(No Model.)

J. A. MELIUS.

SPORTING TRAP.

No. 488,827. Patented Dec. 27, 1892.

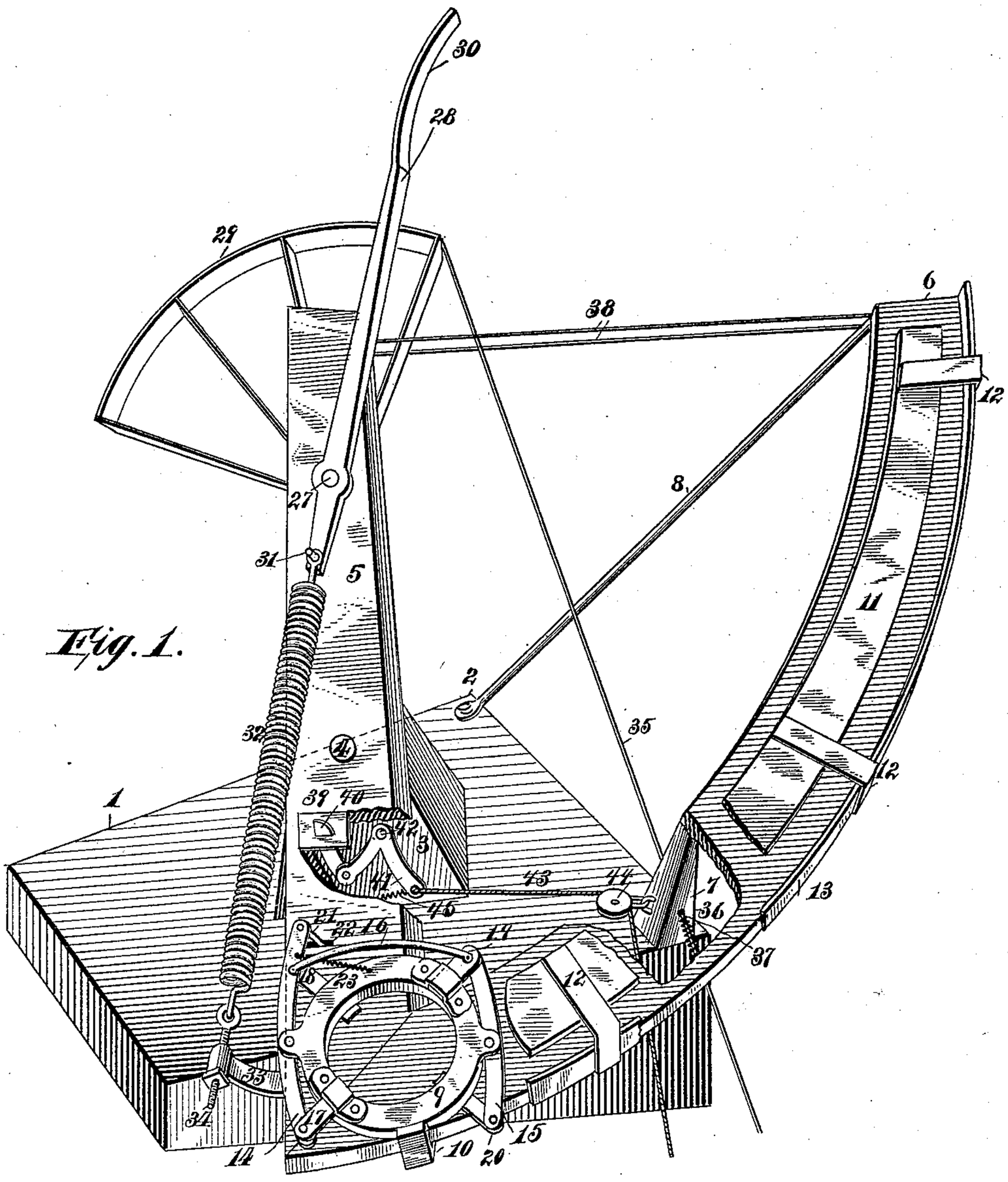

Fig. 1.

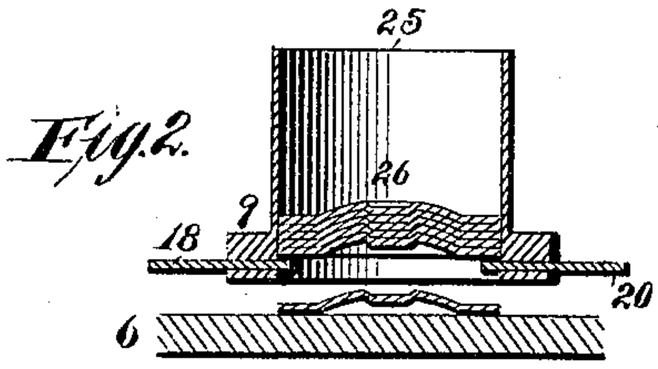

Fig. 2.

