

No. 656,371.

Patented Aug. 21, 1900.

G. G. PLACE.
IRONING MACHINE.

(Application filed May 9, 1898.)

(No Model.)

2 Sheets—Sheet 1.

Fig-1

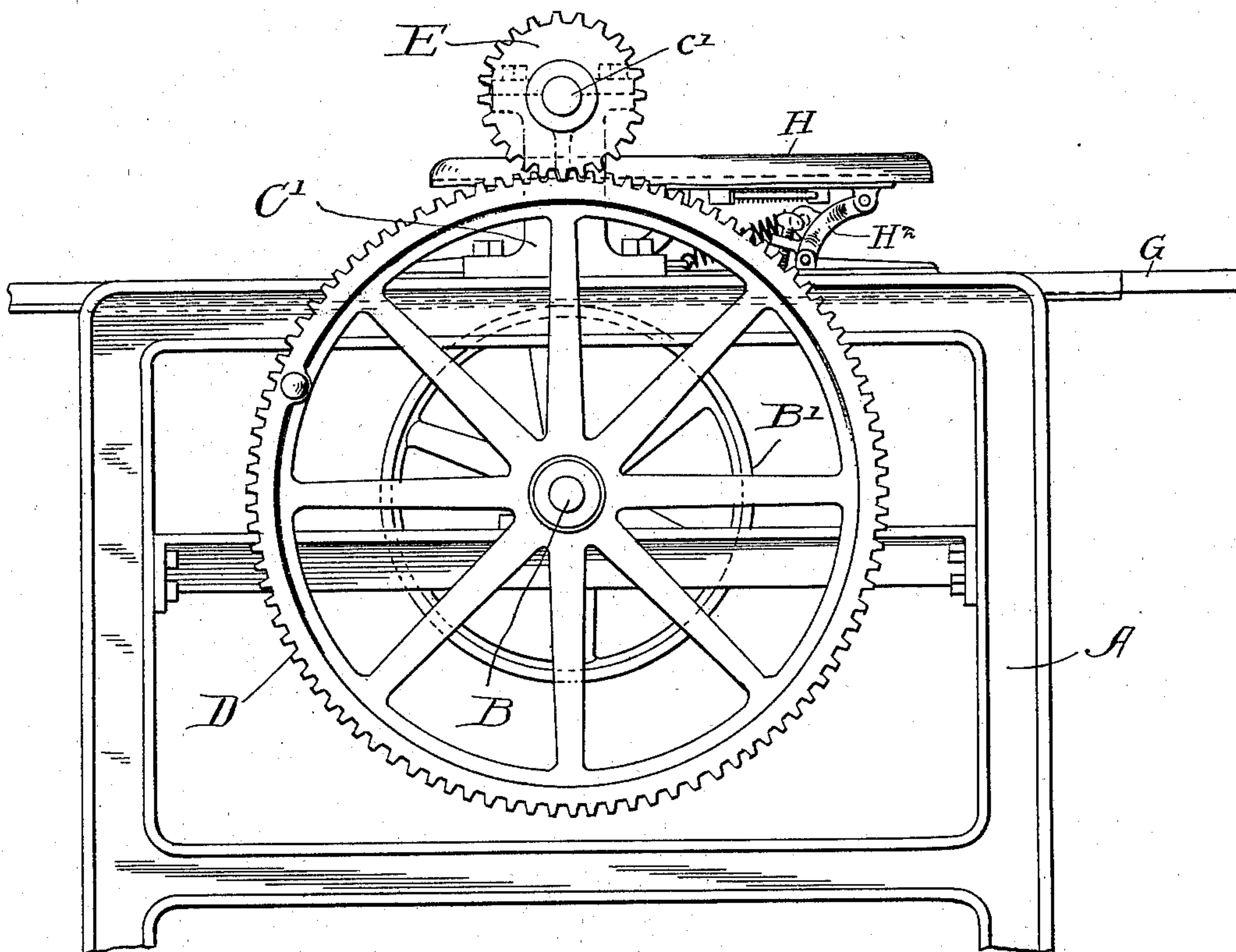
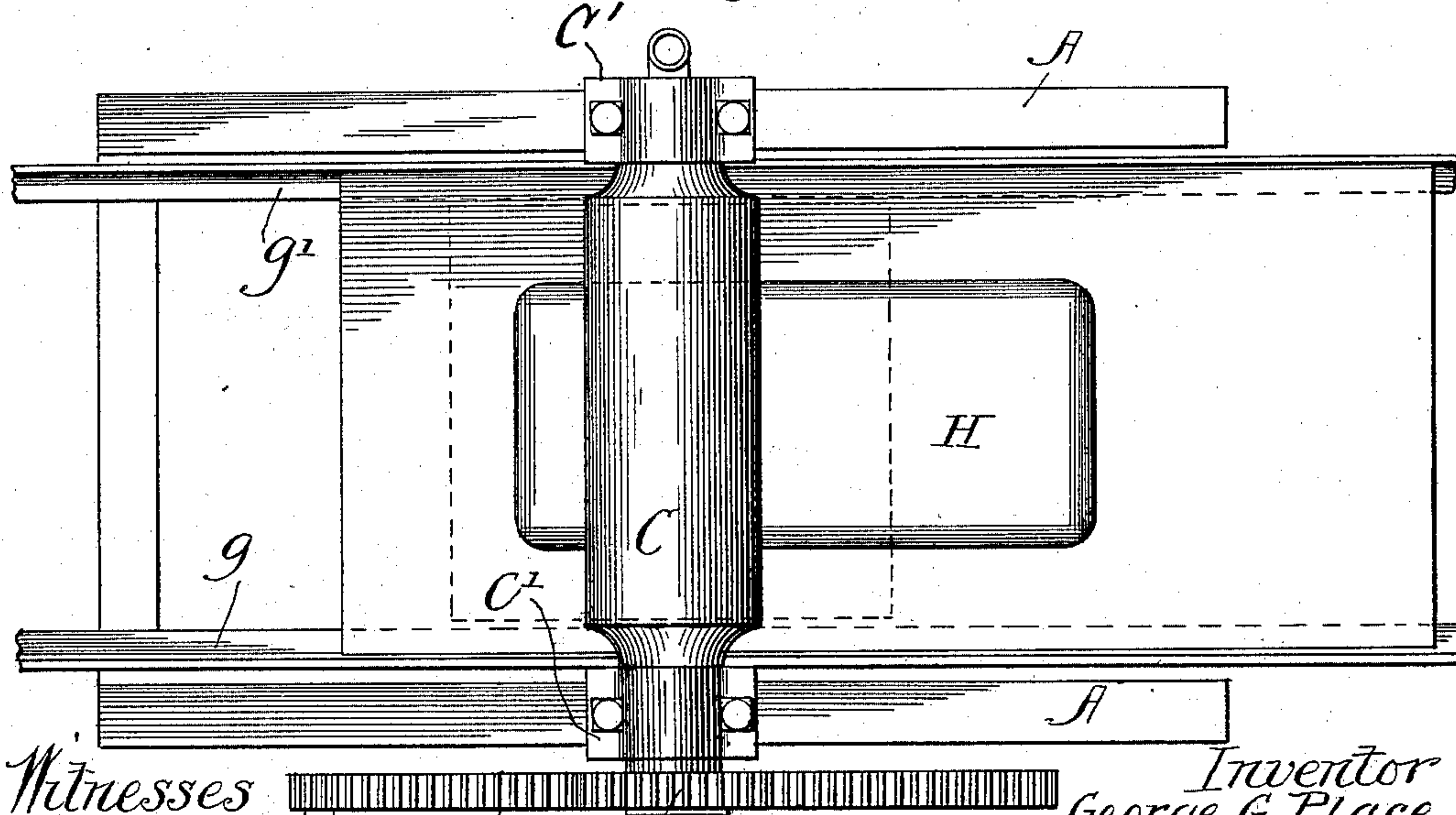


