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4 SHEETS—SHEET 1.



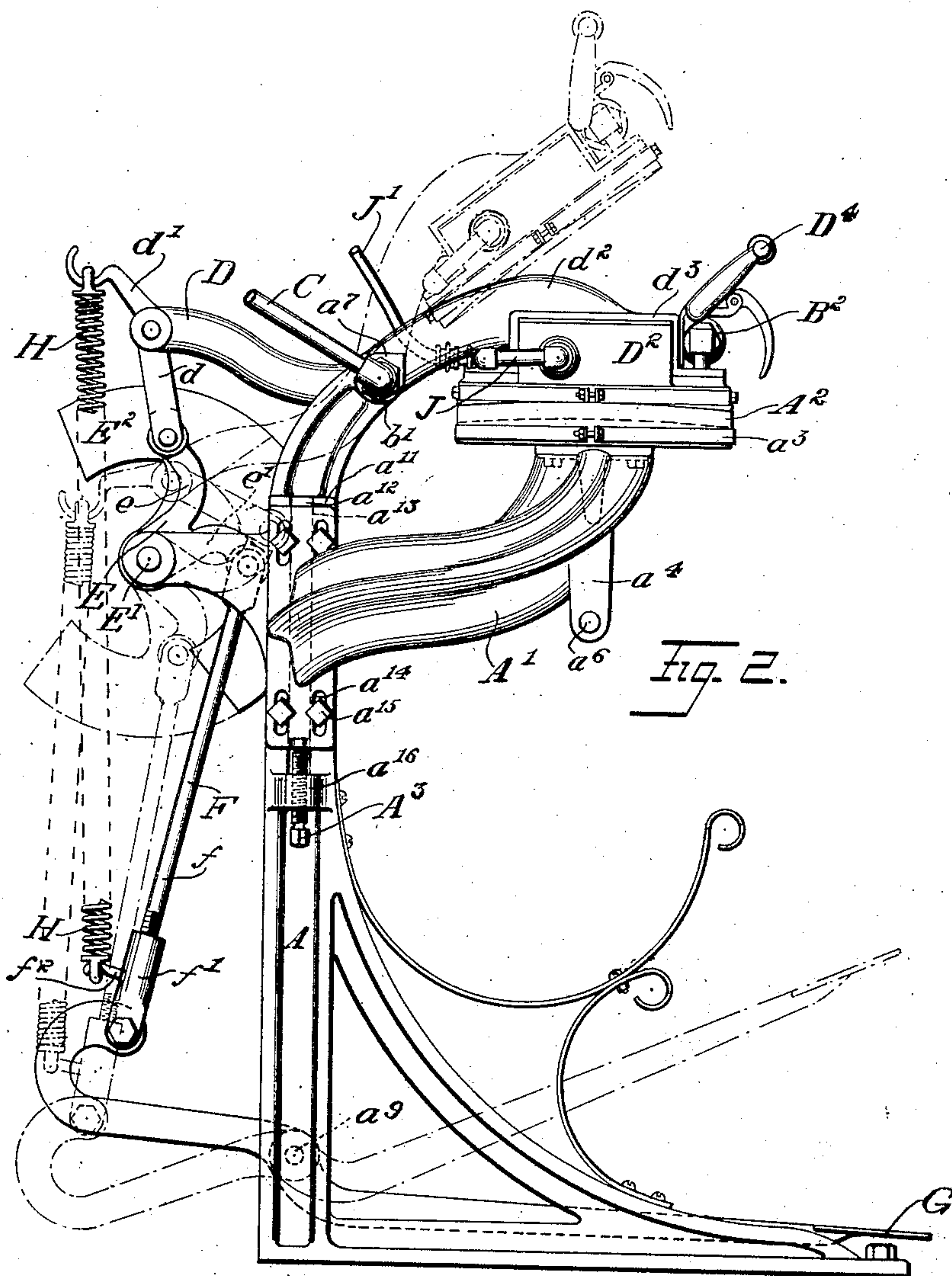
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H. P. SHUPE.
GARMENT PRESSING MACHINE.
APPLICATION FILED OCT. 28, 1908.

