Aug. 21, 1951 W. J. MISKILL 2,565,254

POWER ACTUATED LOCK PICK

Filed April 16, 1948

Fig. 3.

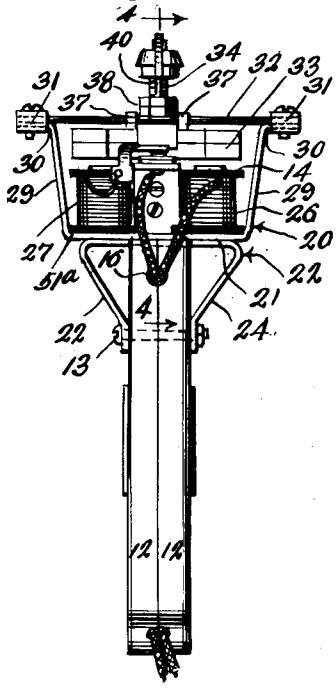


Fig. 1.

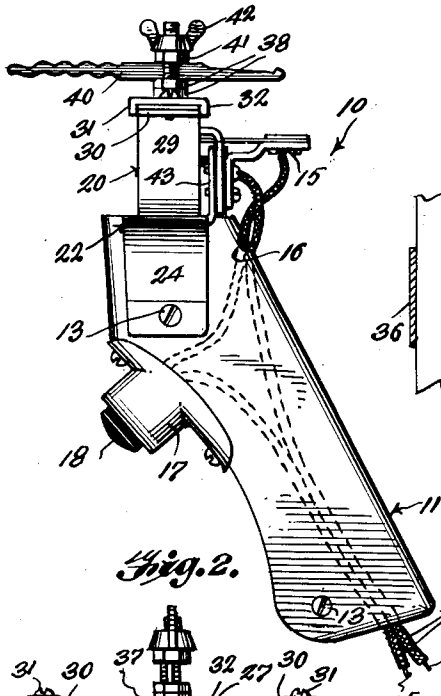


Fig. 6.

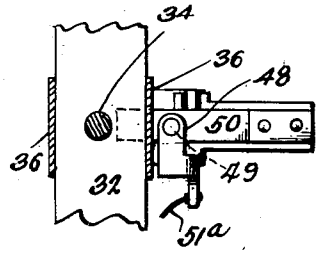


Fig. 2.

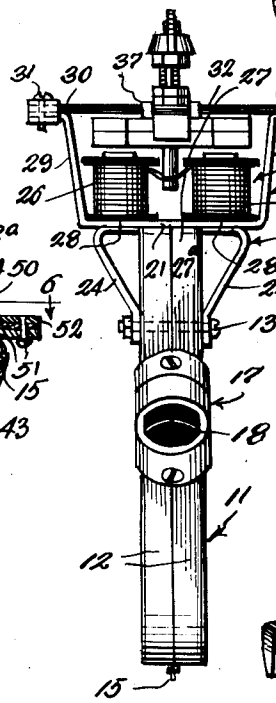


Fig. 4.

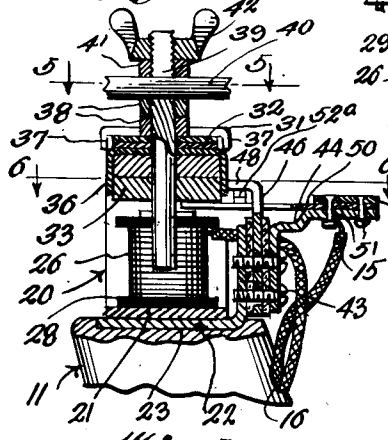


Fig. 7.

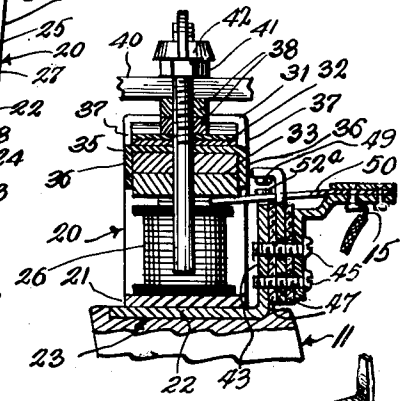


Fig. 5.

