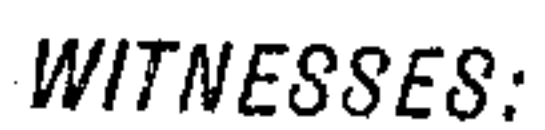


951,917.

Fig. 1.



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APPLICATION FILED APR. 17, 1908.

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3 SHEETS—SHEET 2.

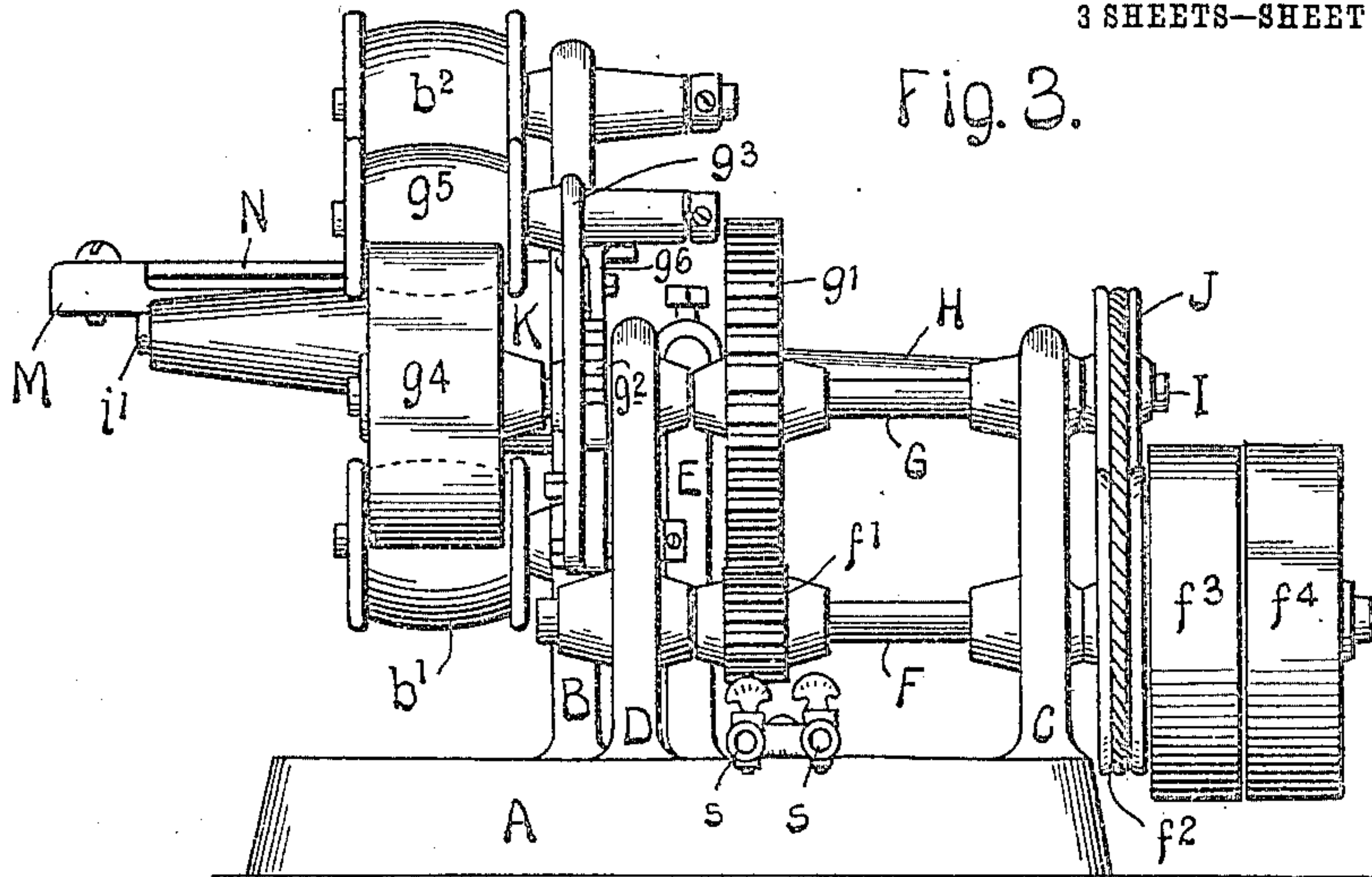


Fig. 3.

