

(No Model.)

T. G. HULL.
WATCH BRACELET.

No. 442,377.

Patented Dec. 9, 1890.

fig. 1.

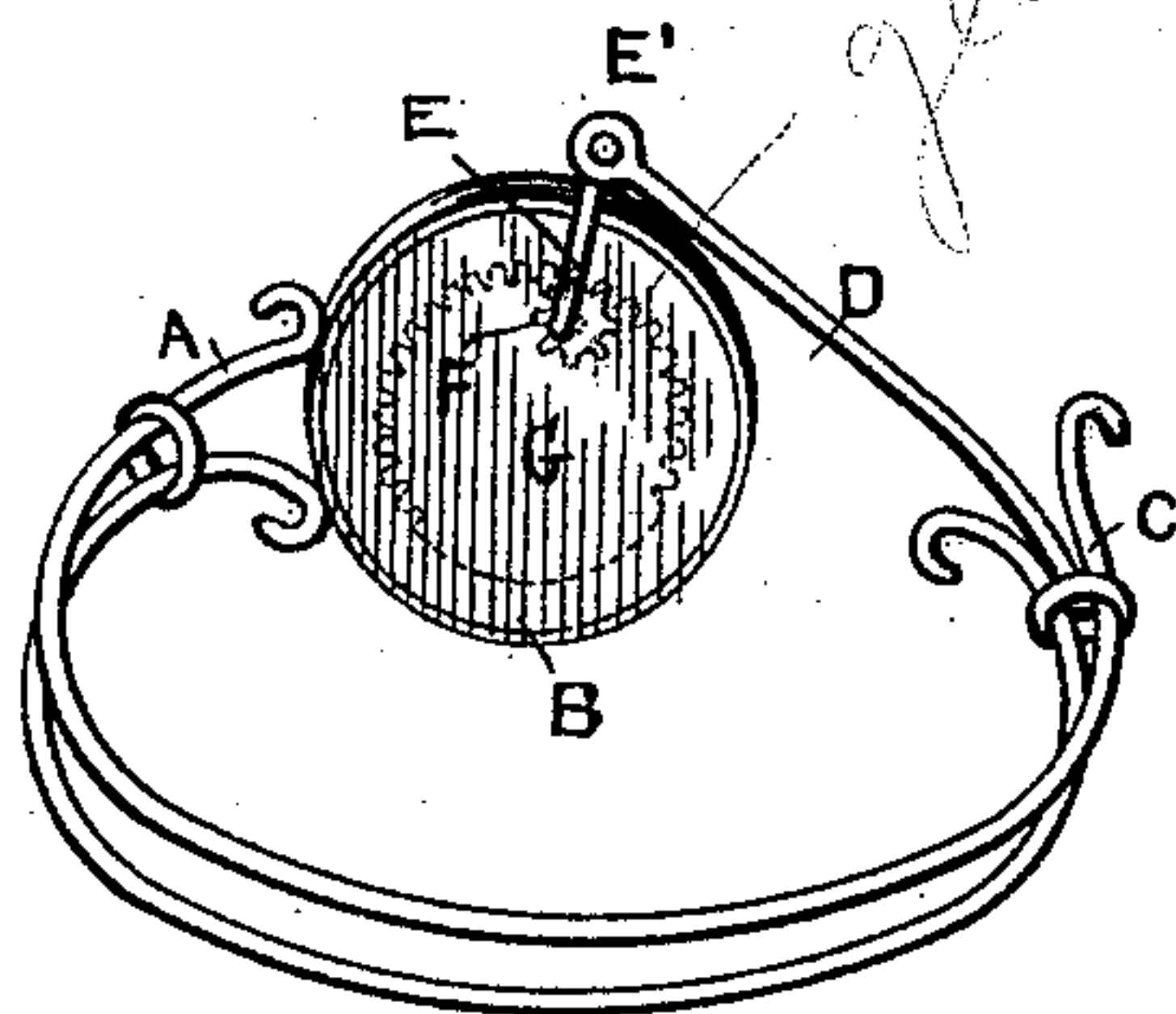


Fig. 2.

