

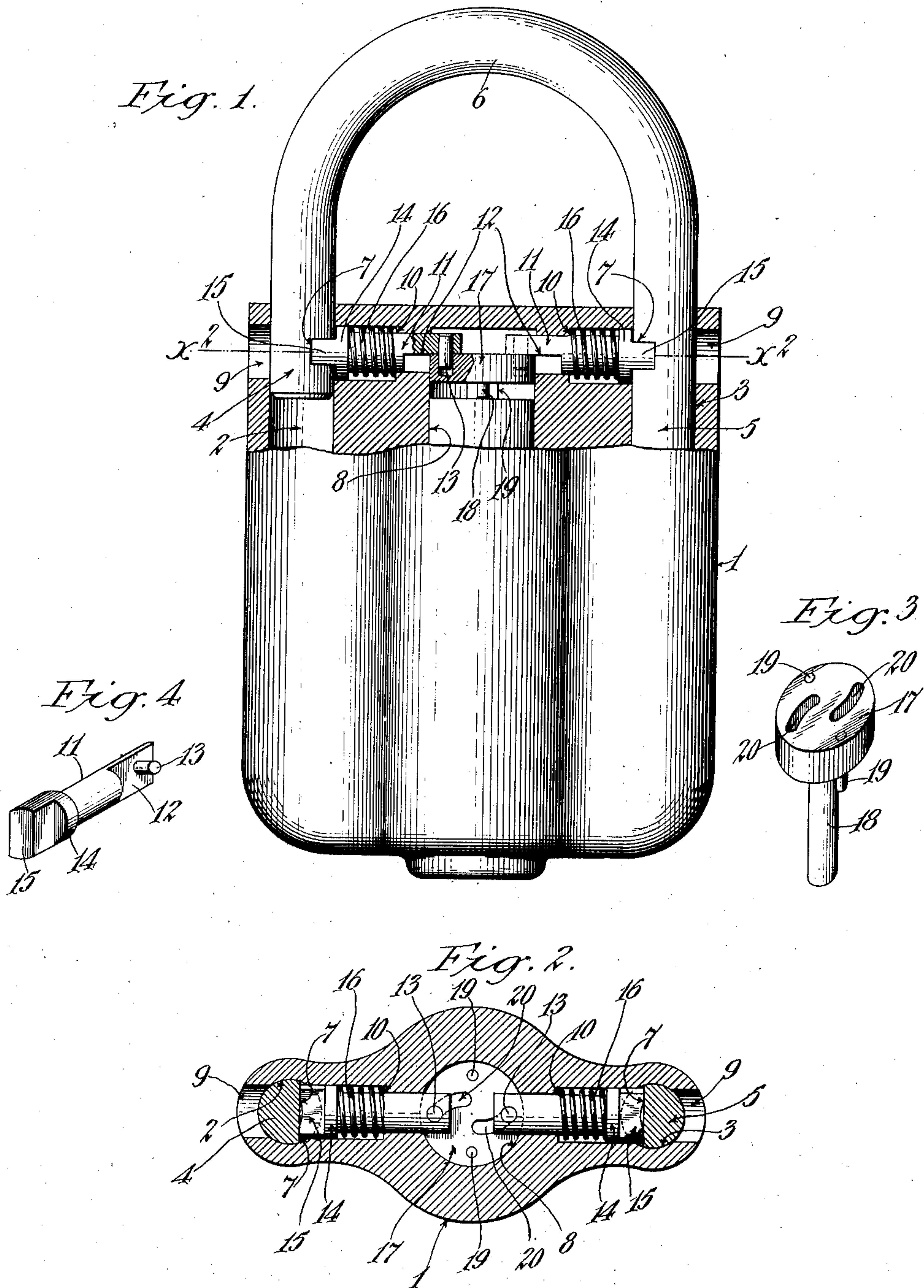
No. 883,417.

F. M. MERRILL.

PATENTED MAR. 31, 1908.

PADLOCK.

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Witnesses:-
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UNITED STATES PATENT OFFICE.

FRANK M. MERRILL, OF LOS ANGELES, CALIFORNIA.

PADLOCK.

No. 883,417.

Specification of Letters Patent.

Patented March 31, 1908.

Application filed August 22, 1907. Serial No. 389,744.

To all whom it may concern:

Be it known that I, FRANK M. MERRILL, a citizen of the United States, residing at Los Angeles, in the county of Los Angeles and State of California, have invented new and useful Improvements in Padlocks, of which the following is a specification.

This invention relates to padlocks, and particularly to a type of padlock shown and described in a previous application of mine filed May 13, 1907, Serial No. 373,512, and the object of the present invention is to improve the construction of such a padlock, and particularly the mechanism which directly operates upon the shackle for locking or unlocking the shackle.

The accompanying drawings illustrate the invention, and referring thereto:—Figure 1 is a front elevation of the padlock, the upper portion of which is shown in section to illustrate the construction of the parts relating to the present invention. Fig. 2 is a cross section through the padlock on line x^2-x^2 Fig. 1. Fig. 3 is a perspective view in detail of the cam disk. Fig. 4 is a perspective view in detail of a sliding bolt.