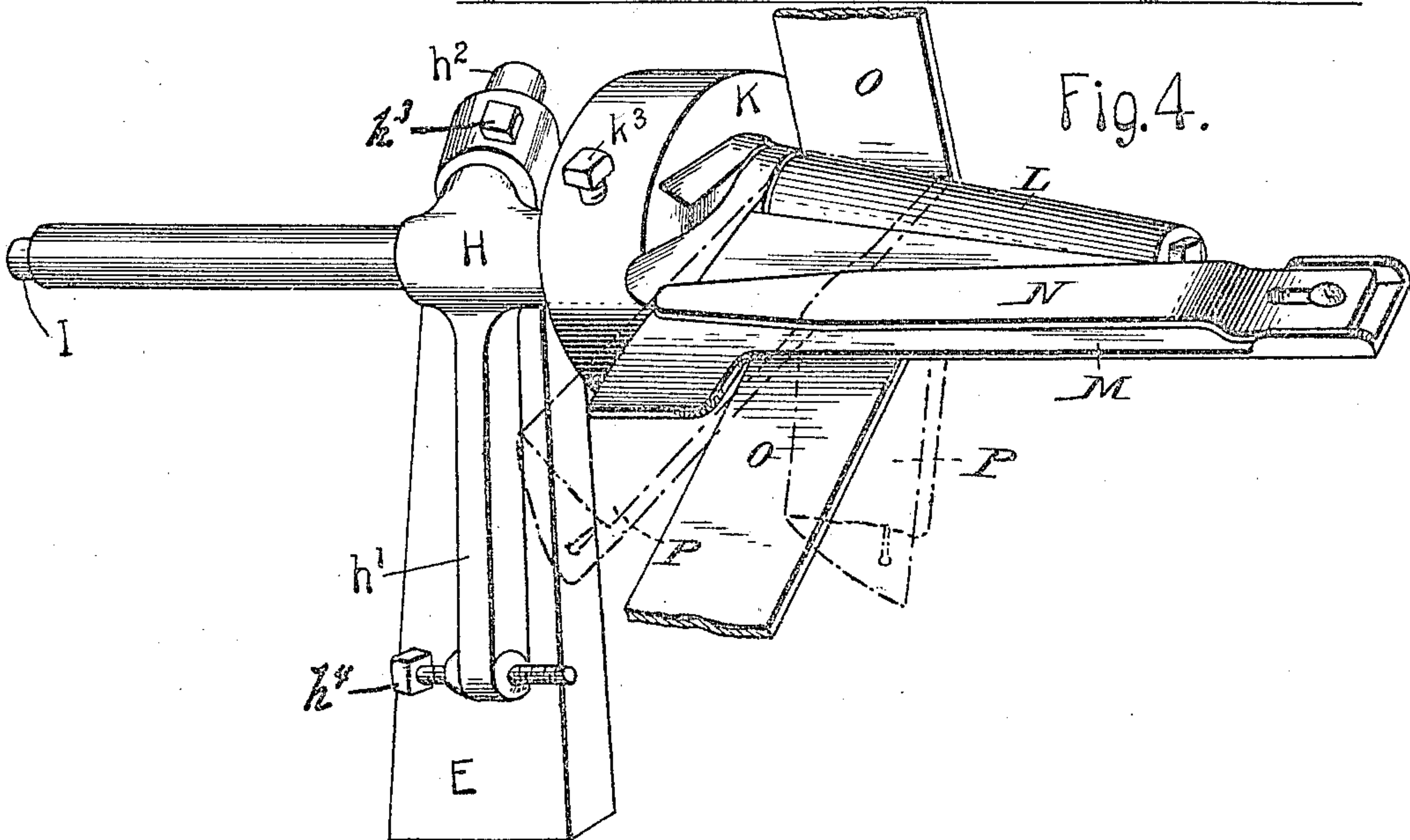


Fig. 4.