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Patented Nov. 16, 1909.
4 SHEETS—SHEET 2.



WITNESSES
Herman Eisele
K. F. Juegling.

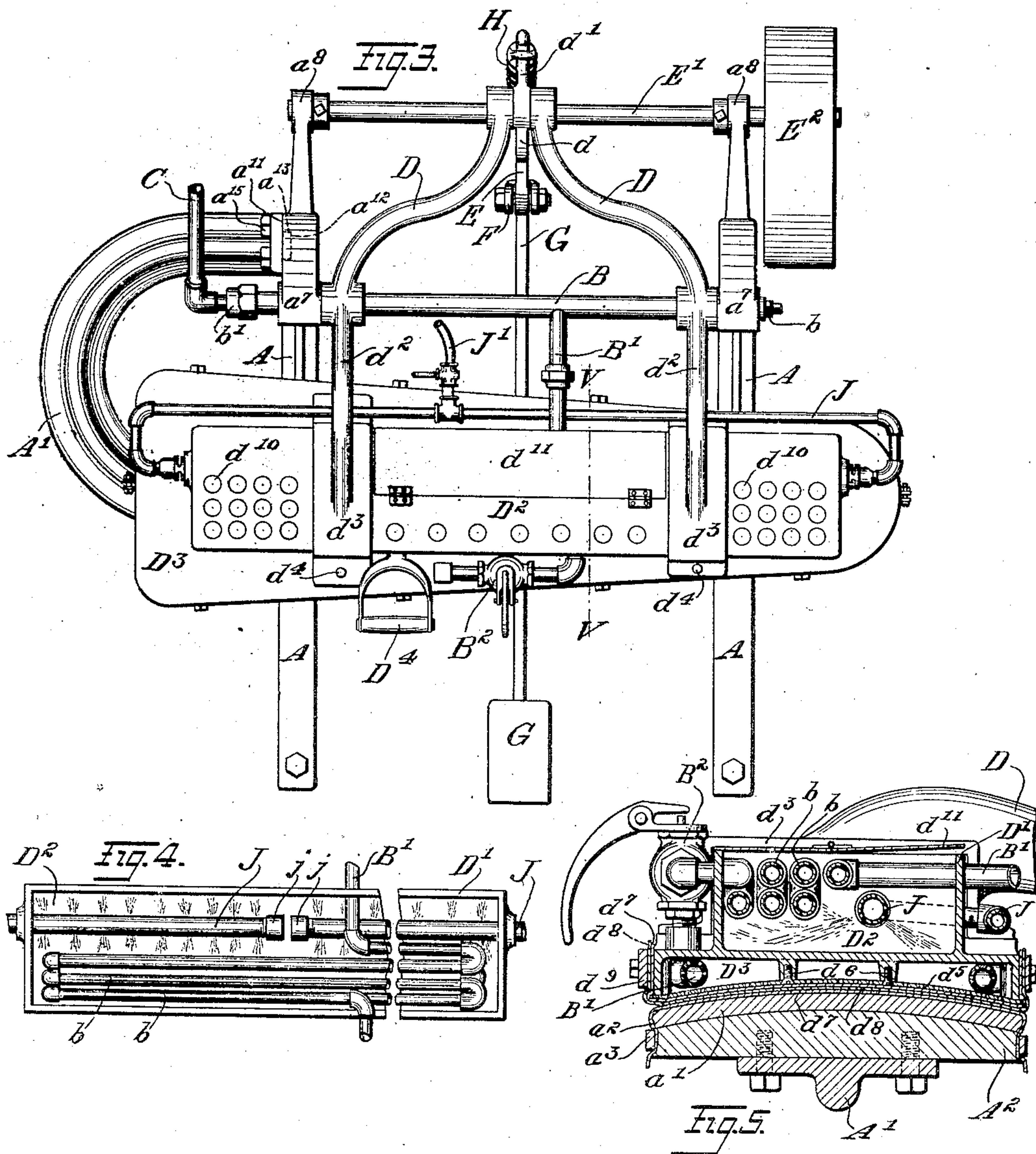
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Witnesses