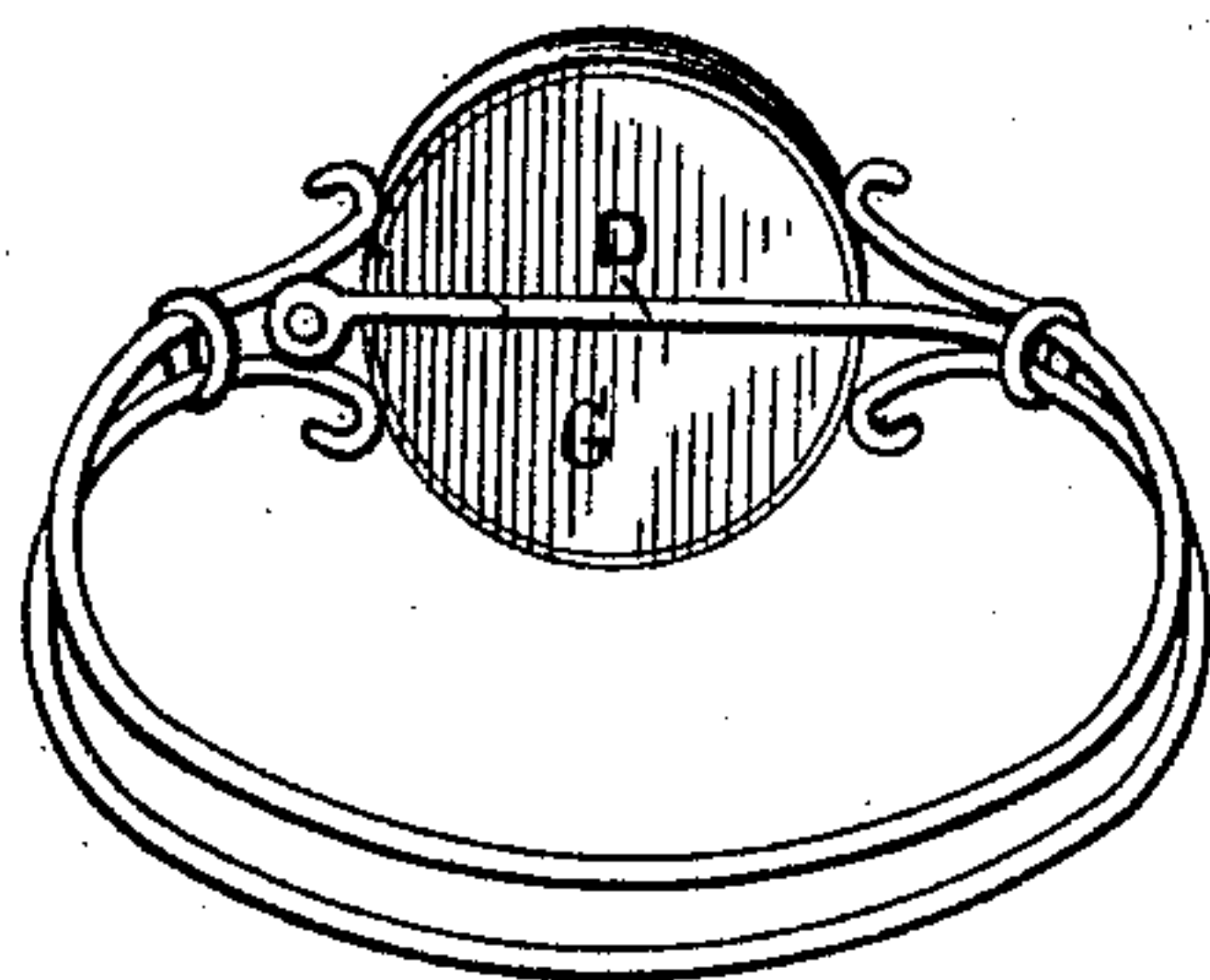