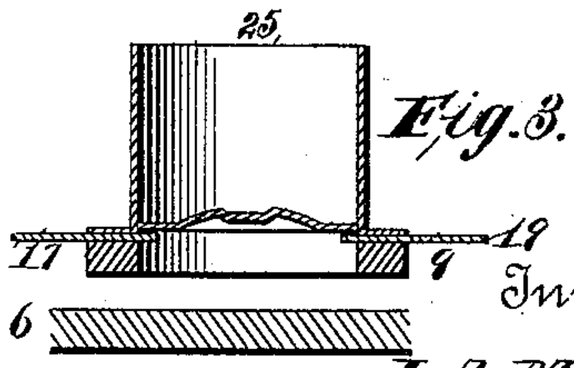

Fig. 3.

Witness
Louis G. Julihn.
Eric F. Julihn

Inventor
J. A. Melius.
By Hopkins & Atkins
Attorneys

UNITED STATES PATENT OFFICE.

JACOB A. MELIUS, OF LANSING, MICHIGAN.

SPORTING-TRAP.

SPECIFICATION forming part of Letters Patent No. 488,827, dated December 27, 1892.

Application filed December 19, 1891. Serial No. 415,595. (No model.)

To all whom it may concern:

Be it known that I, JACOB A. MELIUS, of Lansing, county of Ingham, and State of Michigan, have invented certain new and useful Improvements in Sporting-Traps, of which the following is a specification, reference being had to the accompanying drawings.

The object of my invention is to produce an improved trap for throwing shells, clay pigeons, or the like, for sporting purposes.

In the accompanying drawings, Figure 1 is a perspective view of my trap complete with the exception of the magazine. Figs. 2 and 3 are central vertical sections through the magazine.

Referring to the figures on the drawings, 1 indicates a platform, which preferably has one side higher than the other, and one corner, 2, higher than any other, so as to give it an inclined surface or top. The platform is preferably constructed of wood, or some similar material.

3 indicates a post secured to the top of the platform, to the top of which may be fastened, by a bolt 4, a straight frame piece 5. To one end of the straight frame piece is suitably fastened a discharge chute, 6 preferably in the shape of a quadrant, which is supported near its middle by a post 7 which rises from the platform, and by the brace 8 preferably secured to the outer end of the chute, and to the highest corner of the platform.

9 indicates a shell cage, which may be made of cast metal, provided with a clamp 10 for securing it above the junction of the straight frame piece and the chute.

11 indicates the top of the chute, and is secured preferably by brackets 12 at a height sufficient to admit the free passage of the shell or pigeon to be used.

13 indicates a guard rail or side of the chute.

The bottom of the shell cage and top of the chute should be in the same plane in practice. Upon the shell cage I provide an automatic dropping device, which may be constructed as follows: Upon opposite sides of the shell cage are located movable levers 14, and 15 respectively. These are preferably pivoted to the shell cage, as illustrated in the drawings, and are connected by a link 16, so that the motion of one communicates like motion to the other. They are provided with lugs 17, 18, 19, and 20, pivoted to them, and sliding in suitable ways provided for them in in the top and bottom, respectively, of the cage. In other words motion in a certain direction of the levers will thrust the lugs 17 and 19 toward the center and withdraw the lugs 18, and 20; while motion in the opposite direction will reverse the operation. The opposite lugs on each of the levers being on the same plane, and each pair being on different planes, when one set of lugs is thrust forward and afterward withdrawn by the operation of the lever, it will allow one shell to drop first from one pair of lugs to the next and then drop clear of the cage. Consequently the shells, or pigeons, may be dropped one at a time from the cage by the operation of the levers 14 and 15. To render the operation of the levers automatic a suitable tripping device is necessary, such for instance as that shown in the drawings, in which one of the levers 14 is elongated, and carries a pin 21 which projects downwardly through a slot or opening 22 in the platform. 23 indicates a tension spring for holding the lever 14 in a fixed position. A bell may be located in the path of the pin 21 if desired to indicate when the pin is tripped.

25 indicates a case or magazine, which may be made of suitable thin metal and constitutes an elongation of the shell cage. The magazine is adapted to carry a quantity of shells, as illustrated at 26 in Fig. 2 of the drawings.

27 indicates a pivot-rod, which pierces the straight frame piece near the end opposite the shell cage, and which carries on the same side of the frame piece as the cage a lever or shooting-arm 28, and preferably on the opposite side a quadrantal or curved lever 29. The shooting-arm and curved lever are securely united together, preferably by the pivot-rod, so that motion imparted to one imparts motion to the other. The shooting-arm terminates at its outer end in a curved thinned end 30, and at its opposite end in a pin 31, for instance, to which may be fastened one end of a strong main spring 32, which is fastened at its oppo-

site end to the frame piece, as for instance by a curved stud 33, and an eye-bolt 34.

