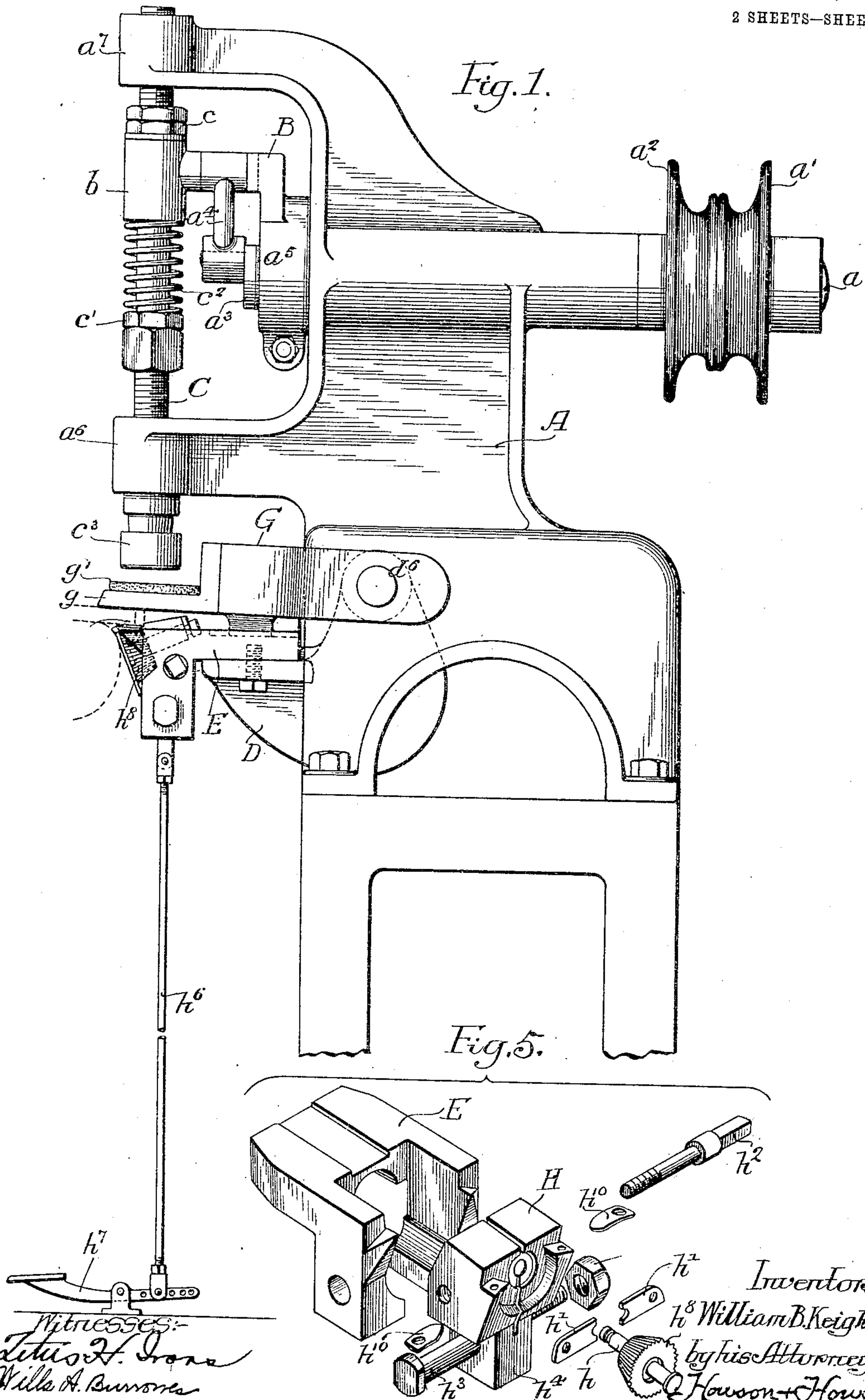


W. B. KEIGHLEY.
INDENTING MACHINE.
APPLICATION FILED OCT. 28, 1909.

962,845.

Patented June 28, 1910.
2 SHEETS—SHEET 1.