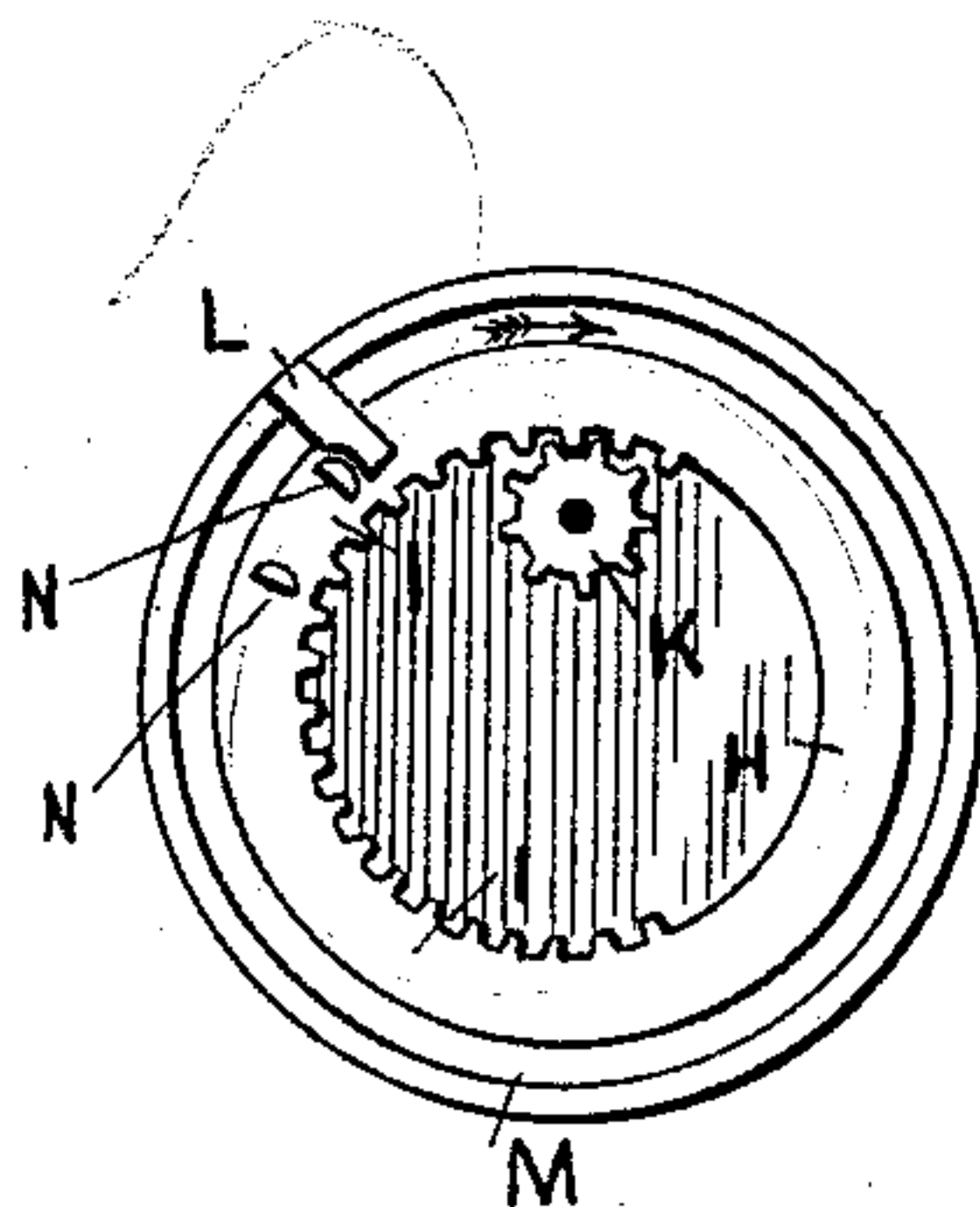


