

G. H. BELL.  
 IRONING MACHINE.  
 APPLICATION FILED JAN. 6, 1910.

965,857.

Patented Aug. 2, 1910.

Fig. 1.

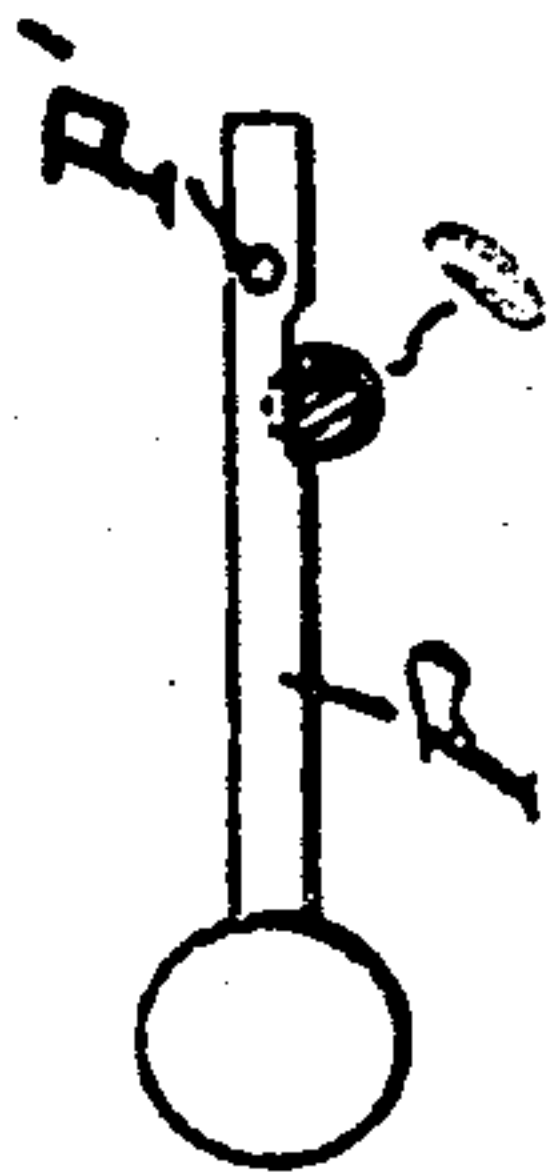
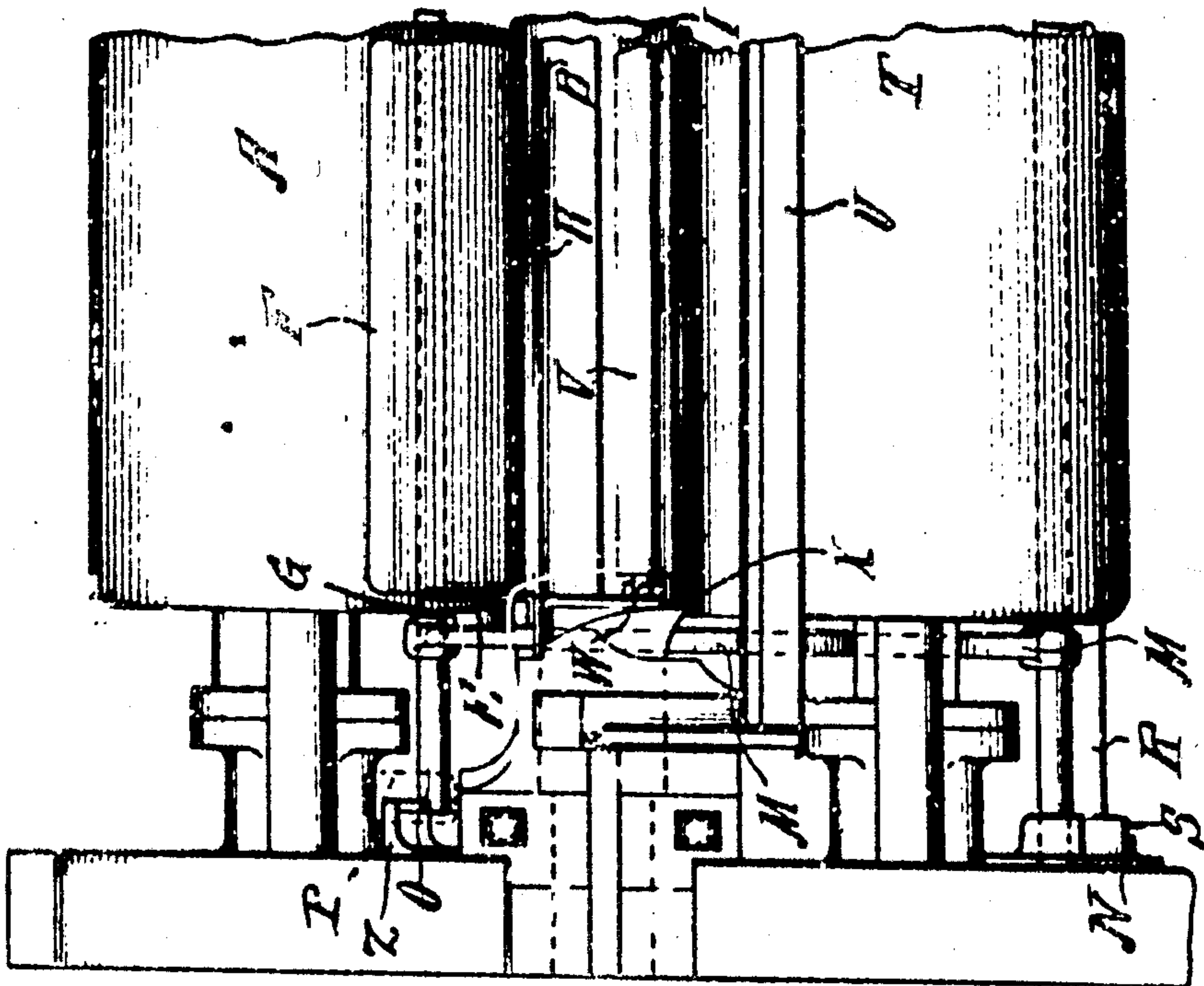
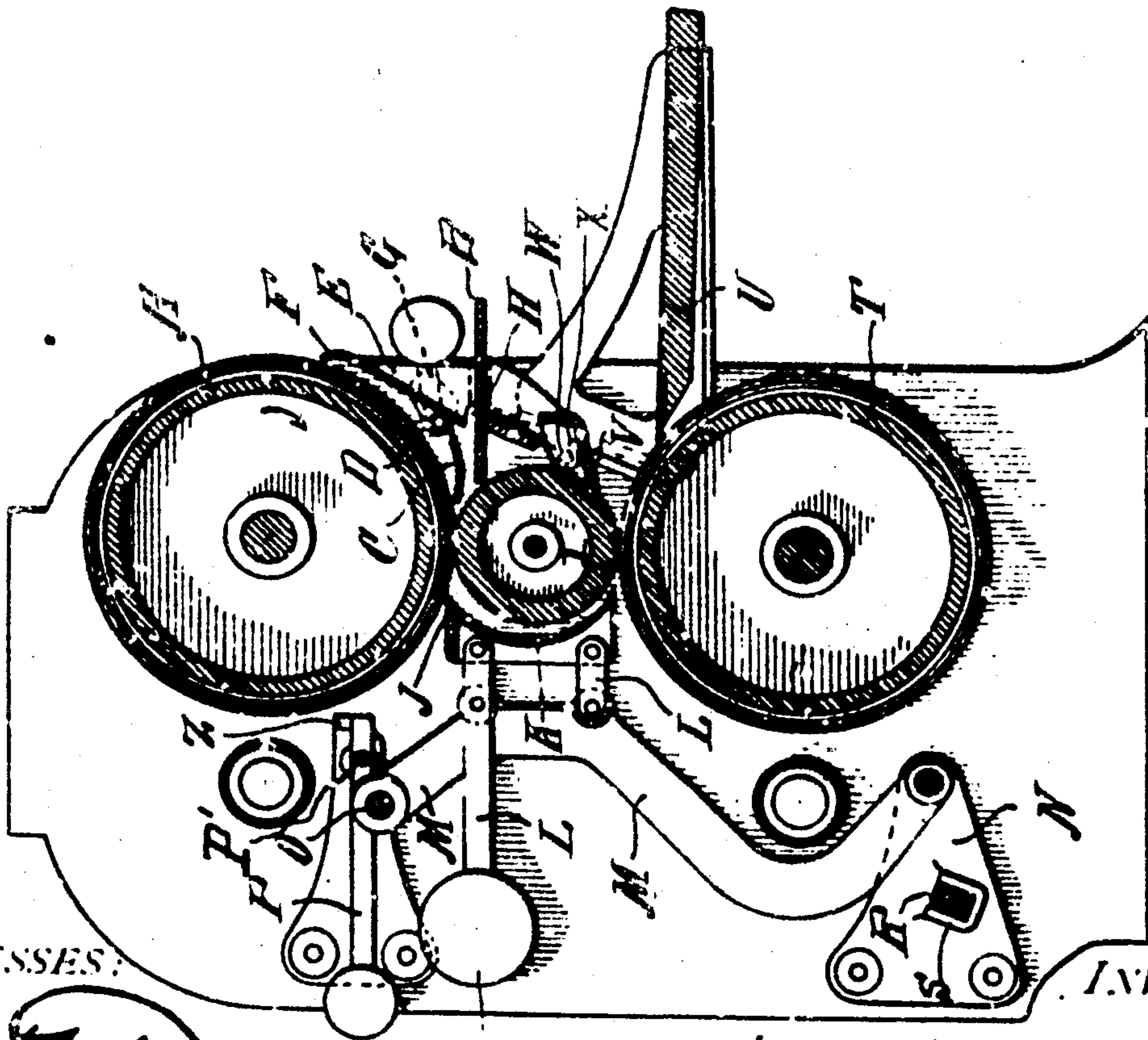