Witnesses:
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W. H. A. Burrows

Inventor
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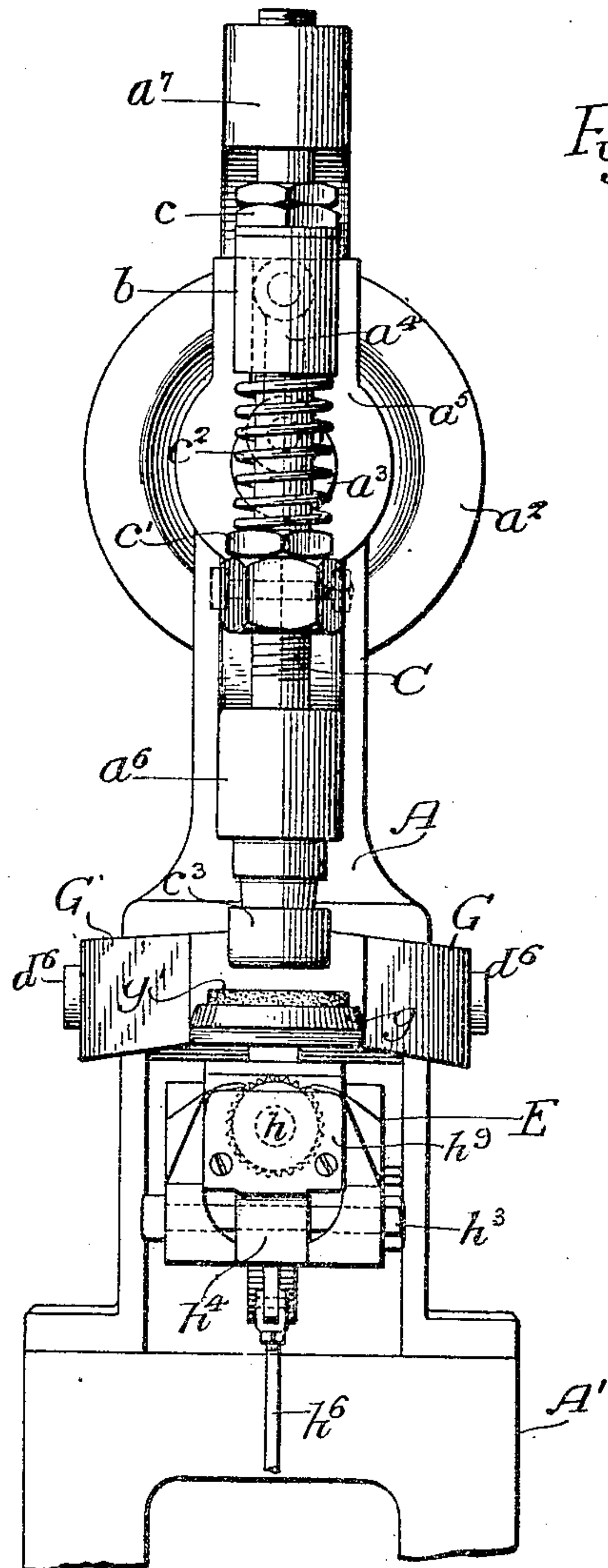


Fig. 2.