Fig-2



Witnesses

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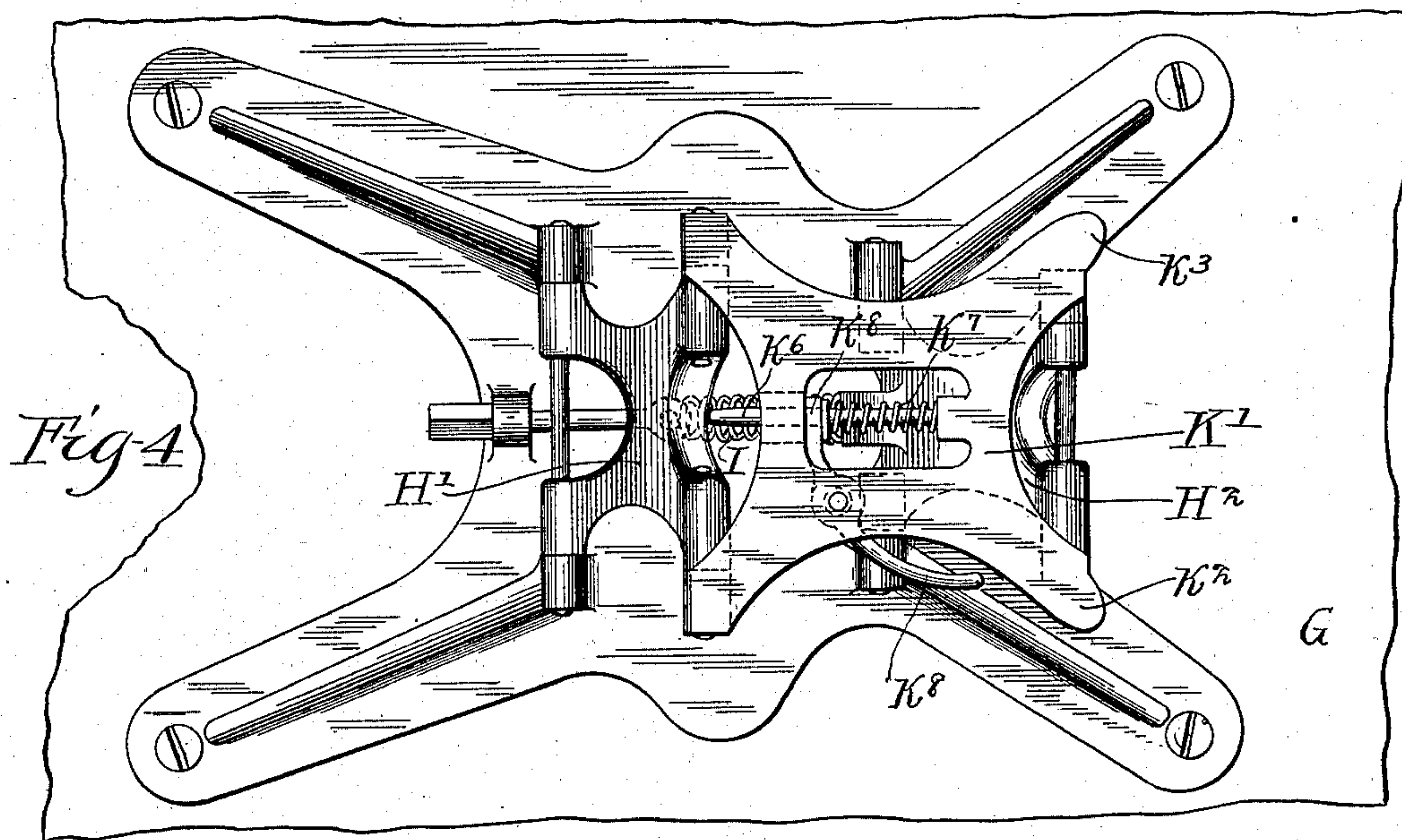