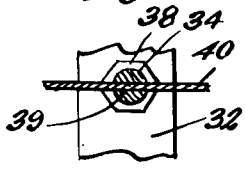
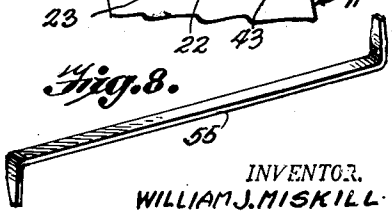


Fig. 8.



INVENTOR.
WILLIAM J. MISKILL
BY
John N. Randolph
ATTORNEY

Patented Aug. 21, 1951

2,565,254

UNITED STATES PATENT OFFICE

2,565,254

POWER ACTUATED LOCK PICK

William J. Miskill, Chattanooga, Tenn.

Application April 16, 1948, Serial No. 21,436

3 Claims. (Cl. 81—3)

1

This invention relates to an improved lock picking machine for imparting a vibratory motion to a lock picking blade and more particularly has reference to an electrically actuated mechanism for imparting a vibratory motion to the blade support.

Another object of the invention is to provide a machine of the aforedescribed character of extremely simple construction and wherein through the making and breaking of an electric circuit automatically accomplished in the operation of the machine the constant vibratory motion of the lock pick blade will be accomplished without the operator being required to execute any manual operation so that the implement, which is manually supported, can be accurately held and guided by the operator for accomplishing the lock picking operation.

Still a further object of the invention is to provide a device for accomplishing the aforedescribed result which is of extremely simple construction, capable of being economically manufactured and sold and which will be very efficient and durable for its intended purpose.

Another object of the invention is to provide an implement whereby a lock picking operation can be accomplished much more rapidly and with considerably less manual effort than is required in employing manually actuated lock picking devices.

Various other objects and advantages of the invention will hereinafter become more fully apparent from the following description of the drawing, illustrating a presently preferred embodiment thereof, and wherein:

Figure 1 is a side elevational view of the assembled machine;

Figure 2 is a front elevational view thereof looking from left to right of Figure 1;

Figure 3 is a rear elevational view of the machine looking from right to left of Figure 1;

Figure 4 is a longitudinal sectional view, partly in side elevation taken substantially along a plane as indicated by the line 4—4 of Figure 3;

Figures 5 and 6 are horizontal cross sectional views taken substantially along planes as indicated by the lines 5—5 and 6—6, respectively, of Figure 4;

Figure 7 is a view similar to Figure 4 but showing the parts in a circuit interrupting position, and

Figure 8 is a perspective view of a tool for use with the lock picking blade.

Referring more specifically to the drawing, the novel lock picking machine in its entirety and

2

which is designated generally 10 includes a housing, designated generally 11 in the shape of a pistol grip and which is preferably formed of corresponding sections 12 detachably connected by fastenings 13. The housing 11 has two electrical conductors 14 and 15 extending therethrough from the lower end of said housing or grip 11 to adjacent the upper end thereof. Said conductors 14 and 15 project from the back edge of the housing 11 adjacent its upper end and through an opening 16 thereof, adjacent the upper end of said housing. A conventional electric switch, designated generally 17 is attached to the opposite, front edge of the housing or grip 11 and the conductor 15 is provided with spaced portions which are connected to the two contacts, not shown, of the switch 17 and whereby a gap is normally formed between said portions of the conductor 15 and which is adapted to be electrically bridged by pressing inwardly on the plunger or button 18 of the switch 17, all in a conventional manner. The conductors 14 and 15 are each enclosed in a tubing or casing 19 of a suitable insulating material, except portions of the conductor 15 which are connected to the switch 17 and the exposed ends of the conductors, as will hereinafter become apparent.

A yoke-shaped supporting frame 20 has a substantially flat intermediate portion 21 which is mounted on the upper end of the grip or housing 11 and transversely thereof. A bracket 22 has an intermediate portion suitably secured, as by welding, not shown, to the under side of the intermediate frame part 21 and which is disposed in a recess 23 at the upper end of the housing 11. The bracket 22 is provided with downwardly and inwardly curved free ends 24 having terminal portions which are apertured and which bear against corresponding portions of opposite sides of the housing 11 and through which the uppermost fastening 13 extends. Said fastening 13 comprises a headed bolt and nut.

