

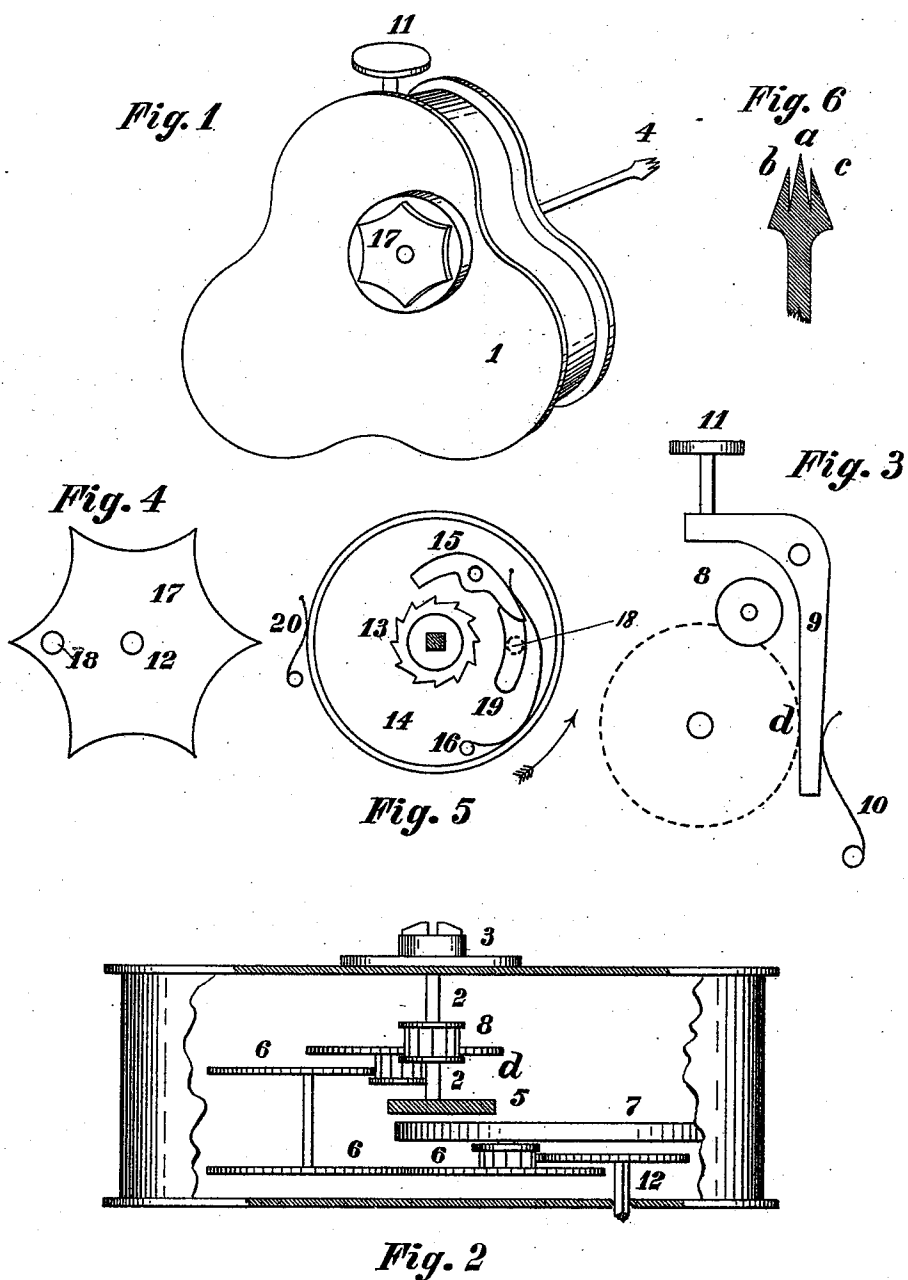
(No Model.)

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PORTABLE SPRING ACTUATED CENTER MARK TOOL.

No. 528,555.

Patented Nov. 6, 1894.



WITNESSES:

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PORTABLE SPRING-ACTUATED CENTER-MARK TOOL.

SPECIFICATION forming part of Letters Patent No. 528,555, dated November 6, 1894.

Application filed May 11, 1894. Serial No. 510,850. (No model.)

To all whom it may concern:

Be it known that I, ROBERT SINGLETON PEABODY, a citizen of the United States, residing at the city of Philadelphia, in the county of Philadelphia and State of Pennsylvania, have invented certain new and useful Improvements in Portable Spring-Actuated Center-Mark Tools, of which the following is a specification.

