J. H. BULLARD.

Machine for Checking Pistol-Handles.

No. 210,180. Patented Nov. 26, 1878.

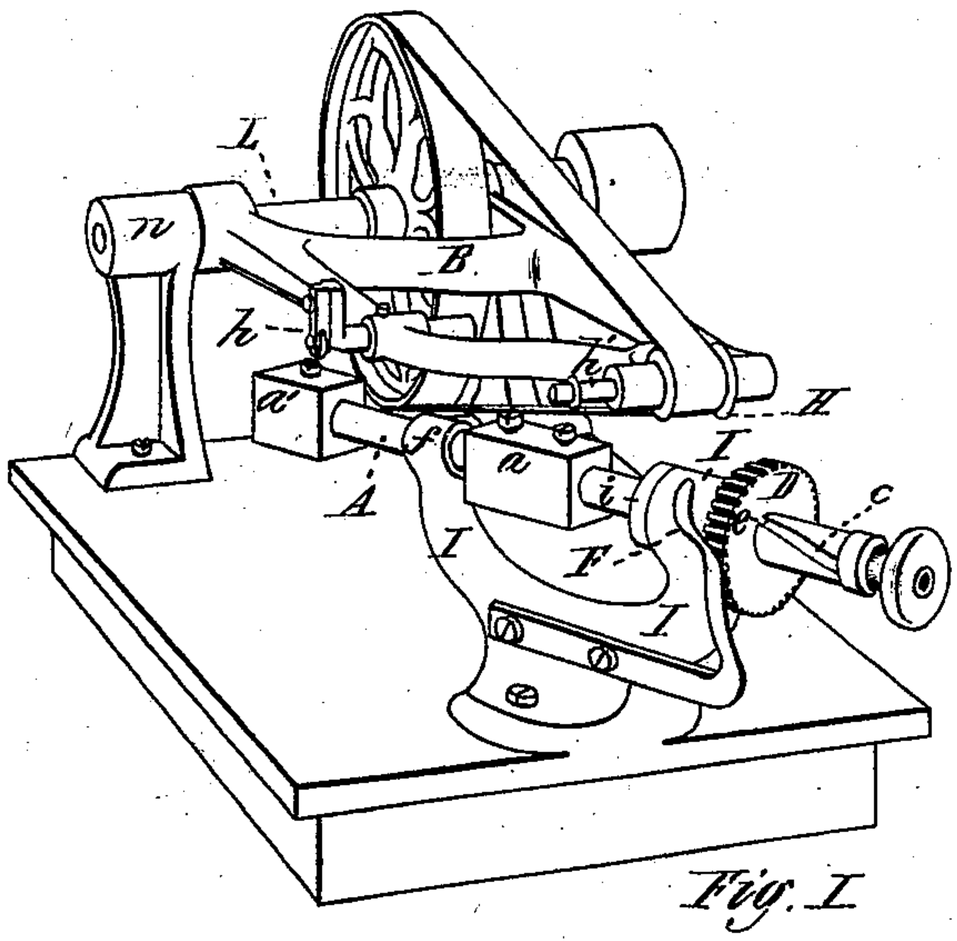

Fig. I

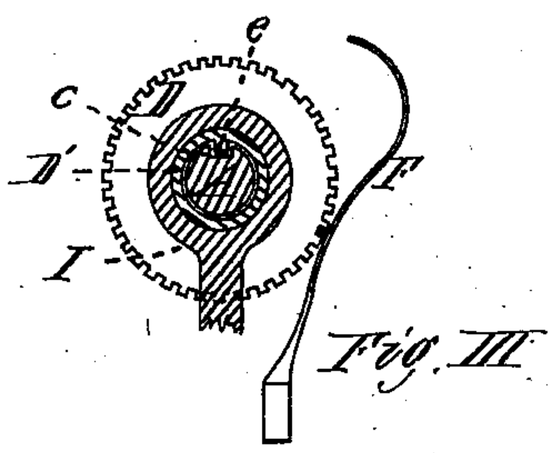

Fig. III

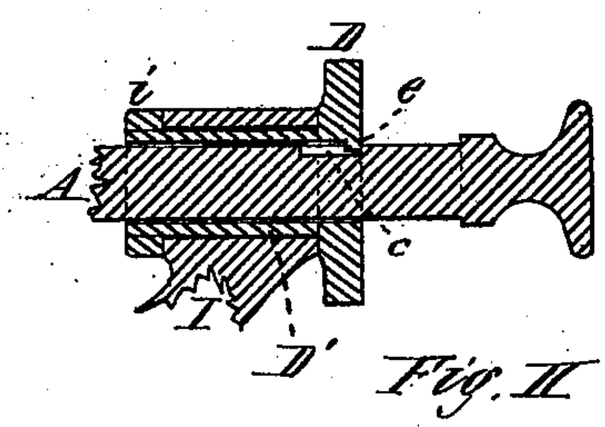

Fig. II

Witnesses—
Fred E. Curtis.
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UNITED STATES PATENT OFFICE.