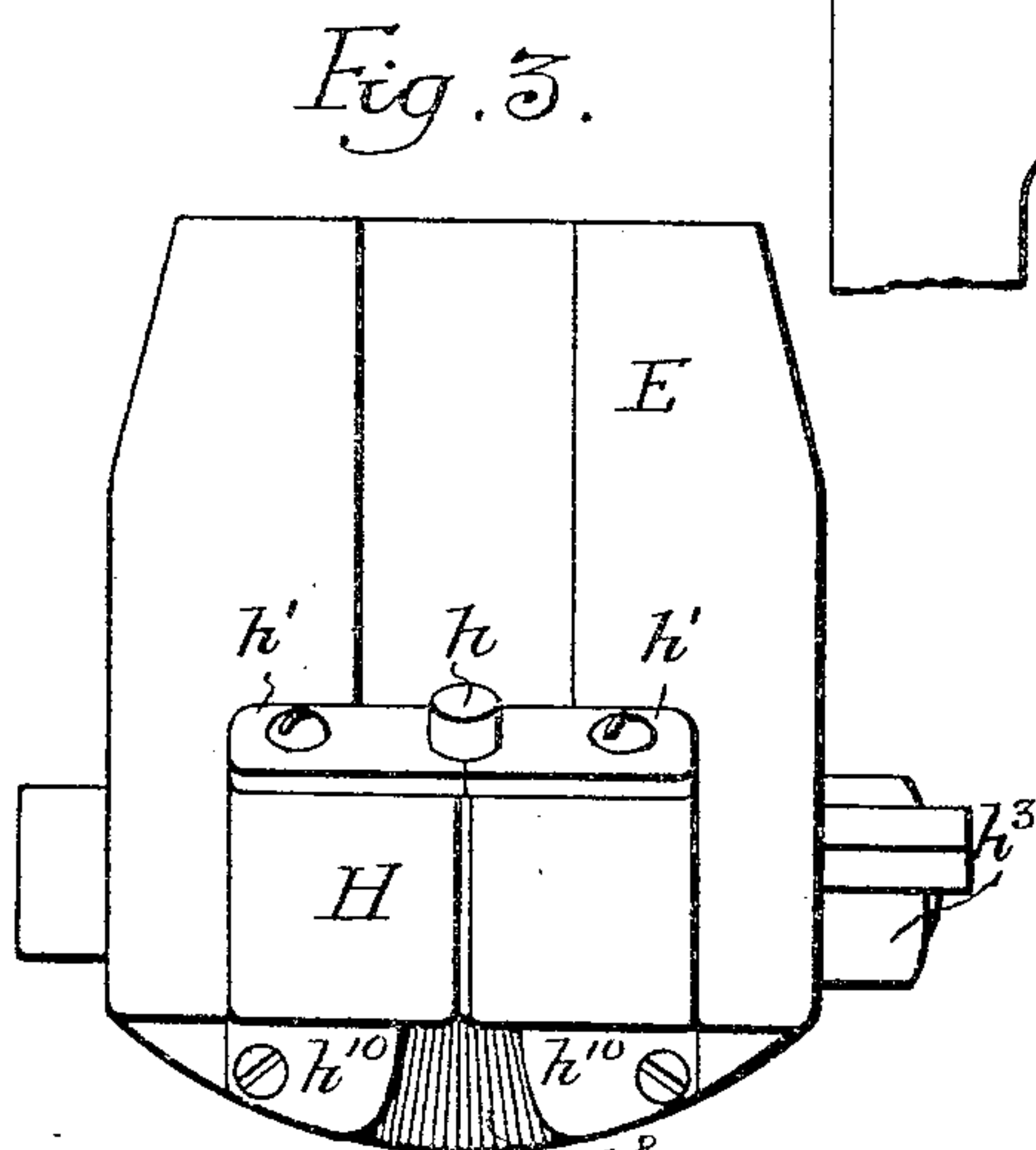


Fig. 3.