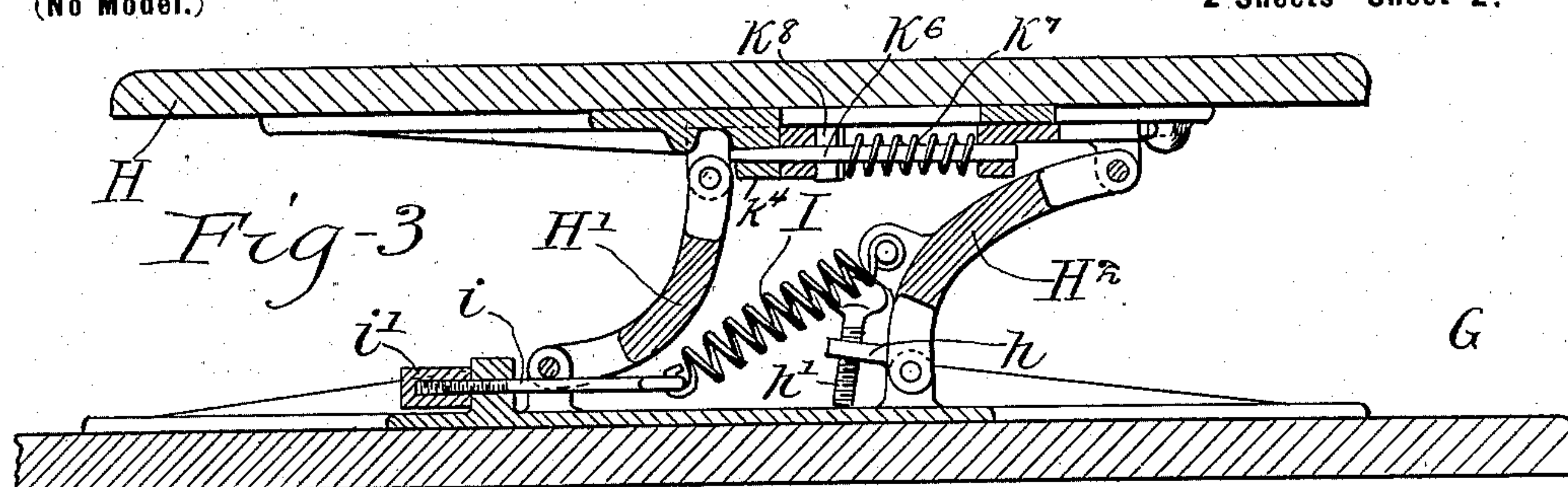
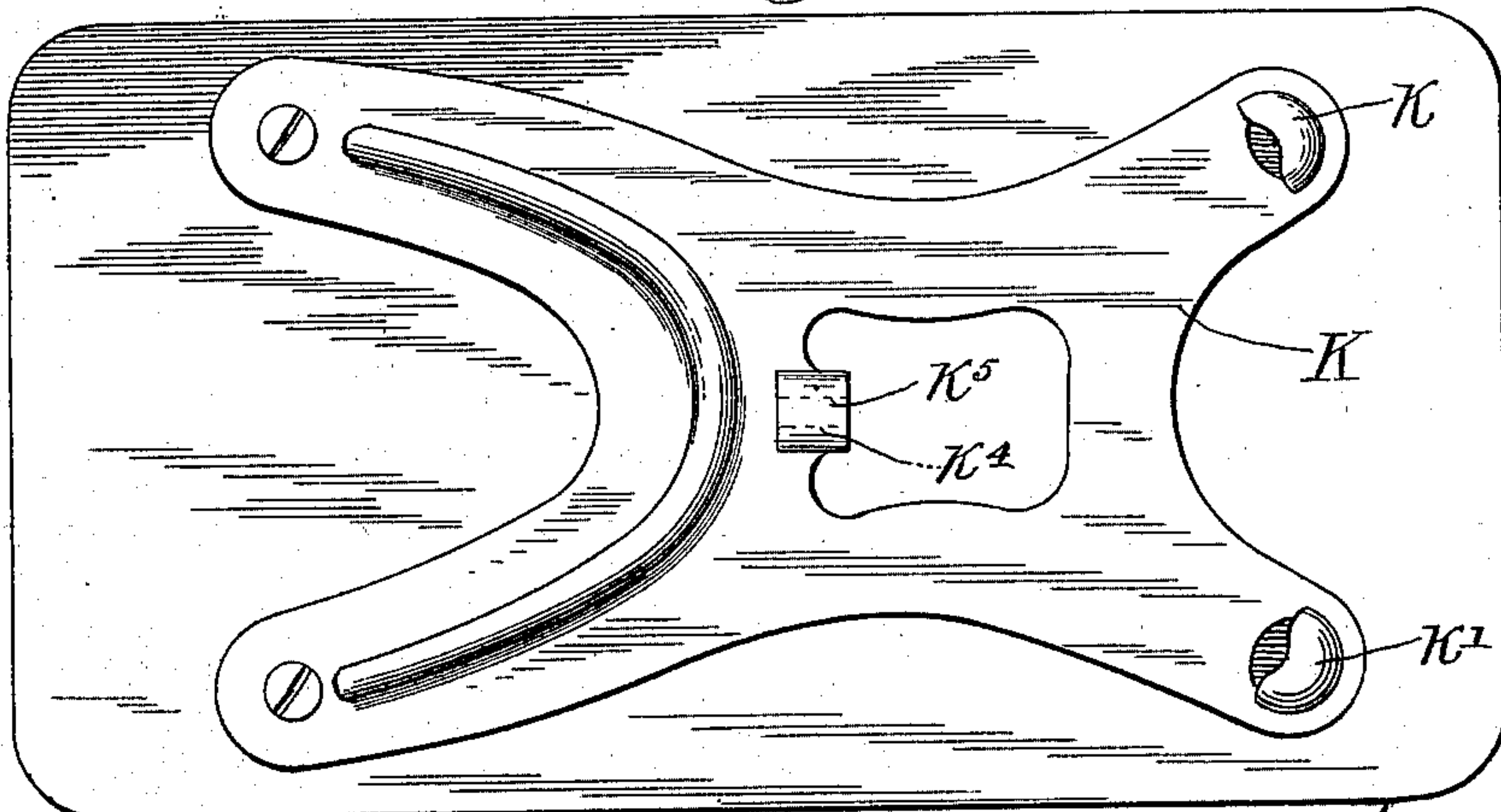