Fig. 2.

Fig. 3.



WITNESSES:

*H. F. K. & Co.*  
*Wm. T. Page*

INVENTOR

B) George Henry Bell,  
*E. B. Stocking*  
 Attorney



# UNITED STATES PATENT OFFICE.

GEORGE HENRY BELL, OF SLATEFORD, SCOTLAND, ASSIGNOR TO TROY LAUNDRY MACHINERY COMPANY, LIMITED, OF CHICAGO, ILLINOIS, A CORPORATION OF NEW YORK.

## IRONING-MACHINE.

965,857.

Specification of Letters Patent.

Patented Aug. 2, 1910.

Application filed January 8, 1910. Serial No. 536,730.

*To all whom it may concern:*

Be it known that I, GEORGE HENRY BELL, a subject of the King of Great Britain, residing at Kingsknowe, Slateford, county of Mid-Lothian, Scotland, have invented certain new and useful Improvements in Ironing-Machines, of which the following is a specification, reference being had therein to the accompanying drawing.

This invention has reference to and comprises improvements in and relating to ironing machines for collars, cuffs, flat fronts and the like, which are applicable to that class of ironing machine which consists of one heated roller revolving between cloth covered pressing rollers and has for its object to provide an improved method of and means for feeding in, returning and delivering the articles to be ironed more safely and automatically than heretofore and with a consequent saving of labor.

Other and further objects and advantages of the invention will be hereinafter set forth and the novel features set forth by the appended claims.

In the drawing—Figure 1 is a sectional end view; Fig. 2 is a half front elevation of an ironing machine fitted with my improvements; and Fig. 3 is a detail of the weighted lever.

Like letters of reference refer to like parts in the several figures of the drawing.

In carrying this invention into effect or practice in order to prevent the end of the cloth covering of the upper roller A, as indicated, getting loose and falling in front of the feeding plate or table B, which may cause the articles to be fed upon the lapping end of the covering instead of between same and the smoothing-roller, a thin metal plate C, preferably curved, is mounted on a spindle D or it may be on trunnions carried in bearings on brackets E carrying the finger guard F. This metal plate C which extends across the length of the roller is caused to press on same at its inner edge by means of a weighted lever or levers G. This plate C causes the loose lapping end of the cloth covering as it comes around at each revolution of the roller A to be pressed close to same.

The finger guard F consists of a plate placed at an angle and carried by brackets

E at each side of the machine, so mounted as to leave a small space H between it and the feed plate B which enables the articles to be fed to the rollers but prevents the attendant's fingers coming into contact with same.