1 designates the case of the padlock which is provided near each edge with longitudinal sockets 2 and 3, and the sockets 2 and 3 receive legs 4 and 5 respectively of a shackle 6. The shackle leg 5 is the longer leg and is always engaged in the socket 3, while the shorter leg 4 is adapted to be raised out of its socket 2 when the shackle is pulled out. Each leg 4 and 5 is provided with a notch 7. The case 1 is also formed with a central longitudinal cylindrical pocket 8 parallel with sockets 2 and 3 but which does not extend through the top wall of the case. The case 1 is bored transversely near its upper end to form two sockets 9 which are in line with each other, and communicate with, and are radial of the pocket 8, and which respectively intersect with the sockets 2 and 3. Each transverse socket 9 is bored with two diameters to form a shoulder 10.

Mounted in each socket 9 is a sliding bolt 11, shown in detail in Fig. 4, each sliding bolt 11 being provided with a flattened end 12 from which projects a stud 13. The other end of the bolt 11 is provided with a flange 14, and a lug 15 is formed beyond the flange 14. When the shackle 6 is closed the lugs 15 of the bolts 11 respectively engage notches 7 of the shackle and thus lock the shackle securely in position. A coil com-

pression spring 16 is arranged between each flange 14 and the adjacent shoulder 10, the spring 16 serving to operate against flange 14 and move the bolt outwardly.

Revolubly mounted in the upper end of pocket 8 is a cam disk 17, shown in detail in Fig. 3, the cam disk being provided with a stem 18 and with two depending studs 19 arranged diametrically opposite each other. The studs 19 coöperate with key controlled mechanism, not necessary to herein show or describe, for operating the cam disk 17. The cam disk 19 is provided with two cam slots 20 which respectively receive studs 13 of the sliding bolts 11.

By turning the cam disk 17 the cam slots 20 act upon studs 13 to draw the sliding bolts 11 inward and thus withdraw lugs 15 from notches 7 in the shackle and thus release the shackle, the shackle springing out to clear the short leg 4 as soon as it is released, and the shackle when thus open prevents the bolts 11 from being projected outwardly by springs 16 for the reason that the round portion of leg 5 acts as an abutment for the adjacent lug 15, and thus holds the adjacent sliding bolt from moving outwardly, which bolt through the medium of the intermediate cam disk 17 holds its mate from being thrust outward by its spring 16. When, however, the shackle is pushed back closed, as soon as the notch 7 in leg 5 is brought into register with the adjacent lug 15 the sliding bolt is thrust out by its spring 16 and the lug 15 enters the notch 7 of leg 5. Simultaneously the notch 7 in leg 4 receives the lug 15 of its adjacent sliding bolt. As both sliding bolts are thrust outward by their springs their studs 13 acting in the cam slots 20 turn the cam disk 17 to normal position, and the padlock is then locked. The flattened portions 12 of the sliding bolts 11 slide over the face of the cam disk 17 and bearing flatly against the cam disk prevent the sliding bolts from having any revoluble movement. The present construction is superior to the construction shown in the former application referred to in that it is easier to construct the two transverse sockets in line with each other than to drill them slanting and parallel with each other. Moreover as the two sockets 9 are not parallel with each other, but are in alignment, the width of the upper portion of the case 1 which contains the sliding bolts may be narrower and may be curved to conform to the cross sectional outline of the main

body of the case 1, as indicated in Fig. 2, thereby making it much easier to finish and polish the case 1.

What I claim is:—

5 1. A padlock comprising a case having two shackle sockets, a shackle with its legs received in said sockets, each of the shackle legs having a locking notch, a pair of sliding bolts in line with each other and provided with
10 lugs adapted to engage in the respective notches in the shackle legs, a cam disk provided with cam slots, and means on the sliding bolts engaging in the cam slots.

2. A padlock comprising a case having two
15 shackle sockets, a shackle with its legs received in said sockets, each of the shackle legs having a locking notch, a pair of sliding bolts in line with each other and provided with lugs adapted to engage in the respective
20 notches in the shackle legs, the case having transverse sockets in alinement with each other and intersecting with the shackle sockets, each transverse socket being formed with a shoulder, one of said sliding bolts in
25 each transverse socket, and having a flange, a coiled spring in each transverse socket be-

tween the flange of the sliding bolt and the shoulder of the socket, and a cam disk having two cam slots and studs on the sliding bolts engaging in said slots. 30

3. A padlock comprising a case having two shackle sockets, a shackle with its legs received in said sockets, each leg having a locking notch, the case having transverse sockets in alinement with each other and intersecting 35 with the shackle sockets, a sliding bolt in each transverse socket and formed with a flattened end and with a lug on the other end adapted to engage a notch in the shackle leg, a cam disk under the flattened ends of the sliding bolts and having two cam slots, a stud on each bolt projecting into a cam slot, the cam disk having a stem and adapted to be operated by key mechanism.

In testimony whereof, I have hereunto set my hand at Los Angeles, California, this 15th day of August, 1907.

FRANK M. MERRILL.

In presence of—

GEORGE T. HACKLEY,
FRANK L. A. GRAHAM.