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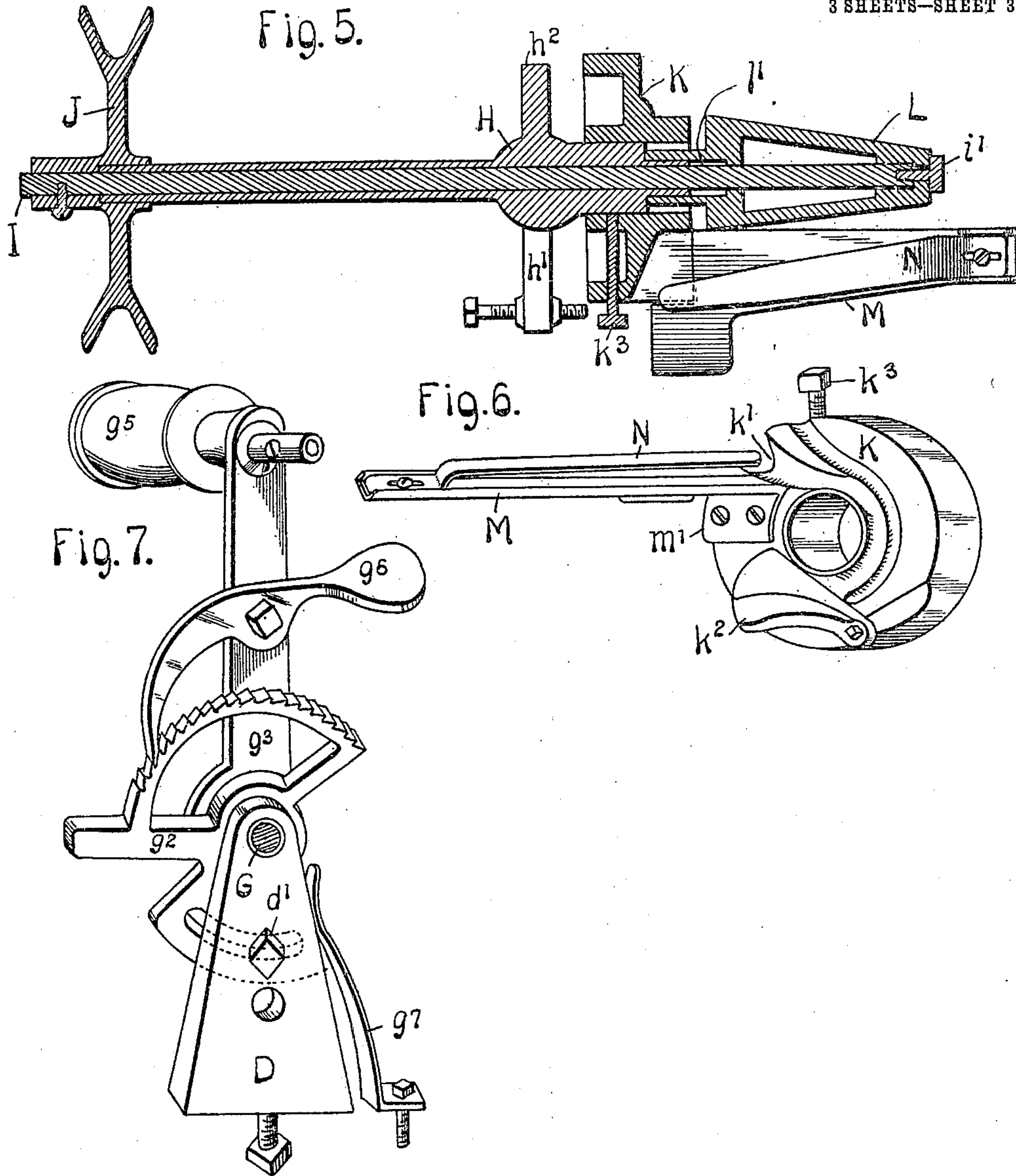
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CHARLES RIESENWEBER, OF ST. LOUIS, MISSOURI.

MACHINE FOR FOLDING AND IRONING THE EDGES OF COLLARS.

951,917.

Specification of Letters Patent. Patented Mar. 15, 1910.

Application filed April 17, 1908. Serial No. 427,708.

To all whom it may concern:

Be it known that I, CHARLES RIESENWEBER, a citizen of the United States, residing at St. Louis, State of Missouri, have invented certain new and useful Improvements in Machines for Folding and Ironing the Edges of Collars; and I do declare the following to be a full, clear, and exact description of the invention, such as will enable others skilled in the art to which it appertains to make and use the same, reference being had to the accompanying drawings, and to the letters and figures of reference marked thereon, which form a part of this specification.

