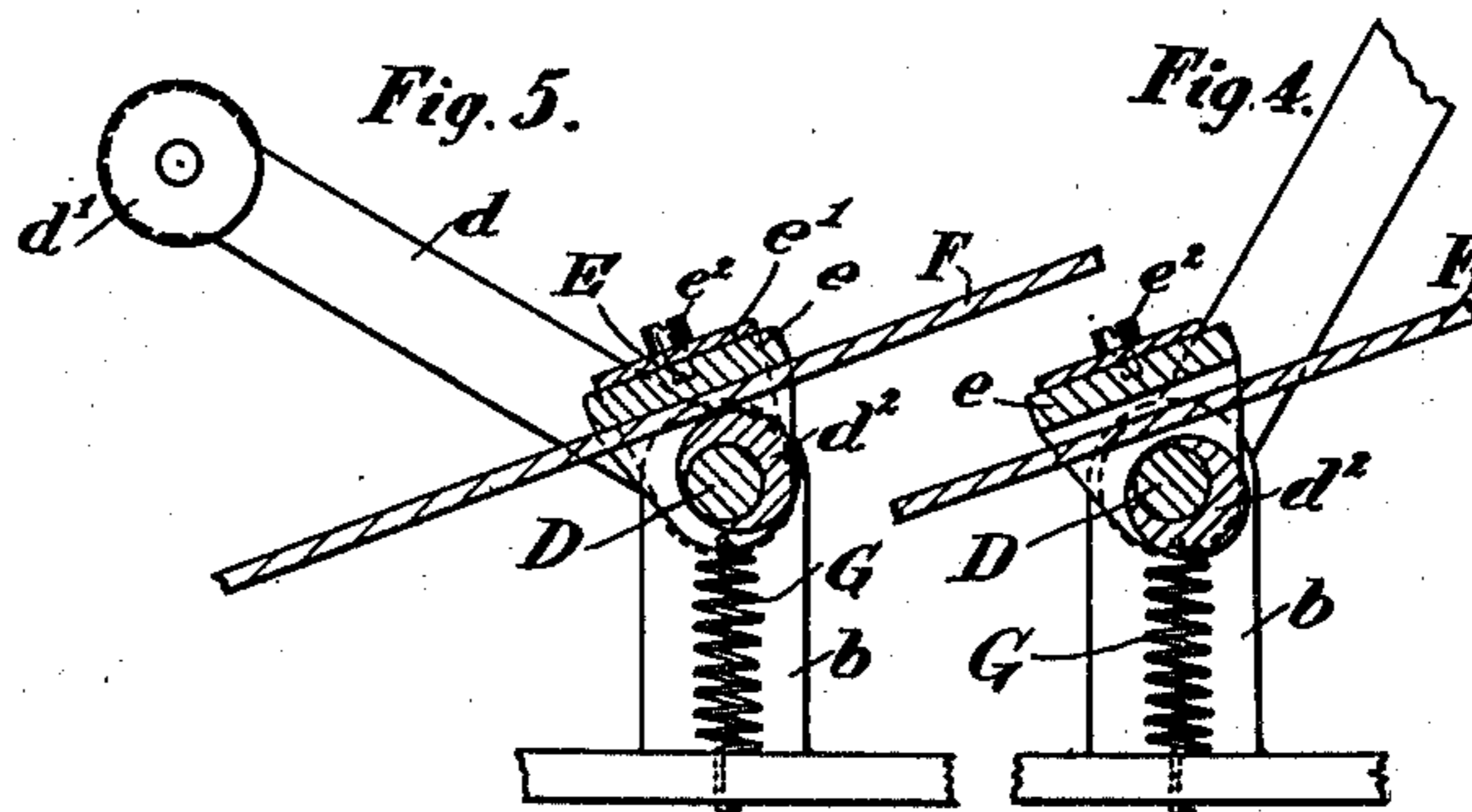