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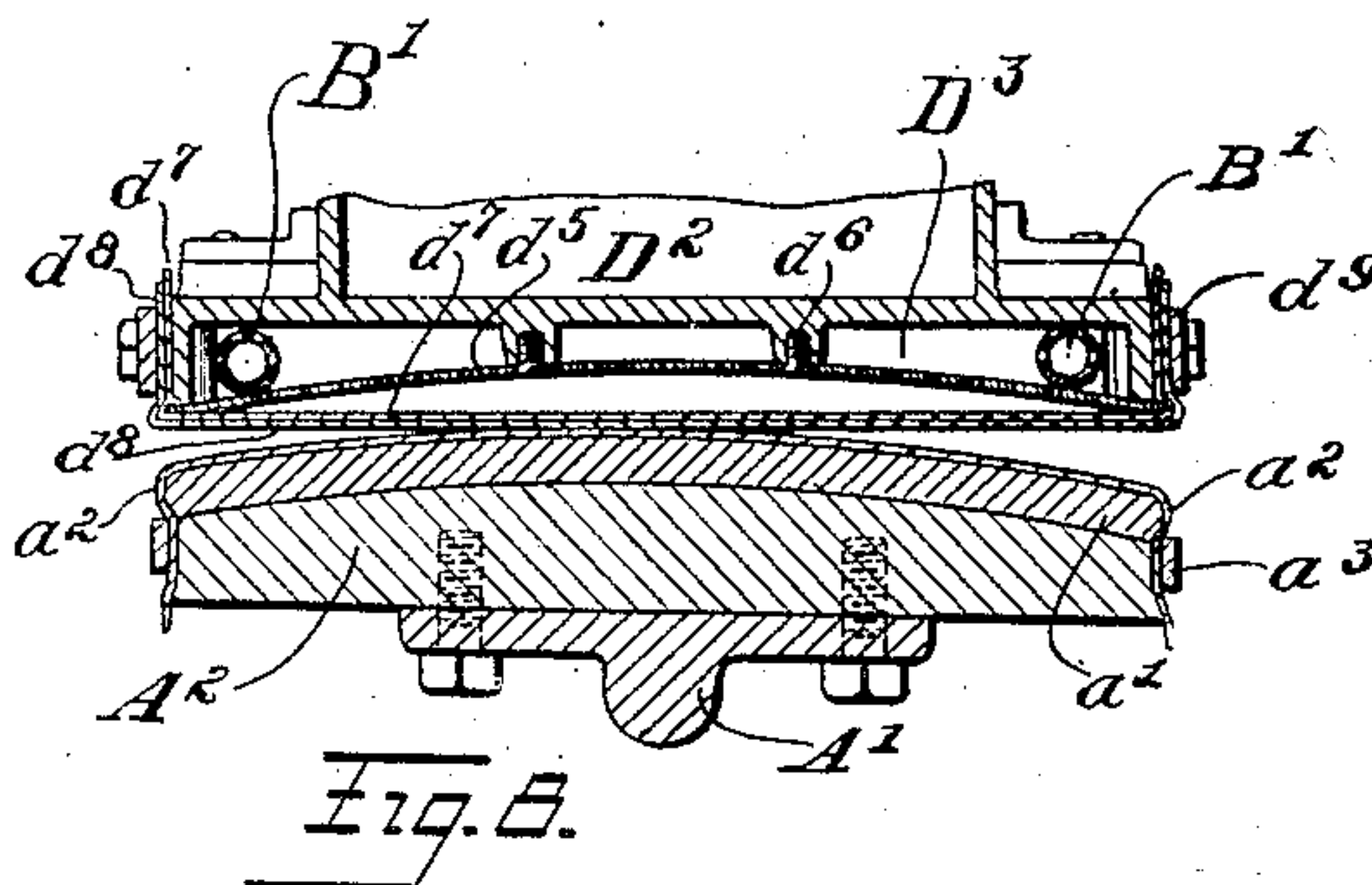
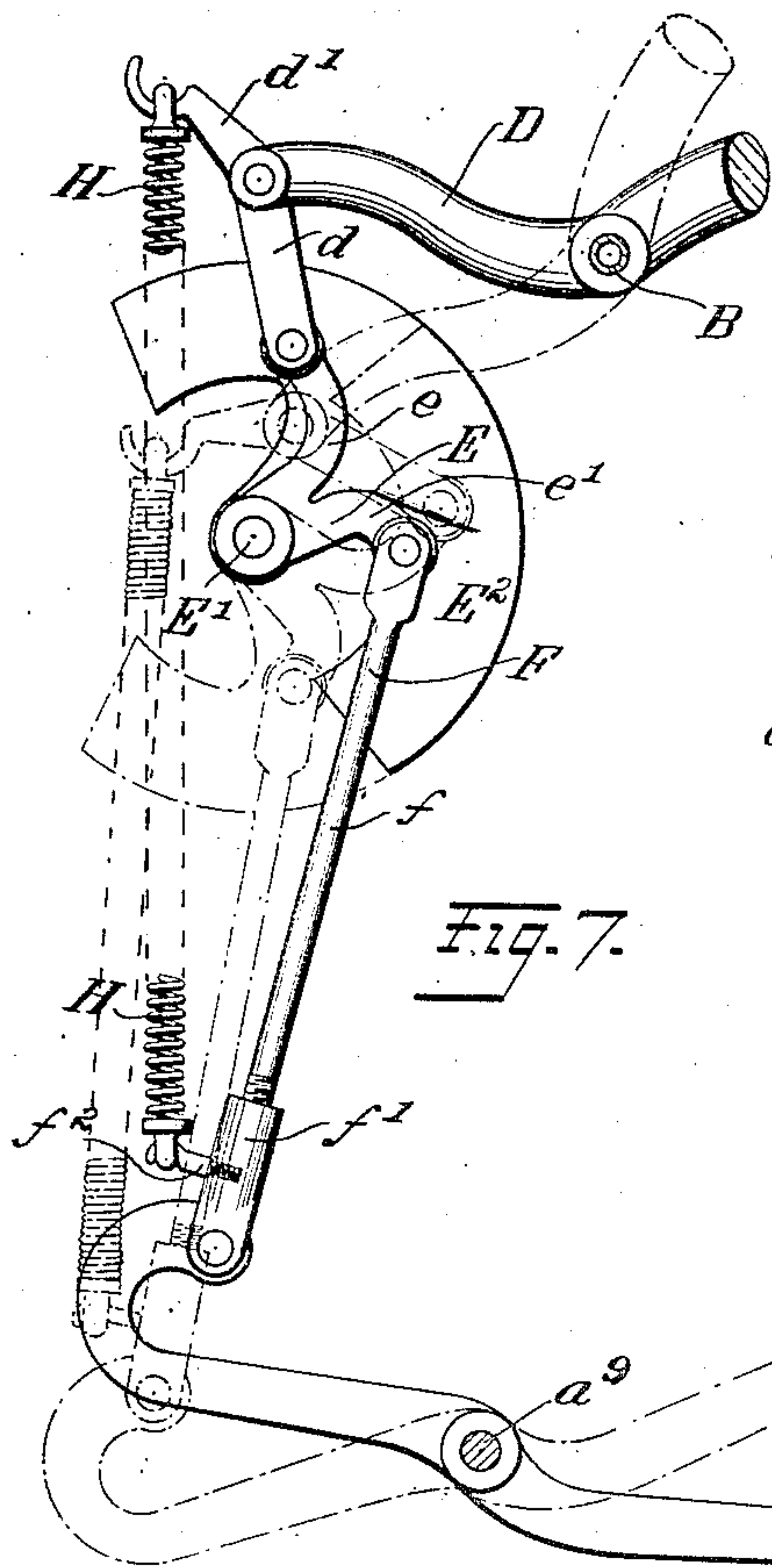