The principal objects of my present invention are, first, to provide a simple, compact and efficient device that may be conveniently held in the hand and employed for making little indentations or punch marks upon work and in positions that would not be readily accessible to ordinary center punches; second, to construct and arrange the operative parts of the device in such manner that it may be readily set in motion and checked as required; third, to provide winding devices for the main spring of the apparatus that do not run backward when the machine is in operation whereby the hand of the operator is protected from accidental injury, and, fourth, to provide a form of drill or marking point especially adapted for use in connection with my improved device.

My invention consists of the improvements hereinafter described and claimed.

The nature, characteristic features, and scope of my invention will be more fully understood from the following description taken in connection with the accompanying drawings, forming part hereof, and in which—

Figure 1, is a perspective view of a center mark tool embodying features of my invention. Fig. 2, is a top or plan view of the same having a portion of the exterior casing removed in order to illustrate the working parts. Fig. 3, is a detail view illustrating a stop lever and its accessories for stopping and starting the machine. Figs. 4 and 5, are detached views of the winding mechanism, and Fig. 6, is a view illustrating the drill or marking point.

In the drawings, 1, is a casing adapted to be held in the hand of the operator.

2, is a revoluble spindle provided with means as a chuck 3, for carrying a drill-like marking point 4. This drill-like marking point 4, resembles in form a dog's tooth and is provided with a center point as *a*, and with

two other points as *b* and *c*, slightly shorter than the center point *a*, and located upon opposite sides of and in close proximity with it, so that the center point *a*, enters the work first and so that the combined operation of the three points results in the production of a single indentation or slight depression.

5, is a plate upon which the inner end of the spindle 2, abuts, so that the pressure brought to bear upon the work at the tip of the marking point 4, is taken up by this plate, which resists such pressure in the line of the axis of the spindle so that freedom of rotation of the spindle 2, is insured.

6, is a train of spur-wheels actuated by the main spring 7, and meshing with a pinion 8, keyed or otherwise secured to the spindle 2.

9, is a centrally pivoted stop lever having one of its extremities solicited by a spring 10, into frictional contact with the periphery of the wheel *d*, which drives the pinion 8, and spindle 2. The other extremity of this lever is provided with a push button 11, protruding through the casing 1. Ordinarily the spring 10, causes the stop lever 9, to contact with the periphery of the wheel *d*, and to thus prevent rotation of the spindle 2, and marking point 4. However, when the push button 11, is depressed, the force of the spring 10, is overcome and the stop lever 9, is shifted clear of the wheel *d*, whereby the spindle 2, and marking point 4, are permitted to revolve freely and rapidly under the influence of the main spring 7, which acts through the intervention of the train of gear-wheels 6, as has been stated.

12, is the winding arbor appertaining to the main spring 7.

13, is a ratchet-wheel keyed or otherwise secured to the portion of the arbor 12, that projects from the rear of the casing 1.

14, is a disk revolubly mounted upon the arbor 12, and provided with a centrally pivoted pawl 15, normally solicited by means of a spring 16, out of range of the ratchet-wheel 13.

17, is a second disk revolubly mounted upon the arbor 12, and provided in the present instance, with a milled or roughed periphery in order to permit of its being readily grasped and turned by the fingers of the operator. This disk 17, is also provided with a pin or projection 18, adapted to extend through and

work freely in a slot 19, in the disk 14, in such manner that it may collide with the heel of the pawl 15, only when the disks are rotated in the direction indicated by the arrow 5 in the drawings.

20, is a spring suitably supported at one of its extremities by the casing or other part of the device and having its free extremity disposed in such manner that it bears upon the 10 periphery of the disk 14, and tends to retard the rotation of the latter, so that when the operator starts to turn the disks in order to wind up the main spring 7, the disk 14, is slightly retarded by the spring 20, and thus 15 caused to lag behind the disk 17, until the post or projection 18, has collided with the heel of the pawl and forced it into engagement with the teeth of the ratchet-wheel, whereupon the resistance offered by the 20 spring 20, is overcome, so that both disks and the ratchet-wheel constitute in effect a single piece, the rotation of which serves to wind the main spring. Obviously when the ratchet-wheel is being turned in a reverse direction 25 under the influence of the main spring 7, the spring 16, shifts the pawl clear of its teeth, with the result that both disks remain at rest for purposes to be hereinafter explained.

From the foregoing description, the skillful 30 mechanic will readily understand the construction of my improvement or invention and the relation that the several parts thereof bear to each other. Hence I will proceed to describe its mode of operation.