My invention relates to improvements in laundry machinery and more particularly to machines for folding and ironing the edges of collars; and the objects of my invention are to fold and iron the edges of collars more rapidly than in the old way; and to accomplish better work more rapidly and more evenly than by the old way, and with less injury to the collars, both turn-over and standing collars, and the ironing process done in this machine especially smooths down all of the scratching threads and roughness on the edges of the standing collars and on the folded edge of the turnover collars. I attain these objects by the mechanism illustrated in the accompanying drawings, in which—

Figure 1 is a view of the right side of the machine complete. Fig. 2 is a view of the left side of the machine complete. Fig. 3 is a view of the rear end of the machine complete. Fig. 4 is a detail perspective view of the ironing head, the feed cone, the compression feed belt and the guide bar and finger with a collar in position. Fig. 5 is a plan view partly in section of the feed cone, ironing head, guide bar and finger. Fig. 6 is an enlarged detail perspective view of the ironing head with its guide bar and finger. Fig. 7 is a detailed perspective view of inside parts of the machine showing the parts forming the adjustable compression belt tightener. In all of which views like letters and figures refer to like parts throughout.

Referring to the drawings, I will describe my machine in detail of its various parts and show their working relation with each other and their combined action to produce the desired result set forth herein. This is a power machine and it is fed by hand.

A is a bed plate to which is attached 4

standards, B, C, D and E, which support the various moving parts of the machine. These standards are securely attached to the bed plate A by cap screws from the under side of the plate. In the lower portion of the standards C and D a driving shaft F is mounted which has on it a pinion f^1 , a sheave wheel f^2 and a loose and tight pulley f^3 and f^4 for a driving belt, which is not necessary to show herewith. This shaft F is the main driving shaft of the machine. Above this shaft, in the same standards C and D, is also mounted a shaft G, which is provided with a spur gear wheel g^1 , which gears into the pinion f^1 . This shaft G is also provided with a ratchet segment g^2 , and an extension arm g^3 for the tightener pulley g^5 , also on the end of the shaft a pulley g^4 , which drives the feed belt O, shown in Fig. 1.

B is a standard which rises high up on the machine and forms a support and long bearings for the shafts of the belt carrier pulleys b^1 and b^2 for the feed belt O. This standard B is made in its curved bracket form so as to hold in the desired position the belt carrier pulleys b^1 and b^2 , as shown. The standard E forms a support for the two armed sleeve H, with its arms h^1 and h^2 in which is mounted the shaft I with its sheave wheel J, which is driven by the round belt j^1 on the sheave wheel f^2 on the main shaft F. The shaft I is secured to the sheave wheel J at one end and it has secured to its other end by a cap screw i^1 the feed cone L, which feeds the collar P through the machine. When a turndown collar is folded one side of it becomes the face of the collar and the other side the band side. In feeding the collar into the machine, the band side always comes against the cone L, while the face side comes against the under side of the razor strop linen belt O. The two armed sleeve H has secured to it by a set screw h^3 the ironing head K, which is provided with a gas fire chamber on its back side and on its front side it has a double curved track groove k^1 in which the edge of the collar P runs as it passes through the machine. To this ironing head K is secured by screws a guide bar M and its finger N. The guide bar M holds the collar and gives direction to it as it enters the machine and the finger N stands between the folds of the collar and keeps it back against the ironing head K as it passes through the machine.

The washable belt O travels on the outside of the collar P and holds it down onto the feed cone L and thus it is held back against the ironing head K and carried through the machine between the belt O and the feed cone L with the finger N between the folds of the collar P. This belt O is made of linen web called razor strop web and it is washed with the clothes and kept perfectly clean.

On the face of the ironing head K there is an adjustable button h^2 , which is held in position by a cap screw, this is adjusted so as to turn the collar away from the head and the belt O as it passes out of the machine.