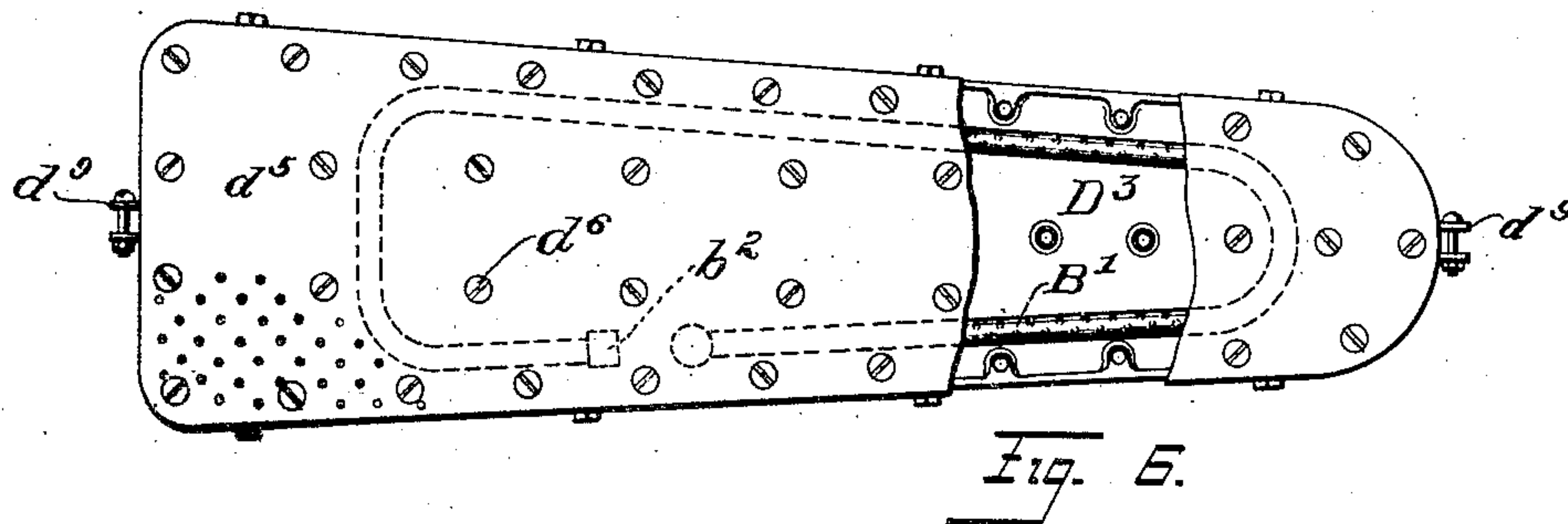
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4 SHEETS—SHEET 4.