Fig-5



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UNITED STATES PATENT OFFICE.

GEORGE G. PLACE, OF CHICAGO, ILLINOIS.

IRONING-MACHINE.

SPECIFICATION forming part of Letters Patent No. 656,371, dated August 21, 1900.

Application filed May 9, 1898. Serial No. 680,123. (No model.)

To all whom it may concern:

Be it known that I, GEORGE G. PLACE, a citizen of the United States, residing at Chicago, in the county of Cook and State of Illinois, have invented certain new and useful Improvements in Ironing-Machines, of which the following is a specification.

My invention relates to that class of ironing-machines which are known as "shirt or collar and cuff ironers," and has for its object the providing of a simple, economical, and efficient machine for ironing shirts, collars, and cuffs, and other work having flat surfaces.

The invention consists in the features, combinations, and details of construction hereinafter described and claimed.

In the accompanying drawings, Figure 1 is a side elevation of a shirt-ironer embodying my improvements; Fig. 2, a plan view of the same; Fig. 3, a longitudinal sectional elevation of the shirt-holder separated from the ironing-machine; Fig. 4, a plan view of the shirt-holder shown in Fig. 3 with the ironing-board removed and looking at it from the top, and Fig. 5 a plan view of the ironing-board looking at it from below.

In the art to which this invention relates it is well known that it is necessary to apply considerable pressure to the ironing-roll in order to perform the work, and it is also well known that different operators have different ideas as regards the amount of pressure necessary to use in ironing, and, again, that the pressure has to be varied to suit various circumstances and conditions. In order to accomplish this result in the prior art—that is, to provide a machine in which the pressure on the ironing-roll could be adjusted or regulated—the ironing-roll and the feed-roll, or both, have been made adjustable—that is, to have a certain amount of play and be moved toward and from each other. They have also been held in their position by means of tension-springs, which have been adjustably held under pressure, so as to accomplish the desired result. The use of adjustable rolls is objectionable, because the moving of the feed or ironing rolls can be accomplished only by interfering with the normal "depthing" or meshing of the driving-gears, which interferes with the smooth and economical run-

ning of the machine. My invention is intended, primarily, to remove these objections by providing a machine in which the ironing and feed rolls may be held stationary, so that their driving-gears may have their normal engagement by the "pitch-lines," so as to provide for a simple, economical, and efficient running, all of which will be more fully hereinafter set forth.

