

(No Model.)

B. ARNOLD.
INSTRUMENT FOR MARKING.

No. 426,094.

Patented Apr. 22, 1890

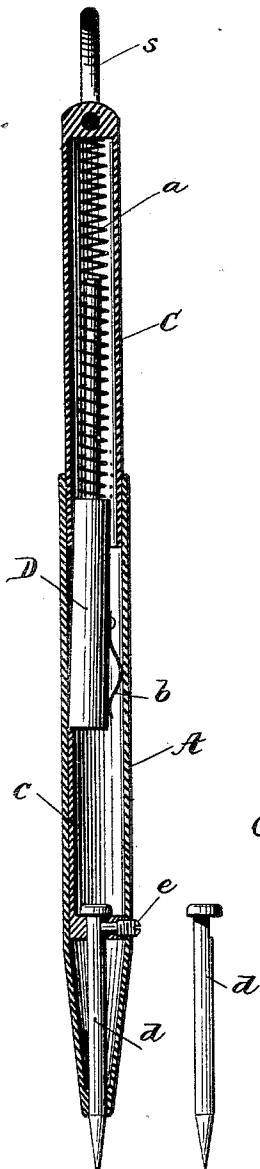
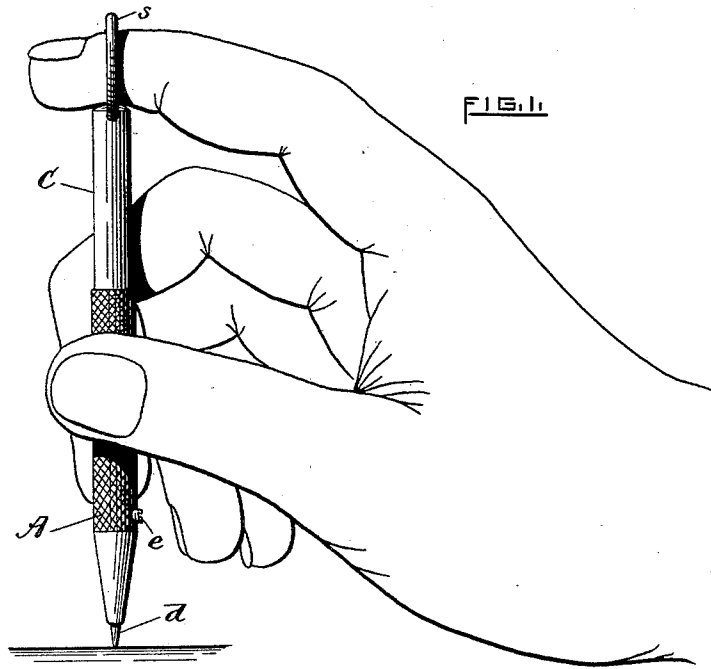


FIG. 2.

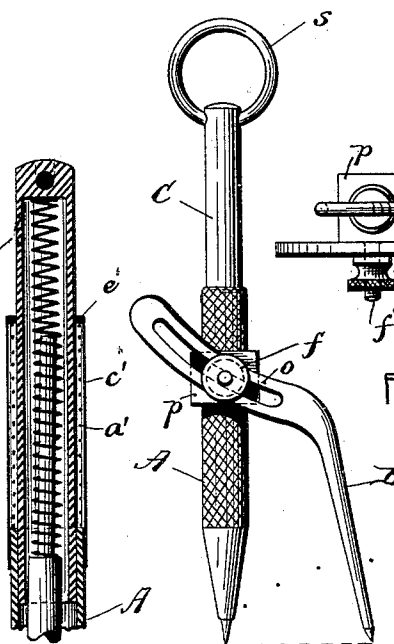


FIG. 4.

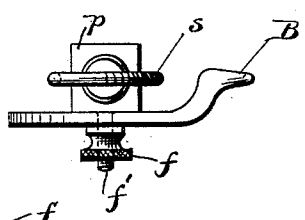


FIG. 3.

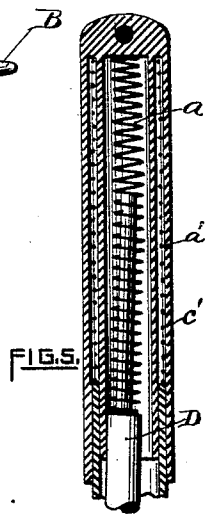


FIG. 5.

WITNESSES.

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INSTRUMENT FOR MARKING.

SPECIFICATION forming part of Letters Patent No. 426,094, dated April 22, 1890.

Application filed February 19, 1890. Serial No. 341,052. (No model.)

To all whom it may concern:

Be it known that I, BENJAMIN ARNOLD, of East Greenwich, in the county of Kent and State of Rhode Island, have invented certain
5 new and useful Improvements in Automatic Instruments for Marking, &c.; and I do hereby declare that the following is a full, clear, and exact description thereof, reference being had to the accompanying drawings, and
10 to the letters of reference marked thereon, which form a part of this specification.

The object of this invention is to produce an instrument to be used mainly in pricking dots in a circular arrangement, as in setting
15 out holes to be drilled, or for marking divisions of spaces in other forms and for making other marks or indentations—as, for instance, figures or letters, &c. It is illustrated in the accompanying drawings, in which—

20 Figure 1 is an elevation of the marking device held in the hand as when used in making separate marks. Fig. 2 shows an enlarged vertical section taken through the center of the instrument. Fig. 3 is an elevation showing the combination of the marking device
25 and one leg of a pair of dividers, as used in pricking out circles and in dividing lines into equal divisions. Fig. 4 shows a part of the same as Fig. 2 with the addition of a spring and case, as hereinafter explained. Fig. 5
30 shows a modification of the parts shown in Fig. 4.