A solenoid, designated generally 25, includes two corresponding units 26 and 27 which are suitably secured to the upper side of the intermediate portion 21 of the frame 20 and the coiled wires of which are connected by a conductor wire 27a, as seen in Figure 2. Solenoid units 26 and 27 are electrically insulated from the frame 20 by insulators 28.

The frame 20 is provided with upwardly diverging arms 29 that rise from the ends of the intermediate portion 21, outwardly of the solenoid 25 each of which arms terminates in an

outturned terminal portion 30 which carries a clamp 31. A normally flat spring 32, preferably formed of two or more elongated resilient leaves, as best seen in Figures 4 and 7, is disposed above the solenoid 25 and with the ends of the spring 32 secured to the terminals 30 by the clamps 31.

An armature 33, illustrated as comprising two metallic bars, has a rod 34 extending through the central portion thereof and which is preferably fixed therein. The rod 34 also extends through an intermediate portion of the spring 32. A metal strip 35, through which the rod 34 extends, is interposed between the armature 33 and spring 32 and has downturned terminal portions 36 which engage opposite sides of the armature 33 and upturned lugs or terminal portions 37 which engage the side edges of the spring 32 to prevent the armature and rod 34 from turning relatively to said spring. Accordingly, the armature 33 is disposed beneath and substantially in alignment with the spring 32 and with the solenoid 25. The upper end of the rod 34 is threaded to receive two clamping nuts 38 by means of which the armature is clamped to the spring 32 and above said nuts 38, the rod 34 is longitudinally slotted as seen at 39 to detachably and adjustably receive the shank portion of a lock picking blade 40. A nut 41 engages the threaded rod portion above the blade 40 for clamping the blade between said nut and the uppermost locking nut 38 and a locking wing nut 42 engages the upper threaded end of the rod 34 to retain the clamping nut 41 in adjusted position.

The bracket 22 is provided with an upstanding extension 43 which rises from the side edge thereof and which extends upwardly from the housing 11 adjacent its outer or rear edge, as best seen in Figures 1, 4 and 7. The supporting arm 43 supports an angular bracket 44, one leg of which is connected to the outer side of said arm 43 by fastenings 45. Interposed between the arm 43 and the adjacent portion of the bracket 44 is a standard 46 through which the fastenings 45 loosely extend and a strip of insulating material 47 is disposed on either side of the standard 46 for insulating said standard from the arm 43 and bracket 44, as clearly illustrated in Figures 4 and 7. The standard 46 is provided with an inturned upper end 48 carrying on its underside an electrical contact 49. A leaf spring 50 is anchored by fastenings 51 and a retaining plate 52 to the upper side of the other end of the bracket 44 and extends inwardly therefrom and has its free end disposed beneath and in engagement with the underside of the armature 33. The leaf spring 50, which is formed of a conducting material, is provided with a contact 52*a* on the upper side thereof and which is disposed to normally engage the contact 49.

As best seen in Figure 3, a conductor wire 51*a* connects the coil of the solenoid unit 27 to a laterally extending portion of the standard 46 and as clearly illustrated in Figures 1 and 4, the end of the electrical conductor 15 which extends from the opening 16 is connected to one of the fastenings 51 thereby forming an electrical connection with the contact 52*a* through the resilient conductor strip 50. The corresponding end of the conductor wire 14 is connected to the coil of the solenoid unit 26.

The opposite ends of the conductors 14 and 15 are adapted to be connected to any suitable source of electrical current, not shown, preferably with a transformer interposed between the machine 10 and current source.