Witnesses

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UNITED STATES PATENT OFFICE.

HENRY P. SHUPE, OF CLEVELAND, OHIO.

GARMENT-PRESSING MACHINE.

940,078.

Specification of Letters Patent.

Patented Nov. 16, 1909.

Application filed October 28, 1908. Serial No. 459,847.

To all whom it may concern:

Be it known that I, HENRY P. SHUPE, a citizen of the United States, resident of Cleveland, county of Cuyahoga, and State of Ohio, have invented a new and useful Improvement in Garment-Pressing 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 machines for pressing garments, its object being to provide a machine of such character which will be economical in its construction and operation.

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

The annexed drawings and the following description set forth in detail certain means embodying the invention, the disclosed means however constituting but one of various mechanical forms in which the principle of the invention may be used.

In said annexed drawings:—Figure 1 is a front elevation of a garment pressing machine embodying my invention. Fig. 2 is a side elevation of such machine showing the different positions of the parts thereof in dotted lines. Fig. 3 is a plan of said machine. Fig. 4 is a broken plan of the superheating chamber with the cover removed. Fig. 5 is a cross section, upon an enlarged scale, of the upper portion of the device taken upon the plane indicated by line V—V, Fig. 3. Fig. 6 is a bottom plan of the upper or oscillatory pressing member with the canvas covering removed and broken away to disclose the interior construction thereof. Fig. 7 is a side elevation of the mechanism for actuating the oscillatory pressing member, detached from the main body of the machine. Fig. 8 is a section similar to that shown in Fig. 5, showing the two pressing members in the position they occupy just prior to the beginning of the actual pressing operation.

The base or main member of the frame comprises two lateral uprights A A secured by upper and lower braces a a . Having one end secured to the upper part of said

base or main member at the outer lateral face of one of the uprights is a secondary frame member A' which extends laterally, forwardly and transversely of said main member, the other end thereof being laterally unsupported as shown in Fig. 3. The upper surface of that portion of the secondary member A' which extends transversely of the machine is made substantially horizontal and flat and secured thereto is a bed plate A². Upon the top of this plate is placed a layer of padding a' and upon this padding is placed a canvas cover a^2 , which is held in place by means of a strap or band a^3 , Fig. 5. This secondary frame portion together with the above described detachable parts forms the stationary pressing member of the machine. The upper surface of said member is preferably convex as shown, and for a purpose hereinafter described.

It will be observed from the above described construction of the stationary pressing member that one end thereof and both sides are entirely free and that by causing the frame to assume the form described, such freedom of said end and two sides is obtained within a comparatively small lateral compass as shown when viewed in plan as illustrated in Fig. 3.

In order to strengthen the secondary frame member, I prefer in practice to provide same with the downwardly extending projections a^4 and a^5 , to which is secured a brace rod a^6 as shown in Fig. 1.

Journaled in bearings a^7 a^7 , Fig. 3, is a hollow rod or pipe B, one end of which is closed by means of a plug b and the other end of which is rotatably connected with a steam pipe C by means of a suitable coupling b' , whereby the said steam pipe C may be stationary and the pipe B oscillated without interfering with the introduction of the steam from pipe C into pipe B, as will be readily understood.

Fixedly secured to the pipe B is a second pressing member D which may therefore be given an oscillatory movement about the axis of the pipe B. The rear end of the member D articulates with a link d provided with an extension d' , as shown in Figs. 2 and 7. The lower end of this link articulates with the upper arm e of a bell crank

E, which is fixed to the oscillatory rod E' journaled in bearings a^8 a^8 , Figs. 2 and 3, forming part of the frame of the machine. Upon one end of this rod E' is fixed a counterweight E². This counterweight is in its normal or lower position when the front end of the member D is elevated as shown in dotted lines in Fig. 2. Articulating with the other arm e' of the bell crank E is a connecting rod F, consisting of a main or threaded portion f and a lower internally threaded portion f' . This latter portion articulates with the end of a treadle member G, which is fulcrumed upon a bolt a^9 , Fig. 1, supported in a hanger a^{10} secured to the bottom of the lower cross piece a . The forward portion of the treadle extends a sufficient distance so as to enable the operator to readily reach the same with his foot when standing in position in front of the machine, as will be readily understood.