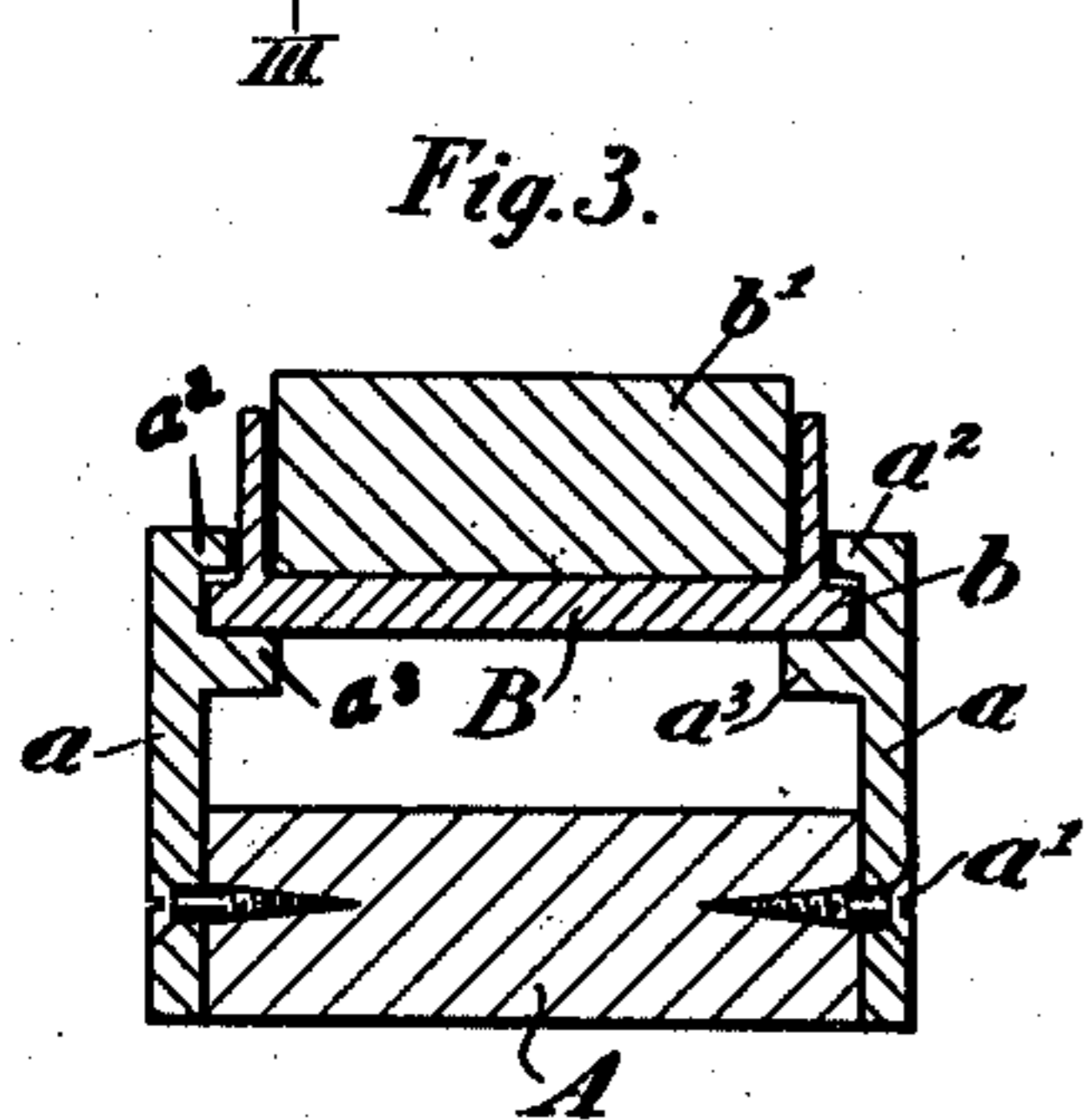
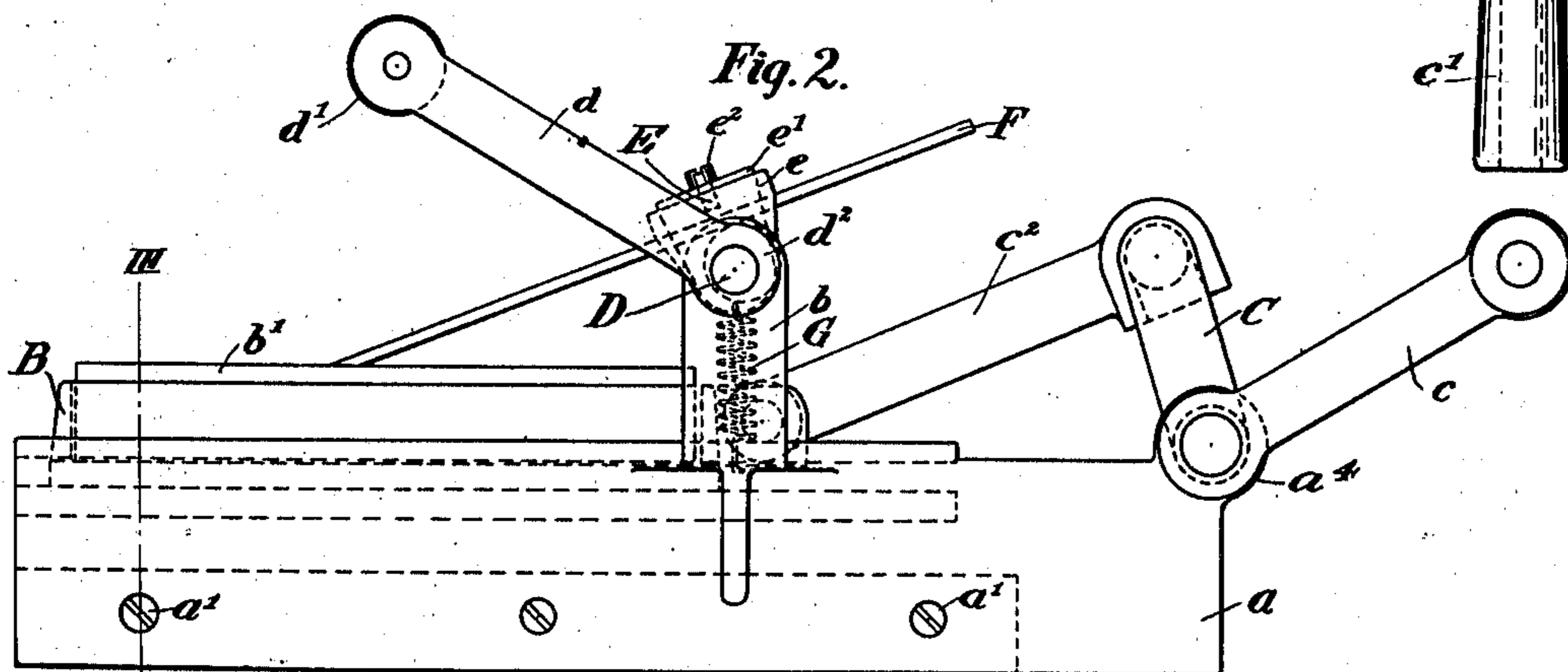
