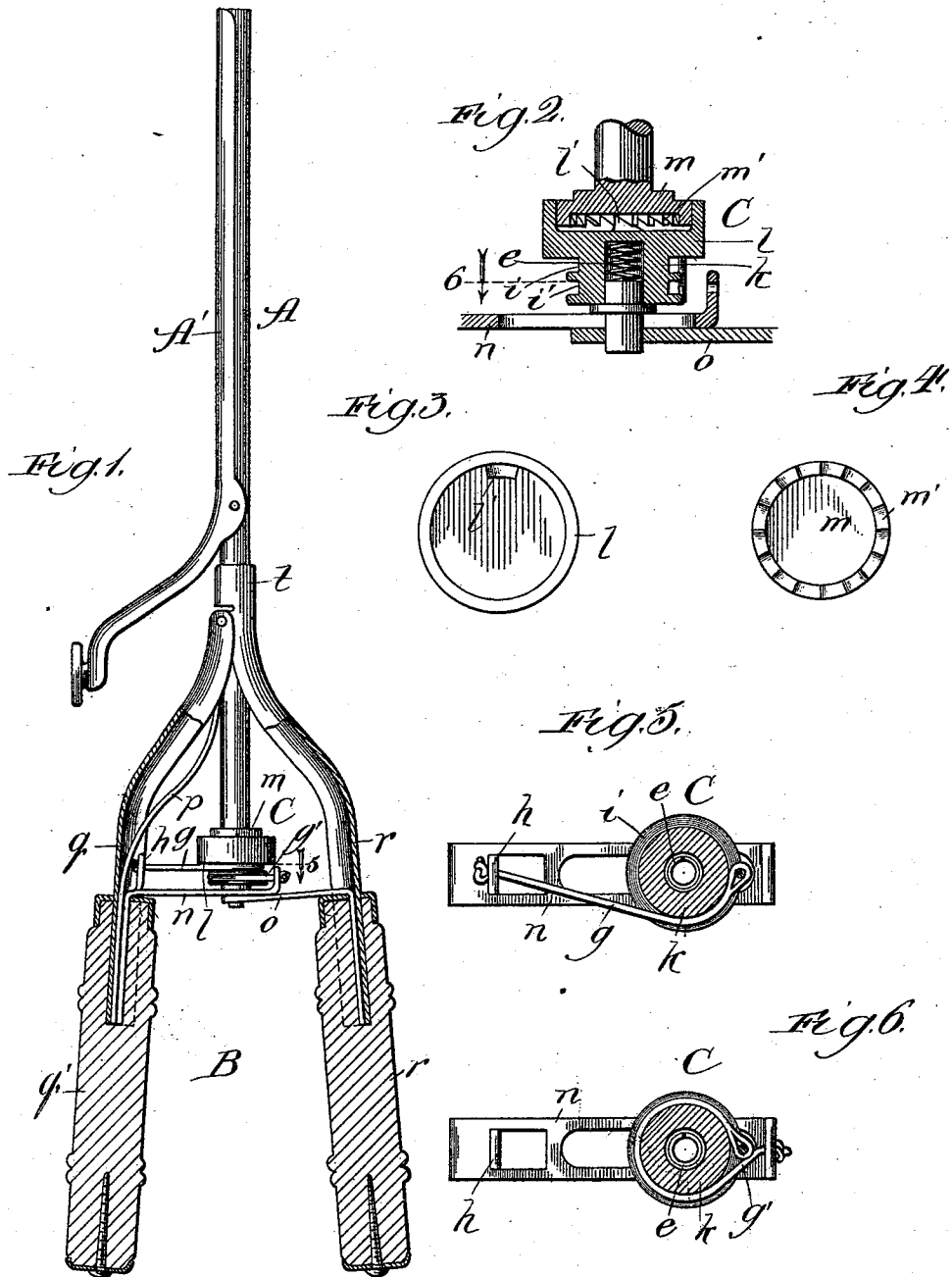


(No Model.)

R. FRIEDEL.
CURLING IRON.

No. 527,172.

Patented Oct. 9, 1894.



Witnesses:
 Capt. E. Gaylord.
 Lute of Altier.

Inventor:
Robert Friedel,
By Dyrenforth & Dyrenforth,
Attys.

UNITED STATES PATENT OFFICE.

ROBERT FRIEDEL, OF CHICAGO, ILLINOIS.

CURLING-IRON.

SPECIFICATION forming part of Letters Patent No. 527,172, dated October 9, 1894.

Application filed June 9, 1894. Serial No. 514,012. (No model.)

To all whom it may concern:

Be it known that I, ROBERT FRIEDEL, a subject of the Emperor of Germany, residing at Chicago, in the county of Cook and State of Illinois, have invented a new and useful Improvement in Curling-Irons, of which the following is a specification.

My invention relates to an improvement in the class of curling-irons, for use as an article of toilet in curling the hair, in which a metal curling-rod portion, adapted to be heated, carries a handle, of material nonconductive of heat, by which to manipulate it.