Fig. 3.



WITNESSES:

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UNITED STATES PATENT OFFICE.

TOM GROVE HULL, OF LONDON, ENGLAND.

WATCH-BRACELET.

SPECIFICATION forming part of Letters Patent No. 442,377, dated December 9, 1890.

Application filed September 15, 1890. Serial No. 365,093. (No model.) Patented in England March 19, 1890, No. 4,313.

To all whom it may concern:

Be it known that I, TOM GROVE HULL, a subject of Victoria, Queen of Great Britain and Ireland, residing at 97 Bond Street, London, Middlesex, England, have invented certain new and useful Improvements in Watch-Bracelets, (for which Letters Patent were granted to me in Great Britain, No. 4,313, dated March 19, 1890,) of which the following is a specification.

The object of my invention is to provide an automatic method of winding up the watches attached to so-called "watch-bracelets" or "watch-bangles" by the simple and necessary action of putting on and taking off the bracelet or bangle, which operations, once performed, shall be sufficient to wind the watch to its fullest extent without any further or other action on the part of the wearer.

The invention consists of an expansible bracelet, to one end or shoulder of which a watch is secured, the other end or shoulder of the bracelet being connected with the winding mechanism of the watch to operate the same when the bracelet is opened.

The invention also consists in the construction and combination of parts and details, which will be fully described hereinafter, and finally pointed out in the claims.

The accompanying sheet of drawings, with the letters of reference, will illustrate my method of automatically winding such watches.

Figure 1 is a view of a watch-bracelet, showing the back of the watch, the bracelet being half opened. Fig. 2 is a similar view showing the bracelet closed; and Fig. 3 is an enlarged view of the winding mechanism attached to the inside of the back, the rest of the watch being omitted.

On one shoulder of the bracelet A—say the left-hand shoulder—I attach or fix a watch B. At or near the edge of such watch and clear of the back thereof, from the opposite shoulder C, I project a wire or rod D, forming the longer arm of a jointed lever, the shorter arm E of which is fixed at its extremity F to a convenient part of the plate G, which forms the back of the watch-case. This plate revolves freely in a race or groove, or may be centrally pivoted, so that when the arm D is moved by the opening of the bracelet the back G is

pulled round in or on its bearings by the short arm E, jointed at E' to the longer arm D.

On the inner side of the back plate G, I fix at or near the circumference thereof a wheel H, toothed internally for half or a convenient portion of its inner circumference, as at I I, the teeth engaging with a pinion K, which is mounted on the barrel-arbor of the watch. No other parts of the watch proper are shown, as this arrangement will be well understood by any skilled workman in the art. Spring-stops, such as L, on the steel or other rim M of the race or groove and engaging in notches N N prevent the plate being moved in the wrong direction.

Fig. 2 shows the bracelet closed, the shorter arm E being under the longer arm D and concealed thereby.

It will be seen that on moving the arm D from its horizontal position and pulling the bracelet open the plate revolves, and the arms, when a quarter of a circle has been described, assume the position shown in Fig. 1, and the internally-toothed wheel having been also moved for a similar distance, the pinion mounted on the barrel-arbor has been actuated and the watch partially wound up. When the bracelet has been opened to its fullest extent, it is closed by completing the revolution of the back plate, the jointed lever also completing its revolution and returning to its normal position after passing round the watch.

The usual set-hands push-piece may be provided for regulating the hands, and by pressing this the winding action is connected with the hands of the watch in any well-known manner.

The number of teeth on the pinion K and the partially internally-toothed wheel H are so calculated and proportioned as to insure the winding of the watch for half its full period on each revolution of the back plate. The internal teeth being omitted on the return portion of the inner wheel H, the plate G and the jointed lever return to their normal position without further winding of the watch; or it will be seen that the teeth may be on the opposite side or all round the inner circumference of the wheel H, and the watch may be wound up by the closing of the bracelet.

Having thus described my invention, I

claim as new and desire to secure by Letters Patent—

1. The combination, with a bracelet, of a watch attached to the same, one end or shoulder of said bracelet being connected with the winding mechanism of the watch, substantially as set forth.

2. The combination, with a bracelet, of a watch attached to the same, and a link connecting one end or shoulder of the bracelet with the winding mechanism of the watch, substantially as set forth.

3. The combination, with a bracelet, of a watch attached to one end or shoulder of the same, a toothed wheel in the watch, a pinion

on the barrel-arbor engaging said toothed wheel, and a link connecting said toothed wheel with that end or shoulder of the bracelet opposite the one to which the watch is attached, substantially as set forth.

In testimony that I claim the foregoing as my invention I have signed my name in presence of two subscribing witnesses.

TOM GROVE HULL.

Witnesses:

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