In constructing a shirt-ironer in accordance with my improvements a frame portion A is provided of the desired size, shape, and strength necessary for holding the operative and other parts in position for use. Mounted in suitable and preferably fixed bearings in this frame is a shaft B, which carries a driving-roll B' for the purpose of feeding the shirt-holder through the machine.

In order to accomplish the ironing, an ironing-roll C is provided and mounted in suitable and preferably fixed bearings on standards C', which are bolted to the frame of the machine. It will be noticed, as above stated and by an inspection of the drawings, that the shafts B and C', upon which the feeding and ironing rolls are mounted, have fixed bearings and are provided with driving and driven gears D and E. The advantage of having these fixed bearings is that the gears have and are at all times kept in a positive mesh at the normal point—namely, the pitch-line—so as not to interfere with the free running or operation of the parts.

While I have described a machine in which the feeding and ironing rolls are arranged in fixed bearings, or relatively-fixed bearings, provided with driving and driven gear-wheels, I do not desire to be limited to this arrangement when considering the remaining portions of my improvements—namely, the shirt-holder—for the reason that such improvements may be used with a machine having adjustable rolls as well as with the machine which I have hereinbefore described, and illustrated in the drawings.

It is desirable and practically necessary in the art to which this invention relates to provide means by which the pressure necessary for ironing may be varied to suit different operators, circumstances, and conditions, and it is particularly essential or desirable to change the pressure without in any way in-

terfering with the depthing or meshing of the train of gears that drive the feeding or ironing rolls. In order to accomplish this last-named result, I provide a shirt-holder in which there is a base portion G, adapted to move in runways g and g' and be contacted by the feeding-roll particularly shown in Fig. 2. Adjustably mounted on this base-board is the ironing-board proper, H, which is pivotally secured to the base-board by means of the swinging link-bars H' and H^2 , which, as will be noticed from an inspection of Fig. 3, are pivotally connected to the base and ironing boards, so that a movement of the ironing-board toward or from the base is accomplished in a parallel manner, and therefore does not interfere with the passage of the holder through the machine.

In order to yieldingly hold the ironing-board at its upper limit of motion to be contacted by the ironing-roll and to provide the necessary tension and consequent pressure, a spring I is provided and preferably secured to one of the swinging bars and adjustably secured by means of the bolt i and nut i' to the base of the ironing-board. By this bolt and nut it will be seen that the tension on the pressure or tension spring I may be regulated so as to keep the ironing-board in its upper or operative position and under the necessary tension.

A lug h is preferably cast to one of the swinging bars and provided with a stop-screw h' , which regulates the amount which the ironing and base boards may be separated, or, in other words, limits the movement of the ironing-board, but at the same time permits their being pressed together by the action of the rolls.

It is well known that shirts are made in different sizes, and as a consequence it is necessary to use different-sized ironing-boards. It therefore becomes desirable from an economical standpoint to provide a supporting mechanism of such a construction that different-sized ironing-boards may be made interchangeable therewith. In order to accomplish this result, the ironing-boards are provided with a metal piece K, having a number of pockets k and k' on the under side, which are adapted to fit lugs or projections k^2 and k^3 on the plate K' of the supporting mechanism. The metal piece on the ironing-board is also provided with a lug k^4 , having a perforation k^5 , into which a pin k^6 on the supporting mechanism may be inserted and lock the parts together. This pin is held in engagement with the lug of the ironing-board by means of a helically-coiled spring k^7 , and an operating-lever k^8 is mounted in such manner as to contact the lug or dowel-pin, so as to withdraw it from engagement with the lug on the ironing-board and permit such board to be removed and a new one inserted as may be desirable or necessary.