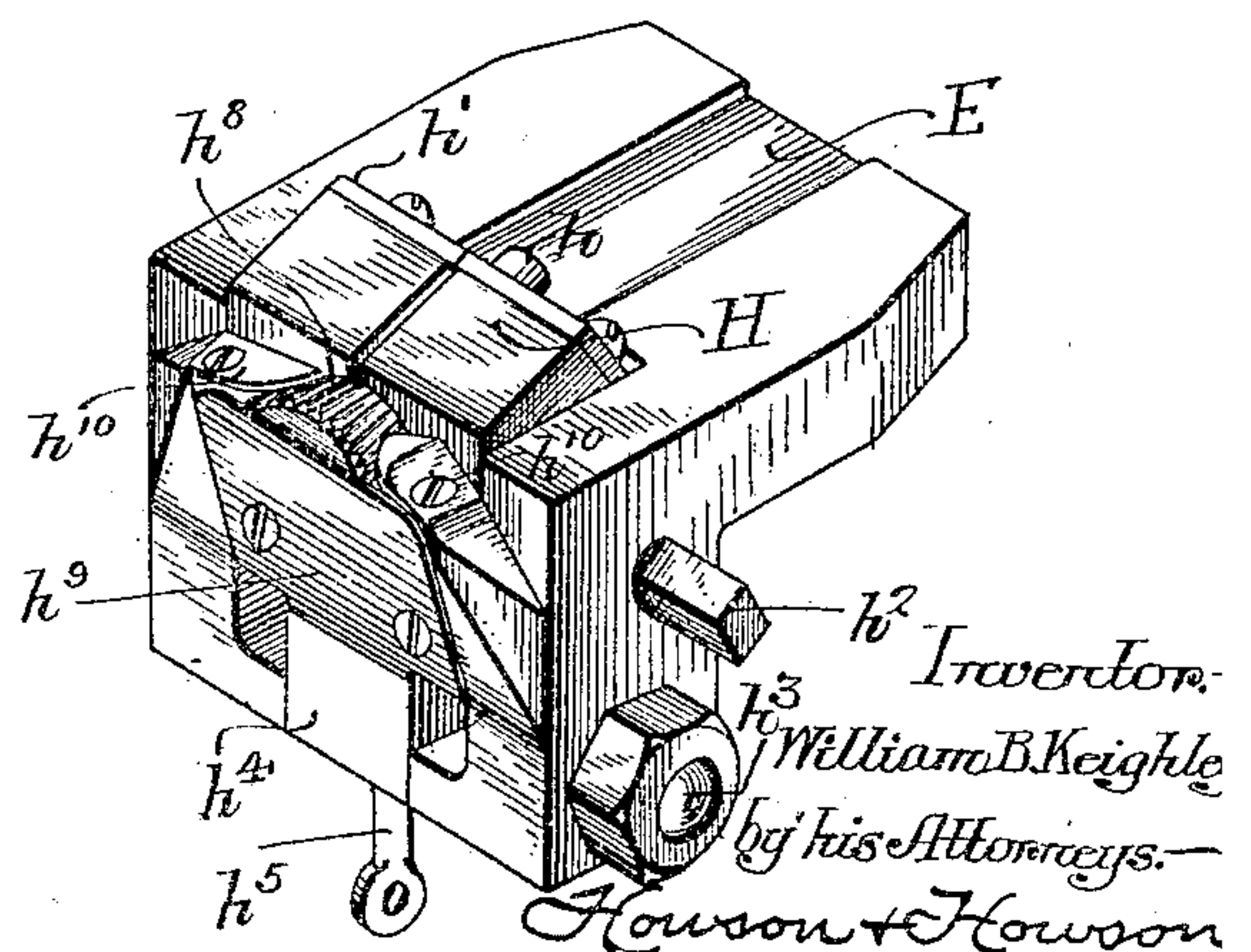


Fig. 4.

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UNITED STATES PATENT OFFICE.

WILLIAM BOTTOMLEY KEIGHLEY, OF VINELAND, NEW JERSEY.

INDENTING-MACHINE.

962,845.

Specification of Letters Patent. Patented June 28, 1910.

Application filed October 28, 1909. Serial No. 525,215.

To all whom it may concern:

Be it known that I, WILLIAM B. KEIGHLEY, a citizen of the United States, residing in Vineland, New Jersey, have invented certain Improvements in Indenting-Machines, of which the following is a specification.

My invention relates to certain improvements in mechanism for making the ornamental indentations in the exposed portions of the welt of a shoe, and one object of said invention is to provide an indenting machine in which the parts are so arranged that during the formation of the indentations there shall be no tendency to pull the welt and with it the sole, away from the upper of the shoe.

It is further desired to provide a relatively simple, substantial and reliable indenting machine by the use of which it shall be possible to attain a higher speed of operation than has hitherto been considered advisable or possible.

I also desire to provide improved controlling mechanism for moving the indenting wheel toward the welt of a shoe and also to so mount said wheel that it shall be possible to employ one machine on shoes of widely varying sizes without the necessity of adjusting or changing any of the parts.

These objects and other advantageous ends I secure as hereinafter set forth, reference being had to the accompanying drawings, in which:—

Figure 1, is a side elevation of one form of indenting machine constructed in accordance with my invention; Fig. 2, is a front elevation of the upper portion of the machine shown in Fig. 1; Figs. 3 and 4, are respectively a plan and a perspective of the indenting wheel and its associated parts, and Fig. 5, is a detached perspective view of certain detail parts of my invention.