JAMES H. BULLARD, OF SPRINGFIELD, MASSACHUSETTS, ASSIGNOR TO DANIEL B. WESSON.

IMPROVEMENT IN MACHINES FOR CHECKING PISTOL-HANDLES.

Specification forming part of Letters Patent No. **210,180,** dated November 26, 1878; application filed October 14, 1878.

To all whom it may concern:

Be it known that I, JAMES H. BULLARD, of Springfield, in the State of Massachusetts, have invented a new and useful Machine for Checking Pistol-Handles; and that the following is a full, clear, and exact description thereof, reference being had to the accompanying drawings, making a part of this specification, and to the letters of reference marked thereon.

The object of my invention is to produce in a uniform manner the grooves usually made on the sides of pistol-handles, to give a firmer gripe, and ordinarily called "checking;" and it consists of a shaft having a spiral movement lengthwise inside a sleeve arranged to rotate in a bearing, and provided with an index, said shaft being arranged at an angle with reference to a vibrating frame adapted to contain a pattern-tool and revolving cutting-tool, as will be more fully described.

Figure I is a perspective view of my invention. Fig. II is a vertical longitudinal section through the sleeve and its bearing, and through that portion of the shaft within the sleeve; and Fig. III is a transverse vertical section through the sleeve, shaft, and its bearing.

In the drawing, A represents a shaft, having its bearing in a cylindrical sleeve, D′, which is arranged to revolve in a support, I, and to one end of this sleeve is fixed a disk, D, provided on its periphery with any desired number of teeth or a series of indents, and a collar or stop, *i*, is fixed at the other end of the sleeve, to prevent the latter from working out of its support.

The shaft A has a spiral groove, *c*, made therein, and a feather, *e*, on the inside of the disk enters this groove, so that when the shaft is moved to and fro longitudinally in the sleeve it is caused to partially revolve in one direction or the other by the feather and groove. A spring-detent, F, entering one of the indents in the periphery of the disk, serves to hold the disk, sleeve, and shaft in any desired position, although any other arrangement of detent or stop would answer quite as well. The shaft A, near its smaller end, may rest in another support, *f*, to give it the desired rigidity and steadiness.

At the desired point along the shaft is fixed a suitable bed, *a*, which may be attached by set-screws, or may be permanently fixed, and at another point along the shaft is another bed, *a′*, the former to receive the material to be "checked" and the latter to receive the pattern or former. Instead of these beds, however, being made separate from the shaft and attached thereto, the latter may be so formed at those points as to be adapted to receive the pattern and the piece to be checked.

L is a shaft, arranged to revolve in suitable bearings or supports *n;* and B is a frame adapted to swing upon the shaft L as a pivot, and this frame I denominate a "vibrating or swinging frame;" and at *h* is a small wheel or pattern-tool, and at *h′* is a shaft arranged to revolve in bearings in the frame, with a cutter to be secured thereto, a band passing around the wheel on the shaft L, and also around the shaft *h′*, serving to cause the shaft *h′* and cutting-tool to revolve rapidly when motion is given to the shaft L.

The upper surface of both beds *a* and *a′* and the axis of the shaft L should be on the same plane to obtain the best results in the accurate working of the machine.

The operation of my invention is as follows: A former or pattern, made of metal or of other suitable material, and having a similar exterior form or contour as the surface of the material upon which the checking is to be made, is attached to the bed *a′*, and the material to be operated upon is secured to the bed *a;* and the detent F being pulled away from the disk D, the latter, as well as the shaft, is turned into the desired position to commence on one edge of the material. The detent is then dropped into one of the indents in the disk, and the shaft is then moved longitudinally until one groove is cut, the pattern-tool at *h* resting on the pattern and governing the amount of material taken out by the cutter on the shaft *h′*. The detent is then drawn out again, the disk turned the desired distance, the detent dropped in again, and the shaft moved longitudinally, as before, and so on until all the grooves have been cut in one direction. The piece is then removed from the bed *a* and placed upon another spirally-operating shaft, arranged with a frame, B, both in a position just the reverse

from that shown in the drawing, it being necessary to perform the whole work of checking when grooves are wanted in both directions, or diagonally across each other, to have two machines, both alike, but having the shaft A and frame B arranged in just the reverse position with reference to each other to that shown in the drawing.

By this invention the checking on pistol-handles may be performed very rapidly and accurately.

I am aware that forming-machines have heretofore been made in which one surface was wrought with a cutting-tool, and in which the cutting-tool was controlled in its movements by a pattern-tool passing over the surface of a pattern, and I do not claim the same nor any part thereof; but,

Having described my invention, what I claim as new is—

The combination, in a checking-machine, of the index D and sleeve D′, revolving in a bearing or support, the spirally-grooved shaft A, and the vibrating frame B, adapted to have a pattern-tool and revolving cutter secured therein, substantially as described.

JAMES H. BULLARD.

Witnesses:

T. A. CURTIS,

G. H. ADAMS.