After the article to be ironed has been passed between the heated roller I and the upper pressing roller A it is stripped off from the latter roller by a stripping plate J hereinafter called a "doctor" which according to my improvements is constructed and fitted as follows:—The "doctor" consists of a blade J normally in contact with the roller A, from which a segmentally curved returning plate or guide K is underhung the whole being joined by two links L to a lever M at each side of the machine, these levers M being fulcrumed on a bracket X at each side. The upper ends of the two levers M are connected by a bar O which engages with a notched and weighted lever P fulcrumed on the machine frame and resting against the stop Z, and placed at right angles to the connecting bar as shown more particularly by Fig. 3. While the connecting bar O is held by the notch of the lever P the doctor remains in its normal working position, but if any article passing between the rollers adheres with too great firmness to the pressing roller A it presses back the doctor J and consequently the levers M and their connecting bar O which is jerked out of the notch in its holding lever P. By this means the doctor and its carrying levers are released and fall back by their own gravity, which may be assisted by the weight Q on the link L extended for the purpose, against a supporting bar R fitted in sockets S transversely on the machine. By removing this supporting bar from its sockets S the levers and doctor can be turned still further back for cleaning or like purposes.

The articles being ironed after passing between the rollers A and I are removed from the upper pressing roller A by the doctor J and being caught by the segmentally curved plate K are bent to a curved shape by it, so as to cause them to be returned and to automatically enter between the heated roller I and the lower pressing roller T to be polished again, and are delivered from the machine on to the delivery



board U which has an edge or doctor lying against the pressing roller T to remove the articles.

To provide against any article adhering to the hot roller I another stripping blade or doctor V is fitted to be against this roller between the feed and delivery. This doctor V which is carried by trunnions W rests against the roller by its own weight and the trunnions W rest in open bearings or brackets X fixed to feed plate. When the article adhering to the roller I comes into contact with this doctor V it is stripped off or if the adherence is too strong it presses the doctor with its trunnions W out of the open bearings or brackets X, so that damage to the article is obviated. The doctor can be replaced without difficulty or appreciable loss of time.

Having described my invention and set forth its merits what I claim and desire to secure by Letters Patent, is--

1. In an ironing machine, the combination with cooperating rolls, of a doctor blade contacting with one of said rolls and mounted to be withdrawn from both of said rolls and held removed therefrom, and means adapted to release said blade from engagement with one of said rolls when unduly pressed by an article being guided by the blade.

2. In an ironing machine, the combination with cooperating rolls, of a doctor blade contacting with one of said rolls and adapted to be withdrawn and held removed therefrom when unduly pressed by an article being guided thereby, holding means adapted to releasably retain said blade in engagement with its contacting roll, and a curved guide extended from said blade adjacent the cooperating roll.

3. In an ironing machine, the combination with cooperating rolls, of a doctor blade contacting with one of said rolls and adapted to be withdrawn and held removed therefrom when unduly pressed by an article being guided thereby, holding means adapted to releasably retain said blade in engagement with its contacting roll, a curved guide extended from said blade adjacent the cooperating roll, and a pivotally movable stripping blade contacting with said cooperating roll.

4. In an ironing machine, the combination with cooperating rolls, of a doctor blade contacting with one of said rolls, means to withdraw and hold said blade removed from its roll when unduly pressed by an article being guided thereby, and holding means for said blade releasable by the pressure thereon.

5. In an ironing machine, the combination with cooperating rolls, of a doctor blade contacting with one of said rolls, means to withdraw and hold said blade removed from

its roll when unduly pressed by an article being guided thereby, and a pivoted lever mounted to engage said withdrawing means to releasably hold said blade in contact with its roll.

6. In an ironing machine, the combination with cooperating rolls, of a lever mounted at one side thereof for normal movement away therefrom, a doctor blade carried by said lever to contact with one of said rolls and movable upward and rearward from its roll, and holding means mounted to engage said lever and to release it through pressure upon said blade.

7. In an ironing machine, the combination with cooperating rolls, of a lever mounted at one side thereof for normal movement away therefrom, a doctor blade carried by said lever to contact with one of said rolls, and a retaining lever mounted to releasably engage a member carried by the blade lever and operated through pressure on said blade.

8. In an ironing machine, the combination with cooperating rolls, of a lever mounted at one side thereof for normal movement away therefrom, a doctor blade carried by said lever to contact with one of said rolls, a retaining lever mounted to releasably engage a member carried by the blade lever and operated through pressure on said blade, and tension means carried by said retaining lever to hold it in said engagement.