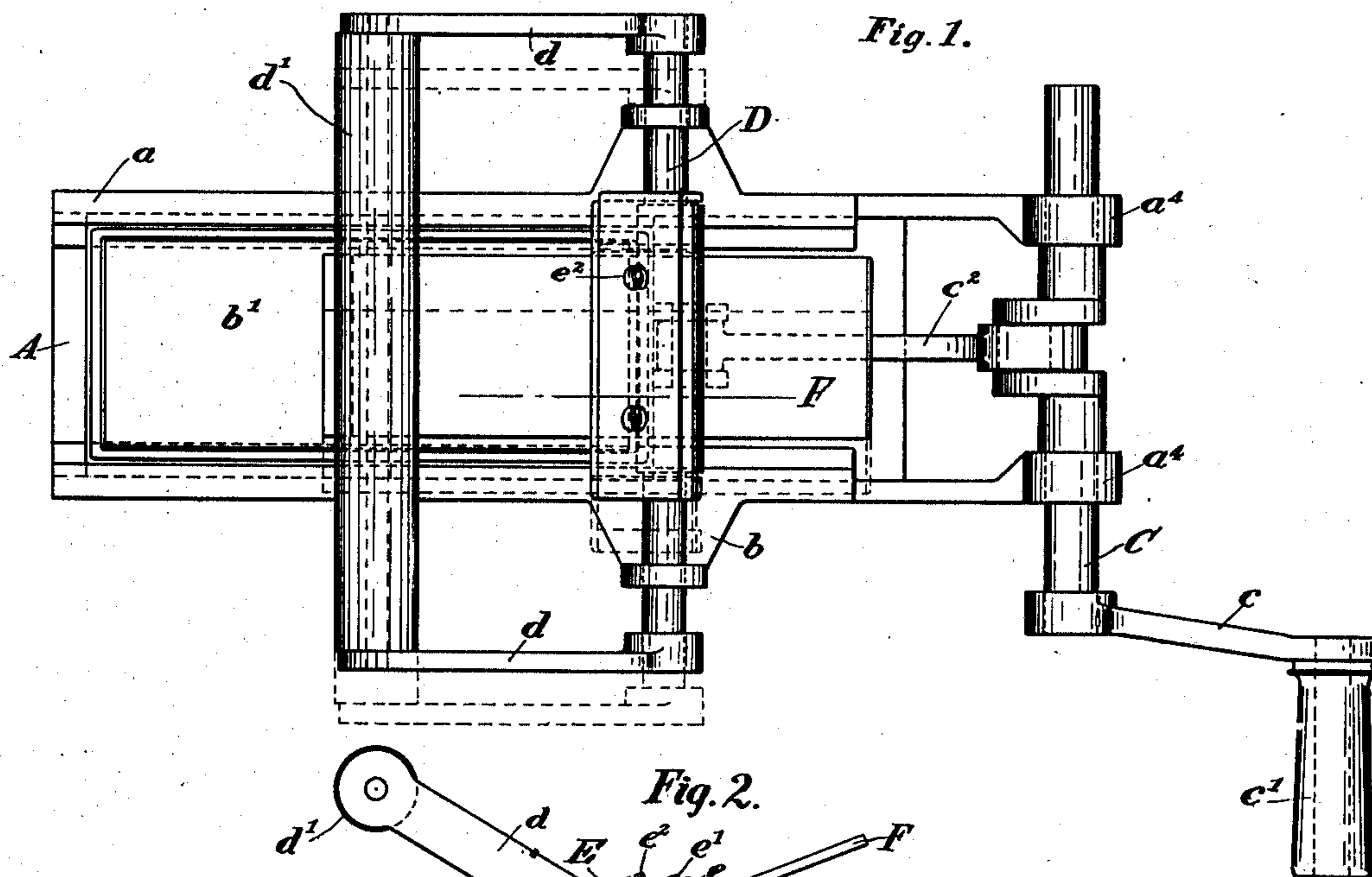