Q is a gas burner which throws the flame of gas into the chamber in the back side of the ironing head K to heat it up to the desired temperature to do the ironing on the collars. This burner Q is the terminal of the pipes and fittings R, R, which terminate at the other end in the double stop cocks S, S, to which rubber tubes are attached to convey the gas to the burner. The two armed sleeve H is made adjustable in its standard E by the arm h^2 and the set screw h^3 in the standard E bearing against the said arm h^2 , and it is limited in its motion by the set screw h^4 in the arm h^1 , forming a stop against the bracket standard B, leaving a slight flexibility between the feed cone L and the belt O. The standard D is the support and back bearing for the shaft G, and pivoted on the same shaft G beside it is a ratchet segment g^2 which is provided with a lower arm having a curved slot into which a pin d^1 in the standard D projects to limit its motion in one direction. The same ratchet segment is provided with its ratchet portion above into the teeth of which the pawl g^6 works and the movement of the ratchet segment is limited in its action in the opposite direction by the spring g^7 which is bolted to the bed plate A and bears against the edge of the ratchet segment. On the shaft G is also pivoted an extension arm g^3 which forms a hanger for the belt tightener pulley g^5 , to this extension arm g^3 is pivoted a pawl g^6 which catches in the teeth of the ratchet segment g^2 and holds the tightener pulley g^5 down onto the belt O firmly with a slightly yielding pressure given to it by the pressure of the spring g^7 , when desired the pawl may be thrown out of the ratchet and the tightener turned back out of the way. In Fig. 2, the pulley g^4 , which drives the belt O is shown only in dotted lines behind the gear wheel g^1 but is shown full face in Fig. 1. The various parts of my machine have been described in detail and their functions and relations to each other have been set forth.

The movement and operation of the machine is as follows: The driving belt having been thrown onto the tight pulley f^4 the

shaft F revolves and revolves the shaft G in the opposite direction, the pulley g^4 on the end of the shaft G causes the belt O to move and turn the three belt carrier pulleys b^1 , b^2 and g^5 , at the same time the sheave wheel f^2 by means of the belt j^1 on the sheave wheel J causes the shaft I to revolve and to revolve the feed cone L in unison with the belt O. The operator now standing in front of the machine with the feed cone revolving from him takes up a collar and starts to fold one end of it with the band of it downward, he inserts the collar in the machine with the folded edge of the collar against the ironing head K and the finger N between the fold of the collar, the feed cone L and the belt O catch it between their surfaces and carry it through the machine, the gas having been turned on and lighted and the ironing head being hot, the collar is perfectly ironed on the edge and folded evenly. This operation can be repeated very rapidly. In the machine all of the oiled bearings are far removed from where the work is being done, except the shaft I with the feed cone L revolving inside of the ironing head K, which is thoroughly protected by packing in the chamber l^1 making it proof against leaking oil to soil the work that is being done.

Having thus described my machine and the mode of operating it so that any one skilled in the art could make and operate it and being aware other ironing machines have been made and used previous to my invention, what I claim as new and desire to secure by Letters Patent is:—

1. In a machine for folding and ironing the edges of collars the combination of the shaft I having secured to one end of it the sheave wheel J and to the other end of it the feed cone L, the two armed sleeve H in which said shaft I revolves, the standard E supporting said sleeve, the ironing head K secured to said sleeve and the guide bar M and finger N attached to said head, substantially as described.

2. In a machine for folding and ironing the edges of collars the ironing head K having a double curved track groove h^1 , in combination with the guide bar M secured to said ironing head and the finger N secured to the said guide bar for the purpose of folding the collar and keeping it up to said ironing head all substantially as set forth and described.

3. In a machine for folding and ironing the edges of collars, the shaft I sheave wheel J and feed cone L rotating together in combination with the sleeve H, pivoted to the standard E and adjusted by the set screw in the arm h^1 , and the ironing head K with its guide bar M and finger N, substantially as shown and described.

4. In a machine for folding and ironing the edges of collars the combination of the

shaft I having secured to one end of it the
sheave wheel J and to the other end of it the
feed cone L, the said shaft I revolving in
the two armed sleeve H, which is mounted
5 in the standard E and adjusted by the set
screw h^3 in the standard E bearing against
the arm h^2 and limited in its motion by the
set screw h^4 in the arm h^1 to which sleeve H
is attached, the ironing head K with its ad-
10 justable button h^2 and the guide bar M and

finger N attached to the said ironing head K
the belt O and suitable means of operating
the same, substantially as shown and de-
scribed.

In testimony whereof, I affix my signa- 15
ture, in presence of two witnesses.

CHARLES RIESENWEBER.

Witnesses:

ADELE C. PICKEL,

TILLIE BARTELS.