W. E. CLEMENTS.

FLEXIBLE OR SPRING GRIP DEVELOPER.

APPLICATION FILED JAN. 30, 1912.

1,041,431. Patented Oct. 15, 1912.

Fig. 1.

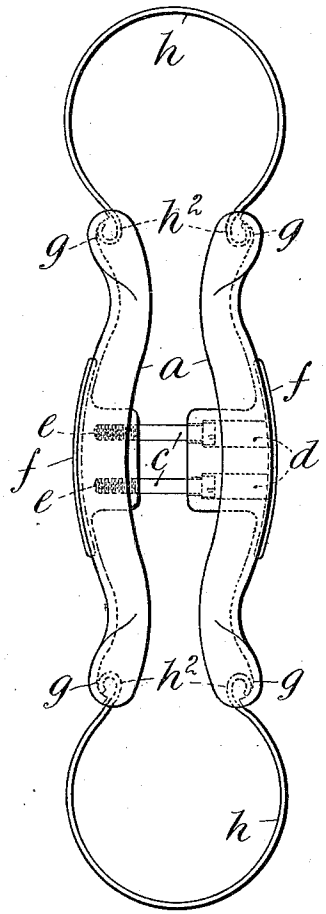
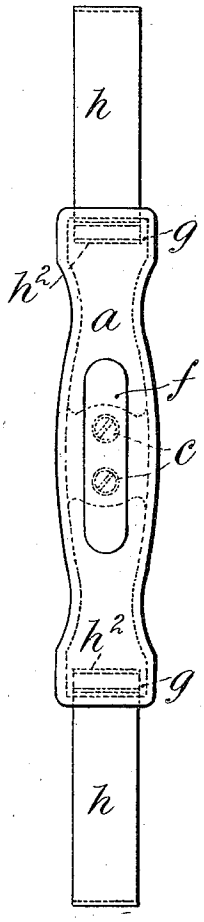


Fig. 2.



Witnesses:

Inventor
Walter E. Clements
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Atty.

UNITED STATES PATENT OFFICE.

WALTER EDWARD CLEMENTS, OF ERDINGTON, ENGLAND.

FLEXIBLE OR SPRING GRIP-DEVELOPER.

1,041,431. Specification of Letters Patent. Patented Oct. 15, 1912.

Application filed January 30, 1912. Serial No. 674,353.

To all whom it may concern:

Be it known that I, WALTER EDWARD CLEMENTS, a subject of the King of Great Britain, residing at Pool House, Kingsbury Road, Erdington, in the county of Warwickshire, England, have invented certain new and useful Improved Flexible or Spring Grip-Developers, of which the following is a specification.

The invention relates to a flexible or spring grip developer of the kind in which the two parts or bars of the handle are separated by bow springs arranged at the ends of said bars. Previously these bow springs have been permanently fitted to the ends of the handle parts, or so fitted that a tool was needed to detach them, and to vary the amount of resiliency in them removable separate springs have been placed within the main bow springs.

According to the invention the bow springs are made easily and completely detachable from the ends of the handle parts or bars without any tool, for the purpose of interchangeability so that a bow spring of less strength can be conveniently substituted for a stronger one, and vice-versa. The ends of the bow have a spring snap attachment to the ends of the handle parts or bars, a special form of the invention being to curl up the two free ends of the bow spring and make them fit recesses at the extreme ends of the handle parts or bars.

The invention is illustrated in the drawings.

Figure 1 is a face view of a developer, and Fig. 2 is a side view.

The handle parts or bars are represented at *a* coupled by the plain shouldered screws, *c*, which allow of a guided but limited parallel movement of said bars *a*. The screws *c* are passed through plain recessed holes *d* in one of the bars *a*, and screw into screw-threaded holes *e* in the other bar or handle part *a*. The bars *a* are shallow recessed on their outer surfaces to receive pads *f* of cork, leather or the like, to cover the screws and holes therefor.

The extreme ends of the bars or handle parts *a* are formed with recesses *g* for the purpose of receiving the ends h^2 of the bow springs *h*. These springs *h* are shown of flat steel bent up into circular form, with the ends h^2 curled up, or beaded. The resiliency in the bow springs is consequent upon contraction, and the feature of the invention is the interchangeability of them in respect of the bars or handle parts so that one can be removed and a less or heavier powered spring substituted without any tool whatever, and simply by a spring snap action of the ends of the bow into the recesses.

Having now described my invention what I claim and desire to secure by Letters Patent is:—

1. In a flexible or spring grip developer the combination of two bars or handle parts coupled to have a limited and guided parallel movement toward and away from each other, and bow springs interchangeably fitted to the ends of the bars or handle parts in a manner requiring no tool to attach or detach them, substantially as described.

2. In a flexible or spring grip developer, the combination of two bars or handle parts coupled to have a limited and guided parallel movement toward and away from each other, recesses formed in the extreme ends of said bars or handle parts, and bow springs interchangeably fitted to the ends of the bars or handle parts and whose ends are curled up or beaded to engage the recesses, substantially as described.

In testimony whereof I have hereunto set my hand in presence of two subscribing witnesses.

WALTER EDWARD CLEMENTS.

Witnesses:
GEO. FUEREY,
BERNARD H. TINGLE.