F. P. OLDS.
BLADE SHARPENING MACHINE.
APPLICATION FILED JUNE 16, 1909.

945,137.

Patented Jan. 4, 1910.



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UNITED STATES PATENT OFFICE.

FREDERICK P. OLDS, OF BEREA, OHIO.

BLADE-SHARPENING MACHINE.

945,137.

Specification of Letters Patent.

Patented Jan. 4, 1910.

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To all whom it may concern:

Be it known that I, FREDERICK P. OLDS, a citizen of the United States, resident of Berea, county of Cuyahoga, and State of Ohio, have invented a new and useful Improvement in Blade-Sharpening Machines, of which the following is a specification, the principle of the invention being herein explained and the best mode in which I have contemplated applying that principle, so as to distinguish it from other inventions.

My invention relates to a new and improved form of blade-sharpening machine in which a longitudinally reciprocable abrading member shall operate in conjunction with a blade, and further has for its object, to provide a greatly simplified and extremely efficient means for accomplishing the clamping of the blade and effecting the exercise of a variable and distributive pressure upon the abrading member.

The said invention consists of means hereinafter fully described and particularly set forth in the claims.

The annexed drawing and the following description set forth in detail a certain means embodying my invention, the described form, however, being but one of various forms in which the principle of the invention may be applied.