Having its upper end secured to the extension d' of the link d and its lower end secured to a hook f^2 screwed into the portion f' of the connecting rod, is a coil spring H. The location of the spring is therefore such that when the forward end of member D is elevated it is in its unstretched or least stretched position. The counterweight E² is of a size such that its mass substantially balances the mass sustained by the forward end of member D. In pulling such forward end downwardly, therefore, such action is opposed by the spring H, and conversely, the spring assists the operator in raising the said forward end. It will also be seen that the length of the connecting rod F is variable and by means of this feature, the tension of the spring may be varied to vary the force exerted thereby. The force tending to elevate the front end of member D may therefore be varied to accommodate the weight thereof, as will be readily understood.

The forward end of member D comprises a casting D' forming two hollow compartments, an upper compartment D² and a lower compartment D³, the casting being preferably a separable part of the member D. To this end the arm portions d^2 d^2 are formed with D-shaped forward end portions d^3 d^3 which embrace the upper compartment D² and are secured to the upper face of the lower compartment D³ by means of bolts or screws d^4 d^4 . To permit of this construction the width of the upper compartment D² is made less than that of the lower compartment D³, as shown in Fig. 5.

A branch pipe B' connects with the pipe B, Fig. 3, passes into the compartment D², and forms a plurality of coils b b , therein, as shown in Figs. 4 and 5. This pipe then passes out of said compartment and into compartment D³. That portion of said pipe

in this latter compartment extends around the interior thereof as shown in Fig. 6 and is perforated to admit of the discharge of steam into said compartment. The extremity of said pipe is closed by means of a suitable cap b^2 . A manually operable valve B², normally closed, is interposed in the pipe B' at a point intermediate of those portions thereof located in the two compartments, as shown in Fig. 3. By means of this valve it will be seen that the discharge of steam into compartment D³ is controlled.

The lower side of compartment D³ comprises a concave perforate plate d^5 which is secured in place by suitable screws d^6 , Fig. 5. Over this plate is placed a layer of wire gauze d^7 and upon the latter is placed a strip of canvas d^8 . The gauze and canvas are respectively held in place by means of a strap d^9 , and are normally flat, as shown in Fig. 8. The construction of this lower side of the said chamber is therefore such as to be pervious to the steam and moisture which is hence allowed to moisten and heat the canvas covering d^8 . The concavity of the lower face of the plate d^5 is made to substantially conform with the convexity of the upper face of the stationary pressing member previously described.

Entering each side of the compartment D² are the two end portions of a gas supply pipe J, such end portions being perforated laterally to permit the gas to be discharged into said chamber and thereupon to be ignited and heat the interior thereof. The extremities of these end portions are closed by means of suitable caps j j , Fig. 4. Pipe J communicates with a source of fuel gas by means of a flexible pipe J', Fig. 3. The upper side of compartment D² is provided with perforations d^{10} d^{10} , Fig. 3, and with the door d^{11} closing an opening affording access to the interior of said compartment. The perforations d^{10} permit of the escape of the gases of combustion formed in said chamber.

A handle D⁴ is secured to the casting D' whereby the operator may normally aid the foot power exerted by him to depress the front end of the oscillatory pressing member or otherwise facilitate the manipulation of the device.

In the operation of the above described device, steam is permitted to enter coils b b and gas to burn in the compartment containing these coils. As a result the steam in the coils may become highly superheated, and thereupon by means of the valve B², admitted into the compartment D³ from which it communicates its moisture and heat to the garment laid between the two pressing members, when the oscillatory pressing member is brought down upon such garment by means of the treadle G. During this opera-

tion of pressing, the canvas d^8 and gauze d^7 are depressed against the concave plate d^5 , thereby conforming to the surface of member A^2 .

5 The link d and bell crank E are so arranged that arm e of the latter forms a toggle in connection with the said link, this toggle being so arranged as to exert its greatest pressure when the two pressing members are brought into proximity with each other. The position of the members of this toggle when the pressing members are in this last named position is illustrated in Fig. 7.

