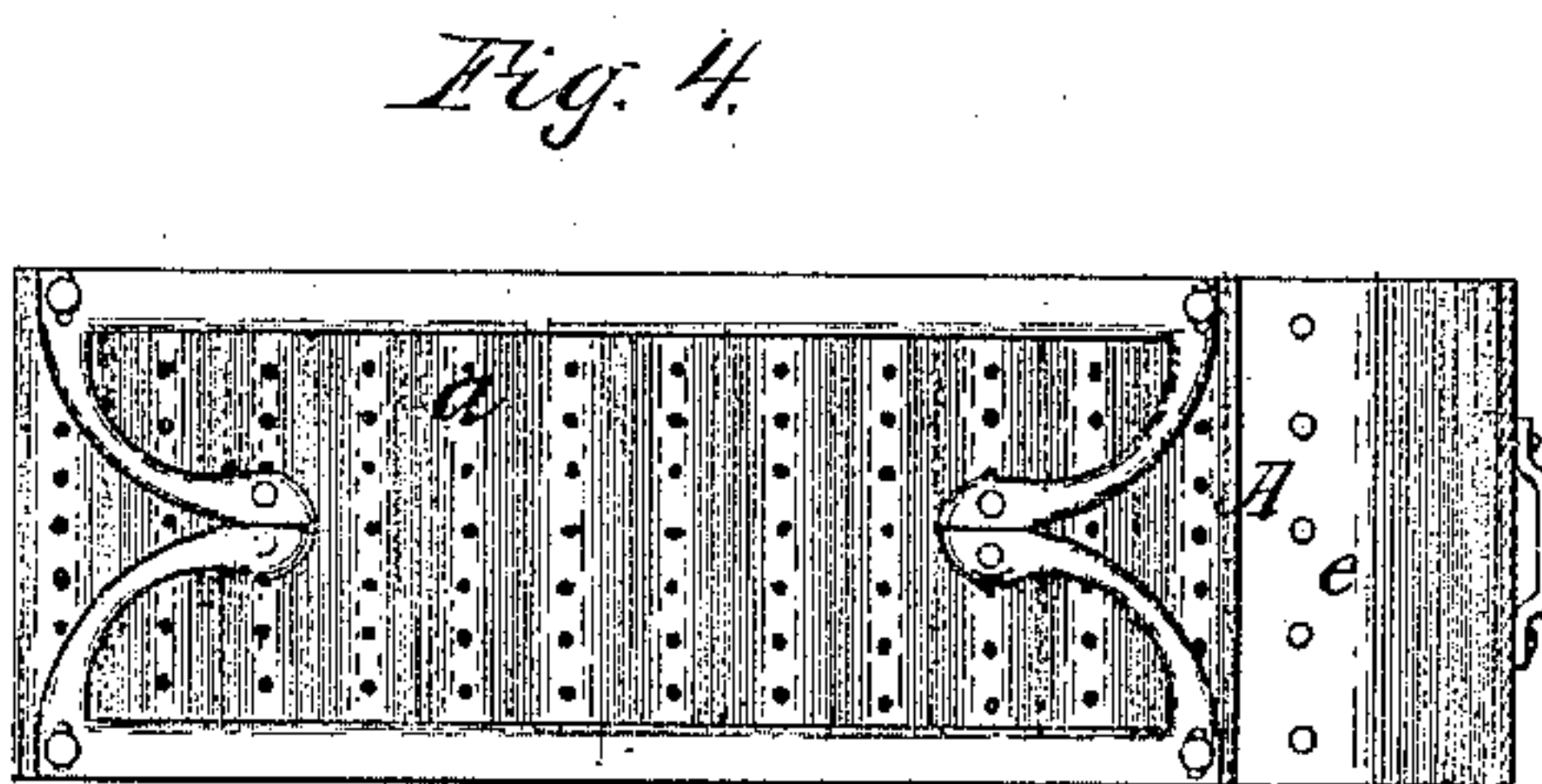


Fig. 4.

Witnesses.

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OIL-PRESS MAT AND COMPRESSOR.

SPECIFICATION forming part of Letters Patent No. 331,162, dated November 24, 1885.

Application filed February 24, 1885. Serial No. 156,697. (No model.)

To all whom it may concern:

Be it known that I, WILLIAM F. SHAFFER, a citizen of the United States, residing at Cedar Rapids, in the county of Linn and State of Iowa, have invented certain new and useful Improvements in Oil-Cake Mats and Compressors, of which the following is a specification.

This invention relates to that class of presses used in expressing the oil from flax, cotton, or analogous seeds; and my object is to secure a more perfect expulsion of oil with less pressure and in a shorter time than hitherto.

The invention consists in the application to the "mat" which holds the cake of a perforated and corrugated plate, through which the oil passes in a fibrous medium between the perforated plate and the outer one to act as an absorbent.

In the accompanying drawings, forming a part of this specification, Figure 1 represents a side elevation of a cake-forming press with the mat applied thereto; Fig. 2, an end elevation of the same; Fig. 3, a longitudinal section of the mat, and Fig. 4 a plan view of one-half of the same.

Similar letters of reference indicate corresponding parts.

The improvement in the mat A consists in the application to it of a perforated and corrugated metallic plate, *a*.

In the use of the mat as ordinarily constructed the oil is all forced to the sides and ends, and consequently an enormous pressure is required to expel the oil. It is also evident that even under the most powerful pressure comparatively more oil will be left in the middle of the "cake" than near the edges. It is to obviate both these difficulties and provide for the easy and rapid escape of the oil that this mat is especially adapted. The mat has for outer bearing-surfaces the usual plane plates, *d d*, connected at one end by a leather hinge, *e*, or other suitable flexible connection. The upper plate, *A'*, may be left plane, if desired; or it may be provided with corrugations corresponding to those on the lower plate, *A*. To the lower plate is fastened the corrugated

plate *a*, having a profusion of holes through the upwardly-extending ridges thereof to allow the oil to pass directly through the plate. By referring to Fig. 3 it will be seen that beneath these ridges is an open space, along which the oil flows freely to the sides of the mat, whence it escapes into proper receptacles. The result of this construction and arrangement of the mat is to facilitate the escape of the oil from the cake, and render the expulsion of such oil easier and more uniform than has hitherto been possible.

A further objection to the ordinary impervious mat arises from the fact that a considerable quantity of oil is naturally left adhering to the bag containing the cake, even after the most extreme pressure has been applied. This is not only wasted, but renders the bag disagreeable to handle. By the use of a fibrous or other porous medium, *c*, placed between the plane and the corrugated plates, this objection is removed, the oil remaining after pressure being absorbed by this medium, leaving the bag clean and dry. In practice I use for this purpose the same material as the cake-bags, though other materials may be found to operate equally well.

In the drawings the mat is represented with the bag-retaining springs *b b*, described and claimed in Letters Patent issued to me on the 3d day of April, 1883, and in practice the mat is so constructed and used.

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

In an oil-cake mat for box presses, the combination of an outer plane plate, an inner corrugated and perforated plate, an interposed oil-absorbing pad of fibrous material, and springs adapted to retain the cake and prevent cutting of the bag, substantially as specified.

In testimony whereof I affix my signature in presence of two witnesses.

WILLIAM F. SHAFFER.

Witnesses:

JAMES WILCOX,
P. F. HARTING.