In the above drawings A' represents a supporting base or other suitable structure, upon which is mounted the main frame A of the machine, and this is provided with a bearing for a horizontal shaft a , having a fast pulley a' and a loose pulley a^2 for the reception of a driving belt. The forward end of this shaft has attached to it a crank disk a^3 provided with a crank pin, and there is a connecting rod a^4 extending between this pin and an arm B. One end of this arm extends at right angles to the main portion thereof and slides in a guideway a^5 mounted

on the main frame of the machine, while the forward end of the arm is provided with a cylindrical head bored to receive a vertically reciprocable hammer bar C upon which it is free to slide. This bar is mounted to operate in two forwardly projecting brackets a^6 and a^7 of the frame, and is provided with one or more nuts c , placed above the end b of the arm B to limit its movement in one direction relatively thereto. Between another nut c' on the hammer bar and the end b of the arm B, is placed a spring c^2 , while the lower end of said bar is provided with a hammer c^3 .

An arm D is journaled on the frame A at d^6 so as to be movable in a vertical plane and has fixed to its flattened front portion an angle piece E preferably of L-shaped section. The front portion of this angle piece is slotted or cut away for the reception of a split block H, in whose main portion is formed a bearing for a stationary spindle h which is inclined at a suitable angle to the horizontal and has at its rear end a head engaged by two plates h' held to the rear top portion of said block H by screws. The front portion of said spindle is likewise headed and rotatably carries an indenting wheel h^8 having the shape of the frustum of a cone and provided with teeth radiating from its apex. The base of said indenting wheel extends substantially flush with a portion of the inclined front of the angle-piece E, which, with the front of the block H and the top of said wheel, overhangs the main part of said block to an amount depending on the angle of the spindle h . The top front portion of the block is cut away to expose the upper part of said wheel, and the upper side portions of this latter are covered by two plates h'^0 held in place by screws. Said block H is held in the angle-piece E by two bolts h^2 and h^3 , the first of which passes loosely through the side portion of the angle piece E and also through one side of the block into the opposite side, where it enters a threaded cavity. As shown in Fig. 5, said bolt is provided with a shoulder adjacent to its head, so that when it is screwed up it is capable of drawing together the two parts of the slotted block to cause them to clamp the spindle h . The second bolt h^3 passes through a downwardly extending projection h^4 of the block H and also through the lower portion of the angle piece E so as to hold said parts rigidly together.

An eye-bolt h^5 projects downwardly from the part h^4 , and serves for the attachment of a link h^6 connected to a foot treadle h^7 , whereby the arm D and with it the indenting wheel h^8 , may be moved upwardly when desired. The base of the indenting wheel h^8 is preferably covered and thereby protected, by means of a removable plate h^9 , held in position by screws, as shown in Fig. 4.

Between the hammer c^3 and the indenting wheel h^8 , I mount a clapper G; this being generally yoke-shaped, with its arms mounted on the pivot d^6 upon which is also mounted the arm D. The front portion g of this clapper, which extends immediately between the hammer and the indenting wheel, is flat and has held to its upper surface in any desired manner a plate g' of leather or fiber, for the purpose of lessening the noise otherwise made when said clapper is struck by the hammer.

Under operating conditions the hammer c^3 is rapidly reciprocated by power supplied from a belt on the fast pulley and delivered through the shaft a , crank a^3 , connecting rod a^4 , arm B and rod C. The welt to be indented is then introduced between the clapper g and the wheel h^8 (the sole of the shoe being uppermost) and the rod h^6 is moved upwardly by depression of the treadle h^7 . This results in a slight turning of the arm D on its pivot d^6 so that the angle piece E, and with it the wheel h^8 , is slightly raised. The edge of the sole and with it the welt is thus squeezed between the wheel h^8 and the clapper each time this latter is struck by the hammer c^3 , and the force of this blow depends largely upon the elevation given the frame E as determined by the extent of the upward movement of the rod h^6 .