15 It is essential that the two pressing surfaces be made to contact each other at all points during the pressing operation in order to treat every portion of the garment in a like manner. This is partially effected by providing the upper pressing member with the concave plate d^5 and the flat elastic gauze and canvas stretched over it, leaving an intermediate free space through which the said gauze and canvas may be depressed. As a result of such construction it will be seen that the central part of the canvas d^8 will strike the garment first, as indicated in Fig. 8. Contact will then be effected laterally in both directions from such central portion.

25 This will effect a uniform contact between the pressing surfaces and the garment as is required and also prevent displacement of the garment during the pressing operation. In order to still further secure the above-described relationship between the said pressing surfaces, the lower member A^2 is made adjustable vertically. To this end, the side of frame A to which the secondary frame A' is secured is provided with a slide-way a^{11} , Figs. 1 and 2, formed with a groove a^{12} in which fits a tongue a^{13} formed on member A' . Elongated slots a^{14} are formed in the latter through which project cap screws a^{15} which screw into the frame A . An adjusting screw A^3 is threaded into a lug a^{16} formed on frame A and bears against the lower surface of the frame A' . By loosening screws a^{15} the frame A' may be raised or lowered to assume the required position, by turning the screw A^3 . When such position is obtained, screws a^{15} are tightened, thereby fixing frame A' securely in place.

55 As shown in the drawing, Figs. 6 and 8, I prefer to discharge the steam into chamber D^3 through apertures in the pipe B' located therein, opening upwardly from the latter, so as to cause the discharged steam to first strike the hot plate forming the bottom of the heating chamber D^2 .

60 What I claim therefore and desire to secure by Letters Patent is:—

1. In a device of the class described, a pressing member comprising the combina-

tion of two non-communicating compart- 65 ments, one of which is formed with a pervious side; a steam duct traversing both said compartments and adapted to discharge into one of same; and means in the other compartment for superheating the steam in said 70 duct.

2. In a device of the class described, the combination of a suitable frame; a pressing member oscillatorily mounted upon the latter; a link articulating with said member 75 and provided with an extension; a bell crank mounted upon said frame, and having one of its arms forming a toggle in conjunction with said link; a treadle arm; a connecting rod articulating with the latter and the 80 other arm of said crank; and a spring having one end attached to said link extension and the other end attached to said connecting rod.

3. In a device of the class described, a 85 pressing member comprising the combination of two non-communicating compartments, one of which is formed with a pervious side; a steam duct traversing both said compartments and adapted to discharge 90 into one of same; means in the other compartment for superheating the steam in that part of the duct located therein; and a manually operable valve controlling communication between that part of said duct 95 located in the one compartment and that part located in the other.

4. In a device of the class described, the combination of two relatively movable pressing members, the one member being pro- 100 vided with a steam chamber having a concave perforated wall, together with a normally flat and flexible member secured adjacent to said perforated wall; the other member having a normally curved pressing 105 surface.

5. In a device of the class described, the combination of two relatively movable pressing members; the one member being provided with a rigid concave surface and a 110 normally flat or plane flexible member secured adjacent to said surface; the other member being provided with a normally and substantially rigid convex surface.

6. In a device of the class described, the 115 combination of two relatively movable and adjustable pressing members; the one member being provided with a normally rigid and concave surface together with a normally flat and flexible member secured adjacent thereto; the other member being provided with a convex surface normally and 120 substantially rigid.

7. In a device of the class described, the combination of a suitable frame; a lower 125 pressing member adjustable vertically upon said frame and arranged to be fixed in various positions thereon, said member further

provided with an upper rigid convex surface covered with cloth placed directly upon such surface; a second pressing member oscillatory movable toward and from the first
5 named member; said oscillatory member being provided with a steam chamber; a rigidly secured and perforated concave plate forming the outer wall of said chamber; and a strip of flexible material stretched over

said plate and suitably secured to said oscillatory member.

Signed by me, this 26th day of October, 1908.

HENRY P. SHUPE.

Attested by—

A. E. MERKEL,

WM. R. MILLER.