35 The device may be wound up for use by the simple operation of rotating the disk 17, in the direction indicated by the arrow upon the drawings. During this operation, the disk 14, is slightly retarded by the spring 20, until 40 the pin or projection 18, collides with the heel of the pawl 15, and causes the latter to engage the teeth of the ratchet 13, whereupon the rotary motion of both disks is transferred to the arbor 12, which winds up the main 45 spring 7. The casing 1, may then be taken in the hand and held in the required position which may be such as would not be accessible with an ordinary center punch. As soon as the marking point has been adjusted to 50 the required position, the operator presses the push button 11, with the result that the stop lever 9, is shifted clear of the periphery of the wheel *d*, and into position for releasing the train of gears 6, whereby the spindle 2, and marking point 4, rotate freely and 55 rapidly under the influence of the main spring 7. In this connection it may be remarked, that any pressure brought to bear upon the work at the marking point 4, is 60 taken up by the plate 5, and resisted along substantially the axis of the spindle, so that freedom of rotation of the latter is insured. As soon as the marking point 4, has been permitted to rotate long enough to make the required indentation in the work, the push button 11, is released whereby the machine is

automatically brought to rest through the action of the spring 10, which causes the stop lever 9, to again come into frictional engagement with the periphery of the wheel *d*. 70 While the machine is in operation, the disks 14 and 17, remain at rest, which is advantageous, because they are in close proximity with the hand of the operator. This result is accomplished by reason of the fact that the 75 projection or pin 18, is clear of the heel of the pawl 15, so that the latter is solicited by its spring 16, out of engagement with the ratchet wheel 13, thus permitting the latter to rotate independently of and without im- 80 parting motion to the disks 14 and 17. In this connection, it may be stated that the spring 20, under these circumstances, tends to prevent the disks from turning or running backward. 85

It will be obvious to those skilled in the art to which my invention relates that modifications may be made in details without departing from the spirit thereof. Hence I do not limit myself to the precise construction 90 and arrangement of parts hereinabove set forth and illustrated in the accompanying drawings; but

Having thus described the nature and objects of my present invention, what I claim 95 as new, and desire to secure by Letters Patent, is—

1. A portable spring actuated center mark tool comprising, a casing adapted to be held in the hand, a revoluble spindle carrying a 100 marking point, a plate upon which the inner end of said spindle abuts, a spring actuated train of spur wheels for driving said spindle, a centrally pivoted L-shaped lever having one of its arms provided with a push button accessible from the exterior of the casing and 105 having its other arm in range of the periphery of one of said wheels, and a spring for normally pressing the last mentioned arm of the lever upon the periphery of the wheel, substantially as described. 110

2. A portable spring actuated center mark tool comprising, a casing adapted to be held in the hand, a train of spring actuated gears for driving a spindle carrying a marking point, 115 a ratchet wheel keyed to the winding arbor of the spring, a revoluble disk provided with a pawl adapted to engage said ratchet wheel, a spring soliciting said pawl out of range of said ratchet wheel, a second revoluble disk provided with a pin adapted to collide with said 120 pawl when the disks are rotated in one direction and to release said pawl when the ratchet-wheel is rotating in the other direction, substantially as described. 125

3. In combination, a winding arbor for a spring, a ratchet wheel keyed to said arbor, a disk revoluble on said arbor and provided with a pawl tending to clear said ratchet wheel, a second disk revoluble on said arbor 130 and provided with a projection adapted to collide with said pawl when the disks are ro-

tated in one direction and to release said pawl when the ratchet wheel is rotating in the other direction, substantially as described.

4. In combination, a winding arbor for a
5 spring, a ratchet wheel keyed to said arbor, a disk revoluble on said arbor and provided with a pawl tending to clear said ratchet wheel, a second disk revoluble on said arbor and provided with a projection in range of
10 the heel of the pawl, and a spring tending to retard the rotation of the first mentioned disk, substantially as described.

5. A portable spring actuated center mark tool comprising, a casing adapted to be held

in the hand, a revoluble spindle carrying a
15 marking point and provided with spring actuated driving mechanism and a push button and retarding mechanism, and a supporting plate as 5, upon the smooth face of which the inner end of the spindle abuts, substantially
20 as and for the purposes set forth.

In testimony whereof I have hereunto signed my name.

ROBERT SINGLETON PEABODY.

In presence of—

ANDREW B. CAMPBELL,
A. B. STOUGHTON.