In said annexed drawings:—Figure 1 is a top plan view of my invention, showing in dotted lines the blade-clamping device slid to the extreme lateral position. Fig. 2 is a side elevation showing the blade securely clamped and resting upon the stone. Fig. 3 is a cross section on line III—III of Fig. 2. Fig. 4 is a view of the clamping device proper, showing the blade inserted but not clamped. Fig. 5 is a similar view showing the blade clamped in position for sharpening.

In the several views, similar reference letters refer to similar parts throughout.

Upon the sides of the base block A two side plates a a are secured in any approved manner, as by screws a' a' , to form a suitable bed frame. Upon each of these side plates near the upper inner edge, I provide two inwardly projecting flanges a^2 a^3 , forming a channel which shall serve as a guideway for the base flange b of the suitable carriage B, adapted to hold the usual type of abrading member b' . At one end of the bed frame on the side plates are projections shaped to form bearings a^4 a^4 for the crank shaft C

having the arm c and handle c' . Attached to this shaft in the usual manner is a connecting rod c^2 pivoted to the carriage B and capable of imparting to it a reciprocable sliding motion when the crank is turned. I further provide upon the side plates a a and preferably a short distance from their longitudinal center two upwardly extending standards b b , which are likewise adapted to form bearings for an oscillatory rod D. This rod extends a short distance beyond its bearing on both sides, for the purpose of permitting it to be slid laterally or in the direction of its axis. Fixedly secured to each of its ends is a lever arm d , supporting a handle d' and adapted to oscillate said rod in any one of its positions in its bearings. The central portion of the rod I supply with a clamping member in the form of an elongated eccentric d^2 . Oscillatorily mounted upon the rod over such elongated portion I provide a supplemental clamping member E composed of two ears forming bearings on each side of the eccentric, and then bent to form two laterally extending and overlapping plates which are fastened together by set screws e^2 e^2 . This supplemental clamping member is of such a depth that the eccentric on the rod will almost meet it, consequently a blade F of normal thickness may readily be clamped against the inner face thereof when the eccentric is turned against it. The under side of this supplemental clamping member is secured to the frame by a spring G, for the purpose of normally holding it in a vertical position, and so make the insertion of a blade more easy.

The operation of my invention is as follows: When the eccentric d^2 is turned away from the supplemental clamping member as shown in Fig. 4, there will be sufficient room for the insertion of the blade to be sharpened, after which the turning of the rod D throws the eccentric against the under side of the blade, to clamp it against the supplemental clamping member. Any downward pressure thereafter upon the handle d' tends to tip the supplemental clamping member to overcome the action of the spring G, and so hold the cutting edge upon the abrading member. In the meantime, the latter can be reciprocated longitudinally in the carriage B and the blade laterally upon the rod D. Thus the blade is sharpened evenly, and at the same time the abrading member is worn uniformly.

Having fully described my invention, what I therefore claim and desire to secure by Letters Patent is:—

1. In a blade-sharpening machine, the combination of a suitable bed frame; an abrading member; blade-holding means; and means for effecting relative reciprocation between said abrading and blade-holding means; said blade-holding means being laterally adjustable relatively to said abrading means.

2. In a blade-sharpening machine, the combination with an abrading member; means for reciprocating it longitudinally; a suitable bed frame; a rod journaled on said frame; a clamping member oscillatorily mounted on said rod; and means comprising an eccentric on said rod, adapted to clamp the blade against said clamping member, the rod being slidable in the direction of its axis.

3. In a blade-sharpening machine, the combination with an abrading member; means for reciprocating it longitudinally; a

suitable bed frame; a rod journaled on said frame; a clamping member oscillatorily mounted on said rod; and means comprising an eccentric upon said rod, adapted to clamp the blade against the clamping member when said rod is oscillated; and means for pressing the blade upon the abrading member.

4. In a blade-sharpening machine, the combination with an abrading member and means for reciprocating it longitudinally; of a suitable bed frame; an eccentric rod journaled on said frame and lying across the path of the abrading member; a clamping member oscillatorily mounted upon said rod; means for sliding said rod in the direction of its axis; and means for oscillating the rod to clamp the blade within said clamping member.

Signed by me, this 14th day of June, 1909.

FREDERICK P. OLDS.

Attested by—

CURT B. MUELLER,
HERMAN EISELE.