The object of my improvement is to provide a construction of the curling-rod whereby it shall be rendered rotatable by compressing the handle, thus to enable, by a mere compression-action of the hand, the rod to be rotated for winding upon it hair to be curled, instead of requiring the more inconvenient and tiresome operation of turning the handle-portion to turn the curling-rod for the purpose. To this end I journal the curling-rod portion of the device on a compressible handle and provide on the former a clutch having a loose rotary member operative from the handle by a connecting medium between the two.

My invention consists in the general construction of my improved curling-iron; and it also consists in details of construction and combinations of parts.

Referring to the accompanying drawings—Figure 1 is a partly sectional view in elevation of my improved curling-iron; Fig. 2, a broken sectional and enlarged view of the clutch-device; Figs. 3 and 4, details of the clutch. Fig. 5 is a section taken at the line 5 on Fig. 1, viewed in the direction of the arrow and enlarged; and Fig. 6 is a section taken at the line 6 on Fig. 2 and viewed in the direction of the arrow.

A is the cylindrical curling rod, which should be formed of metal. It is journaled on a handle B, shown as comprising the two handle-portions *r* and *q*, the former being tubular at one end, as shown at *t*, there to surround the rod A, and having pivotally connected with the bearing *t* the handle-portion *q*, from which there extends a spring *p* against the rod to prevent undesirably easy turning thereof and render the handle-portion

q resilient. On the grip-ends of the handle-portions *r* and *q*, respectively, are the wooden, or other non-heat conducting tubular shields *r'* and *q'*. From the advance-end of the former there extends inward a rigid bearing *o*, in which is journaled the inner end of the rod A, while from the corresponding end of the latter there projects inward, to overlap the inner end of the bearing *o*, a longitudinally slotted finger *n*, embracing the curling-rod.

C is a clutch, comprising a disk-shaped head *m* forming one member rigidly fastened to the rotary curling-rod and provided on one face, circumferentially, with ratchet-teeth *m'*; and a member *l* loosely surrounding the rod and yieldingly held, by a spring *e*, to engage, by its tooth *l'*, the ratchet on the rigid member, and terminating, at the side opposite that carrying the tooth, in a sleeve *k* formed into the drum-portions *i* and *i'* and in which the spring *e* is confined. The spring *e* is confined under compression in the sleeve *k* between its outer closed end and the plug *o'*, shown in Fig. 2 and on which the sleeve is adapted to move telescopically, whereby the tension of the spring tends to force the member *l* outward. A portion of metal severed from the finger *n* is bent forward to form the tongue *h*, having fastened to it one end of a cord *g*, chain, or the like, the opposite end thereof being fastened to the drum *i*; and a cord *g'*, chain, or the like, is fastened at one end to the drum *i'* and at its opposite end to the upturned extremity of the slotted finger *n*. The cords *g* and *g'* are arranged to wind upon their respective drums in opposite directions.

As shown, the device has pivotally supported on the rod A a concavo-convex jaw-piece A' terminating in a thumb-bearing and controlled, as usual, by an interposed spring (not shown); the jaw affording means for gripping the hair between it and its companion-part A.

As will be seen, by compressing in the hand the parts *r* and *q* forming the handle B, the finger *n* is moved transversely past the bearing *o* and unwinds the cord *g'* from its drum *i'*, thereby turning the clutch-member *l* to engage its tooth with the ratchet on the member *m* and thus turn the latter to rotate the rod A with the jaw-piece A'. Thus turning

the clutch-member *l* turns the drum *i* to wind upon it the cord *g*. On releasing the handle B from the compression-action of the hand, the recoil of the spring *p* draws upon the cord
 5 *g* to unwind it from its drum *i*, thereby turning the loose clutch-member backward to slip its tooth, against the yielding resistance of the spring *e*, over the ratchet *m'* and avoiding any backward turning of the curling-rod;
 10 and this reverse turning of the loose clutch-member causes the drum *i'* to wind upon it its cord *g'*.

By working the hand, in which the handle B is held, repeatedly to compress and release
 15 the latter the rod A is, obviously, caused to rotate, the arrangement illustrated effecting a partial rotation thereof with each compression-action on the handle and accordingly winding the hair to be curled upon the rod.

20 What I claim as new, and desire to secure by Letters Patent, is—

A curling iron comprising, in combination, a curling-rod A having pivotally supported on it a spring-controlled jaw-piece A', a handle-portion *r* having pivotally connected with
 25 it a spring-controlled handle-portion *q* and provided with bearings *t* and *o* in which the rod is journaled, a clutch-device C on the rod, comprising the rigid member *m* and the loose yielding member *l* provided with the sleeve
 30 *k*, a finger *n* extending from said spring-controlled handle-portion, a cord *g* connecting said yielding handle portion with the sleeve to wind thereon by its rotation in one direc-
 35 tion, and a cord *g'* connecting said finger with the sleeve to wind thereon by its rotation in the opposite direction, substantially as described.

ROBERT FRIEDEL.

In presence of—

J. W. DYRENFORTH,
 W. N. WILLIAMS.