It will be understood that under the conditions above noted, the edge of the shoe is moved longitudinally between the clapper and the wheel h^8 , so that this latter is turned and made to form a succession of indentations in the welt as desired. By the use of the clapper all objectionable marks upon the sole are prevented, and since the blows of the hammer are directed upon the sole toward the upper of the shoe, there is no tendency to tear the members apart, as has hitherto been the case in machines of the same general class.

I claim:—

1. The combination in an indenting machine having driving mechanism, of a hammer; an indenting wheel; with a clapper between said hammer and the wheel, said clapper being movable away from said wheel to permit of the introduction of a sole to be indented.

2. The combination in an indenting machine having driving mechanism, of a ham-

mer; an indenting wheel; and a clapper between said hammer and wheel; with means for varying the distance between the clapper and the indenting wheel.

3. The combination in an indenting machine having driving mechanism, of a hammer; an indenting wheel; and a clapper between said hammer and the wheel; with means for bodily moving the indenting wheel toward the clapper.

4. The combination, in an indenting machine, of a frame; a hammer mounted thereon; means for reciprocating said hammer; a clapper pivotally mounted on the frame and placed to be struck by the hammer; with a structure having an indenting wheel placed to operate on a shoe sole edge between it and the clapper.

5. The combination, in an indenting machine, of a frame; a hammer mounted thereon; means for reciprocating said hammer; a clapper pivotally mounted on the frame and placed to be struck by the hammer; a bodily movable structure having an indenting wheel; with means for moving said structure toward and from the clapper.

6. The combination, in an indenting machine, of a frame; a hammer mounted thereon; means for reciprocating said hammer; a structure movably mounted on the frame; an indenting wheel on the structure; a pivotally mounted clapper operative between the hammer and said wheel; and means for moving the wheel at will toward the hammer.

7. The combination of a frame; a hammer thereon; means for actuating the hammer; a rotatable indenting wheel mounted to permit of the introduction of a shoe sole between it and the hammer; a movable supporting structure for said wheel; and means for covering the end and all but a limited portion of the sides of said wheel.

8. The combination of a frame; a hammer thereon; means for actuating the hammer; an indenting wheel; a supporting structure for said wheel; a clapper; a common supporting pivot for said clapper and wheel-supporting structure; with means for moving said structure, with the indenting wheel, toward the clapper.

9. The combination in an indenting machine of a frame; a hammer thereon; means for actuating said hammer; a structure movable toward and from the hammer, and including a split block; a spindle clamped between the parts of said block; an indenting wheel mounted on said spindle; and means for moving said structure toward and from the hammer.

10. The combination in an indenting machine; of a frame; a hammer thereon; means for actuating the hammer; a structure mounted to be movable toward and from the hammer; a toothed indenting wheel ro-

tatably mounted on said structure, and projecting beyond the same; with means for moving the structure toward and from the hammer.

5 11. The combination in an indenting machine of a frame; a hammer; means for actuating the hammer; a structure movable toward and from the hammer; an indenting wheel having a conical toothed surface; a
10 spindle mounted on said structure and supporting the indenting wheel with certain of its elements substantially horizontal and in position to overhang the face of said supporting structure; with means for moving
15 said structure toward and from the hammer.

12. The combination in an indenting machine of a frame; a hammer thereon; means for actuating the hammer; a structure movable on the frame toward and from the hammer; a split block mounted on the structure
20 and provided with a bearing; a headed spindle clamped in said bearing; a plate engaging the head of said spindle; a conical indenting wheel rotatably mounted on said

spindle, in position to overhang the face of 25 the movable structure; and means for moving the structure toward and from the hammer.

13. The combination in an indenting machine of a hammer; an overhung indenting wheel mounted to permit a shoe sole to be introduced between it and the hammer; means for moving said wheel at will toward and from the hammer; with means for actuating the hammer. 30

14. The combination in an indenting machine of a hammer; having actuating means; an overhung indenting wheel; a clapper movable between the indenting wheel and the hammer, and means for moving said
35 indenting wheel at will toward the hammer. 40

In testimony whereof, I have signed my name to this specification, in the presence of two subscribing witnesses.

WILLIAM BOTTOMLEY KEIGHLEY.

Witnesses:

WILLIAM P. JARDINE,
WILLIAM E. HUGHES.