In the drawings, A represents a tubular case having a plug in its lower end made tapering on the outside of the case. An opening
35 is made lengthwise through the center of this plug to receive a marking-tool *d*, constructed to make a pointed or other impression, as may be desired. The marking-tool is held in place in the opening in the plug by
40 means of a small screw *c*, which screws in through the side of the plug and enters a recess made in one side of the tool *d*. This recess in the tool, into which the screw enters,
45 is made large enough to allow the tool to move up or down a short distance. Another tubular case C is made of the proper size to just slide easily in the case A, and has a ring *s*
50 inserted in its top to raise it by. A hammer D is made with a larger portion of the proper size to slide freely in the case C and a smaller

portion or handle extending from the larger portion or weight up into the case C. An open spiral spring *a*, made just large enough to work freely in the case C, is placed around
55 the smaller portion of the hammer, and, extending some distance above the upper end of the hammer, has its upper end attached to the top of the case C, while the lower end of the spring is fastened to the middle of the
60 hammer D, so that when the case C is drawn up out of the case A the hammer D will also be drawn up by the spring *a*.

A projection *e* is placed on one side of the case A in its lower part on the inside, and is
65 put at the height above the plug that it is desired to raise the hammer D in using it. The hammer D has a light spring *b* fastened on its side opposite to the projection *e*, for the purpose of throwing the lower end of the hammer, when it is raised, over to the other side
70 of the case A, that the lower end of the hammer may catch on the upper end of the projection *e* and be held there until dislodged in using.

The spring *b* may be dispensed with and the hammer thrown over by bending the
75 spring *a* so that it will touch the side of the tube C opposite to the projection, as it will require but a very light pressure to swing the
80 hammer over as desired.

In Fig. 4 a form of the instrument is shown in section in which the ring *s* (shown in Fig. 2) is dispensed with and the case C, with
85 spring *a* and hammer D, raised after having made a stroke by means of an open spiral spring *a'*, placed around the upper part of the case C and having its lower end resting on the upper end of the case A and its upper end pressing against the ring *e'*, attached
90 to the case C. *c'* is a short case attached to the up end of case A to protect the spring *a* by sliding over it. This spring *c'* should not be made any stronger than what is necessary
95 required to compress it must be subtracted from the force used to compress the spring *a* in making a stroke.

Fig. 5 shows the case *c'* made longer than it is in Fig. 4 and attached to the top of the
100 case C, so as to move with that case and slide freely over the case A below. The spring is

also carried up to press against the top of the case C, though the projection may still be used, as in Fig. 4.

Fig. 3 shows the combination of the marking-instrument and a divider-leg for the purpose of marking circles and dividing off spaces. The leg B has a flat top with a slot in it carried off to one side and curved for the purpose of allowing the dividers' leg-point to be extended off to enlarge the circle, and at the same time have the marker-leg retain a position nearly vertical to the plane to be marked. A block *s'*, having a vertical hole in it to receive the case A of the marker and hold it firmly, has also a projecting ridge *o* on its side fitting into the curved slot in the top of the divider-leg, and a pin *f'*, projecting out from the middle of this ridge, has a screw-thread cut on it, and a milled nut *f* is fitted on it to be screwed up and hold the divider-leg fast to the block *s'* when set.

In using the marking leg or device without the divider-leg it is held in the fingers with the forefinger through the ring, as shown in Fig. 1. The case C is drawn up partly out of the case A by raising the forefinger and ring *s*. This draws up the hammer by means of the spring *a*, which, as before stated, is connected at its ends to the hammer and case C until the lower end of the hammer D is above the upper end of the projection *c*, upon which it will lodge, being pushed over that way by the spring *b* on its other side. The work to be marked being held by the other hand, the point of the marker *d* can be put at the exact place where the mark is wanted, and by pressing down on the top of case C with the forefinger in the ring *s* the case C' will be pressed down into the case A, compressing the spring *a* on the top of the hammer D until the lower edge of the case C, passing down at the side of the hammer, crowds the lower end of it off of the projection *c*, that holds it, when the compressed spring *a* will throw it down forcibly against the upper end of the marker *d*, forcing its lower end into the material below, making the desired mark.

In using the instrument with the divider-

leg to mark out circles or divide lines off into spaces it is held in the hand and operated in the same manner as just described, except that the point of the divider-leg B is placed in a mark first made for the center of the circle, and as the successive marks of the circle are made the instrument is swung around on the point of the divider-leg, so that the marks made will be concentric, and in dividing a line into spaces the point of the divider-leg is placed successively in the last mark made to govern it in making the next, so that the spaces between the marks will be equal.

This instrument can also be used for other purposes besides that of a marker.

By making the lower end of the tool *d* flat and sharp it may be used to cut with, and by rounding the point it may be used as a dental plugger or for driving small tacks or points without any other alteration of its working parts.

Having thus described my improvements, what I claim as my invention is—

1. The combination of an automatic percussive marking-instrument with a leg of a pair of dividers, substantially as and for the purpose set forth.

2. The combination, with a hammer and a spring arranged substantially as described, of an interior and an exterior case, the latter being provided with a projection to receive and support the hammer when raised and having a tool at its lower end, substantially as described.

3. The combination of the case C and the case A, having a plug in its lower end with an axial aperture in it to receive a tool, a hammer with a spring to operate it, and a tool, substantially as described.

4. The combination of the case C and of the case A, having the projection *c* and the tool *d*, the hammer D, provided with the spring *a* and the spring *b*, with the case *c'* and the spring *a'*, substantially as and for the purpose set forth.

BENJ. ARNOLD.

Witnesses:

H. A. SHOVE,
M. C. ARNOLD.