9. In an ironing machine, the combination with cooperating rolls, of a lever mounted at one side thereof, a doctor blade carried by said lever, a retaining lever mounted to engage a member carried by the blade lever, tension means carried by said retaining lever, and a stop to limit the movement of said retaining lever in one direction.

10. In an ironing machine, the combination with cooperating rolls, of a lever pivoted at one side thereof, a doctor blade mounted to contact with one of said rolls, and links connecting said blade and lever.

11. In an ironing machine, the combination with cooperating rolls, of a lever pivoted at one side thereof, a doctor blade mounted to contact with one of said rolls, links connecting said blade and lever, and tension means carried by an extension from one of said links.

12. In an ironing machine, the combination with cooperating rolls, of a lever pivoted at one side thereof, a doctor blade mounted to contact with one of said rolls, links connecting said blade and lever, tension means carried by an extension from one of said links, a lateral extension from said lever, and a weighted retaining lever having a seat to engage said lateral extension.

13. In an ironing machine, the combination with cooperating rolls, of a plurality of levers pivoted at one side thereof, a con-

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necting bar extending between said levers, a doctor blade mounted upon said levers and adapted to contact with one of said rolls, and a weighted retaining lever having a seat upon its under face to engage said bar.

14. In an ironing machine, the combination with cooperating rolls, of a plurality of levers pivoted at one side thereof, a connecting bar extending between said levers, a doctor blade mounted upon said levers and adapted to contact with one of said rolls, a weighted retaining lever having a seat upon its under face to engage said bar, and a stop disposed above one end of said retaining lever to limit its movement toward said bar.

15. In an ironing machine, the combination with cooperating rolls, of a plurality of levers pivoted at one side thereof, a connecting bar extending between said levers, a doctor blade mounted upon said levers and adapted to contact with one of said rolls, means for retaining said lever blade adjacent said rolls, and a removable supporting bar disposed to limit the movement of said lever away from said rolls.

16. In an ironing machine, the combination with cooperating rolls, of a lever pivoted at one side thereof, a doctor blade pivotally mounted upon said lever by a link connection, and tension means connected to said blade to normally hold it in contact with one of said rolls.

17. In an ironing machine, the combination with cooperating rolls one of which is clothed, of a plate having one edge held under tension in contact with the clothed roll and adjacent the bite of said rolls and extended in the direction of rotation of the clothed roll with which it contacts.

18. In an ironing machine, the combination with cooperating rolls one of which is clothed, of a plate transversely curved and having one edge held under tension in contact with the clothed roll and adjacent the bite of said rolls and extended in the direction of rotation of the clothed roll with which it contacts.

19. In an ironing machine, the combination with cooperating rolls one of which is clothed, of a pivoted plate disposed with one

edge in contact with the clothed roll and extended in the direction of rotation of said roll, and a lever provided with a tension device and extended from the pivot of said plate.

20. In an ironing machine, the combination with cooperating rolls one of which is clothed, of a pivoted plate disposed with one edge in contact with the clothed roll and extended in the direction of rotation of said clothed roll, and a weighted lever extended from the pivot of said plate at one end thereof.

21. In an ironing machine, the combination with cooperating rolls one of which is clothed, of a plate yieldingly mounted to engage the clothed roll adjacent the bite of said rolls for pressing the lap of said clothing toward its roll, a feed table beneath said plate, and a finger guard above said table and spaced therefrom.

22. In an ironing machine, a frame, a heated ironing roll mounted therein, cooperating clothed rolls at opposite sides of said heated roll, a doctor blade cooperating with one clothed roll, a guide extending from said blade concentric with the heated roll and delivering to the other clothed roll, a stripping blade mounted to engage said heated roll, and a delivery board provided with an edge contacting with the last mentioned clothed roll.

23. In an ironing machine, a frame, a heated ironing roll mounted therein, cooperating clothed rolls at opposite sides of said heated roll, a doctor blade cooperating with one clothed roll, a guide extending from said blade concentric with the heated roll and delivering to the other clothed roll, a stripping blade mounted to engage said heated roll, a delivery board provided with an edge contacting with the last mentioned clothed roll, and means for automatically releasing and withdrawing said doctor blade and guide.

In testimony whereof I affix my signature in presence of two witnesses.

GEORGE HENRY BELL. [L. S.]

Witnesses:

JAMES WHITELAW,  
FREDERICK PIATT.