It will be seen that a machine constructed in accordance with the foregoing description

may be made in which it is unnecessary to change the position of the feeding and ironing rolls at any time and that all the pressure necessary to accomplish the process of ironing can be obtained by the construction described when considering the ironing-board.

While I have described my invention with more or less minuteness as regards details and as being embodied in certain precise forms, I do not desire to be limited thereto unduly any more than is pointed out in the claims. On the contrary, I contemplate all proper changes in form, construction, and arrangement, the omission of immaterial elements, and the substitution of equivalents as circumstances may suggest or necessity render expedient.

I claim—

1. In an ironing-machine, the combination of an ironing-roll having a fixed relation, a plate or bed having a straight-line reciprocation in a fixed horizontal plane beneath the ironing-roll, and a spring-controlled ironing-board mounted on the plate or bed and vertically adjustable thereon in horizontal planes parallel therewith, substantially as described.

2. In an ironing-machine, the combination of an ironing-roll, a feed-roll, a plate or base having a straight-line reciprocation in a fixed horizontal plane, and an ironing-board mounted on the plate or base and vertically adjustable thereon in horizontal planes parallel therewith, substantially as described.

3. In an ironing-machine, the combination of an ironing-roll having a fixed relation, a plate or base having a straight-line reciprocation in a fixed horizontal plane beneath the ironing-roll, an ironing-board, and a spring-controlled support mounted on the plate or base and carrying the ironing-board for vertically adjusting the board in a horizontal plane parallel with the base and maintaining the ironing-board at its outer limit of movement and under tension, substantially as described.

4. In an ironing-machine, the combination of an ironing-roll, a feed-roll, a plate or base, and an ironing-board vertically adjustable in horizontal planes parallel with the plane of the plate or base and removably mounted on the plate or base, substantially as described.

5. In an ironing-machine, the combination of a reciprocating plate or base, an ironing-board, swinging bars pivotally secured to the plate or base and the ironing-board for raising and lowering the board in planes parallel with the plane of the plate or base, and means for maintaining the ironing-board at its outer limit of motion and under tension, substantially as described.

6. In an ironing-machine, the combination of a reciprocating plate or base, an ironing-board, swinging bars pivotally secured to the plate or base and ironing-board for raising and lowering the board in planes parallel with the plane of the plate or base, and a helical coiled spring connected to one of the swing-

ing bars and to the plate or base for maintaining the ironing-board at its outer limit of motion and under tension, substantially as described.

5 7. In an ironing-machine, the combination of a supporting-plate or base-board, an ironing-board, swinging bars pivotally secured to the upper side of the base-board and to the under side of the ironing-board, and a resistance-spring secured at one end to one of the swinging bars and adjustably secured at the other end to the base-board for the spring to operate and hold the ironing-board at its outer limit of motion and under tension, substantially as described.

15 8. In an ironing-machine, a shirt-holder composed of a base-board, a supporting-plate, swinging bars pivotally connected to the supporting-plate and the base-board, an ironing-board removably mounted on the supporting-plate and spring mechanism secured to one of the swinging bars and the base-board for keeping the ironing-board at its outer limit of motion and under tension, substantially as described.

25 9. In an ironing-machine, a shirt-holder composed of a base-board, an ironing-board,

swinging bars pivotally connecting the ironing and base boards together, stop mechanism for limiting the movement of the ironing-board, and a helical coiled spring connected to one of the swinging bars and adjustably connected to the base-board for holding the ironing-board at one limit of motion and under tension, substantially as described. 30 35

10. In an ironing-machine, the combination of a frame, a feed-roll and an ironing-roll, both rotatably mounted in fixed bearings on the frame, driving-gear transmitting power and motion from one roll to the other, a plate or base having a straight line of reciprocation in a fixed horizontal plane from the feed-roll, and an ironing-board mounted on the plate or base and vertically adjustable thereon in planes parallel therewith and maintained above the base under tension for the plate or base and the ironing-board to reciprocate as one between the feed and the ironing rolls, substantially as described. 40 45

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Witnesses:

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