From the foregoing it will be readily apparent that the circuit to the solenoid 25 will normally be interrupted by the switch 17. The grip-shaped housing 11 can be grasped in either hand and by applying one finger to the switch plunger 18, said plunger can be pressed inwardly for bridging the gap between the conductor portions 15 for closing the electric circuit to the solenoid 25, assuming that the conductors 14 and 15 are connected to a source of electric current. When this occurs the solenoid 25 will be energized and magnetized for attracting the armature 33 downwardly. As the armature 33 is drawn downwardly the spring 32 will be flexed downwardly and at the same time the resilient conductor strip 50 will also be caused to flex downwardly at its inner or forward end by its engagement with the armature 33. Accordingly, as the armature approaches the solenoid the resilient conductor strip 50 will draw the switch contact 52*a* out of engagement with the contact 49 thereby interrupting the electric circuit at the switch 49, 52*a* for de-energizing and de-magnetizing the solenoid 25 so that the spring 32 will return the solenoid 33 from its position of Figure 7 back to its position of Figures 2, 3 and 4. As the solenoid 25 is thus moved upwardly the resilient strip 50 will return to its position of Figure 4 thereby returning the contact 52*a* into engagement with the contact 49 for again energizing and magnetizing the solenoid 25 for repeating the operation just described. It will thus be readily apparent that the solenoid 25 will be alternately magnetized and in combination with the spring 32 will thereby impart a vibratory motion to the lock pick blade 40 which is supported by said spring. Accordingly, so long as the plunger 18 is held depressed the lock pick blade 40 will be vibrated in a vertical plane to enable the proper impact to be imparted to the tumbler of a lock for accomplishing the lock picking operation.

Figure 8 illustrates a tension implement 55 which is adapted to be disposed in the keyway of a lock to be picked beneath the blade 40 and for holding the lock pick blade in the upper part of the keyway and in a position for impact engagement with the lock tumblers.

Various modifications and changes are contemplated and may obviously be resorted to, without departing from the spirit or scope of the invention as hereinafter defined by the appended claims.

I claim as my invention:

1. An electric lock picking machine comprising a supporting structure adapted to be manually engaged and supported, a solenoid supported thereby and adapted to be connected to a source of electric current, an armature for said solenoid, a resilient support connected to said supporting structure for supporting said armature in spaced relationship to the solenoid, means connected to said resilient support for supporting a lock pick blade thereabove and for movement therewith, an electric switch interposed in the electric circuit of the solenoid and including a fixed contact and a resilient contact, and said resilient contact having a portion disposed beneath and in engagement with the armature whereby when the solenoid is energized and magnetized for attracting the armature said resilient contact will be moved by the armature to a circuit interrupting position for de-energizing the solenoid, and said resilient support reacting to

move the armature away from the solenoid when the solenoid is de-magnetized.

2. An electric lock pick as in claim 1, said supporting structure including a yoke-shaped frame in which said solenoid is fixedly disposed, said frame having upstanding side members, clamping means on the upper ends of said side members for detachably engaging and clamping the ends of the resilient support to the frame and for positioning the resilient support above the solenoid.

3. An electric lock picking machine comprising a manually supported supporting structure, a solenoid fixedly supported thereby, a spring bridging a portion of said supporting structure, an armature supported by said spring in spaced relationship to the supporting structure, means mounted by said spring for adjustably and detachably mounting a lock picking blade, said solenoid being electrically energized for attracting the armature and flexing said spring, a switch interposed in the electric circuit to the solenoid including a movable contact, and a resilient member normally supporting the movable contact in a circuit closing position and disposed to be engaged and moved by the armature to move

the movable contact to a circuit interrupting position for interrupting the circuit when the armature is drawn toward the solenoid, said spring reacting to move the armature away from the solenoid when the latter is de-energized for closing the switch and re-energizing the solenoid.

WILLIAM J. MISKILL.

REFERENCES CITED

The following references are of record in the file of this patent:

UNITED STATES PATENTS

Number	Name	Date
616,554	O'Rourke	Dec. 27, 1898
1,254,990	Daley	Jan. 29, 1918
2,055,129	Hill	Sept. 22, 1936
2,268,654	Goddu et al.	Jan. 6, 1942
2,309,677	Segal	Feb. 2, 1943
2,346,474	De La Torre	Apr. 11, 1944

OTHER REFERENCES

"The Manual of Locksmithing," by S. A. McLean of Denver, Colorado, 1941 (pages 297–298).