35 indicates a strap, preferably made of metal, which is fastened to the quadrant lever, and passes through a hole 36 in the post 7.

37 indicates a spring providing against too sudden strain upon the strap when the lever is actuated by a spring.

38 indicates a pair of guide rods for guiding the strap and its lever when in motion.

39 indicates a latch-plate fastened in the top of the straight frame piece.

40 indicates a latch, to which at one end is pivoted one arm of a bell-crank lever 41 which is pivoted in its angle, as indicated at 42, to the post 3. To the free end of this lever is fastened a rope or cord 43, which is guided in the direction of the strap 35 by the pulley 44 that is fastened to the post 7.

45 indicates a spring fastened at one end to the post 3, and at the other to the end of the bell-crank lever 41, and which tends to keep the latch elevated.

The operation of my machine is as follows: The shooting arm is forcibly turned upon its pivot by pulling on the strap 35 until its end strikes the pin 21. Thereupon the levers 14 and 15 are operated to drop one of the shells from the cage 9 into the chute 6 ahead of the thinned end of the shooting-arm. An instant later, under a continued pull upon the strap, the arm is securely fastened by the latch to the frame piece. In this position, under the tension of the spring 23, with the shell in position to be struck by the arm when it is released, a pull upon the latch cord will release the arm, and the spring will cause it to sweep violently through the chute and throw the shell a great distance. The curved end of the shooting-arm will at the same time impart to the shell a spinning motion, which gives it a steady and even flight. The operation may be repeated until the shells in the magazine are exhausted, or it may be loaded from time to time, so that the operation of the machine may be continuous with the shortest intermission practicable between each discharge. The direction of flight of the shell, after it leaves the chute, may be regulated by adjusting the frame piece upon the post 3.

What I claim is:—

1. The combination with a platform having one side higher than the other, and one corner higher than any other, so as to give it a peculiarly inclined surface, of a post located thereon, a swinging arm pivoted to the post, and a chute arranged adjacent to the swinging arm, substantially as described.

2. In a trap, the combination with a suitable supporting post, of a swinging arm pivoted thereto, a chute curved concentrically with the axis of rotation of the swinging arm, substantially as set forth.

3. In a sporting trap, the combination of a spring-actuated pivoted arm, a frame piece for supporting the same, said arm being adapted to move in a plane parallel with the frame piece, of a latch secured to the frame and adapted to catch the arm, and a chute curved concentrically with the axis of rotation of the swinging arm, substantially as described.

4. In a sporting trap, the combination with mechanism for throwing shells consisting essentially of a pivoted spring-operated shooting arm, and a chute arranged adjacent thereto, of a vertical magazine for holding the shells until needed, and mechanism for automatically dropping one shell before each operation, upon the chute, substantially as described.

5. In a sporting trap, the combination with means for throwing shells, consisting essentially of a pivoted spring actuated shooting arm, and a chute arranged adjacent thereto, of a vertical magazine adapted to drop a shell before each operation of the throwing mechanism, and a dropping device operatively connected with the shell-throwing mechanism and adapted to operate the dropper, substantially as described.

6. In a sporting trap, the combination with the cage, movably connected levers thereon, sliding lugs connected with the lower ends of the levers, a tripping device connected with the levers, and a chute arranged adjacent to said cage, substantially as described.

7. In a sporting trap, the combination with the cage, movably connected levers thereon, sliding lugs connected with the lower ends of the levers, a tripping device connected with the levers, and a chute arranged adjacent to the cage, substantially as and for the purpose described.

8. In a sporting trap, the combination with the frame-piece, of a rod pivoted therein, a spring-actuated shooting arm secured thereto, a chute curved concentrically with the axis of rotation of the shooting-arm, a lever attached to the rod, and means for operating the lever to operate the shooting arm, substantially as described.

9. In a sporting trap, the combination with a cage and a movable lever thereon, of sliding lugs upon the lower ends of the levers actuated to slide inwardly within the cage, and a chute arranged adjacent to the cage, substantially as described.

10. In a sporting trap, the combination of a frame piece of a rod pivoted therein, a spring actuated shooting arm secured thereto, a lever also secured thereto, means for operating the lever, guides for the lever, and a chute curved concentrically with the axis of rotation of the shooting arm, substantially as described.

11. In a sporting trap, the combination with suitable supporting parts, of a spring-actuated shooting arm, and a discharge chute located so as to be swept by one end of the shooting arm, substantially as set forth.

12. In a sporting trap, the combination with suitable supporting parts, of a spring-actuated

shooting arm, a chute located so as to be swept by one end of the arm, and an automatically discharging shell magazine located above the chute for discharging shells in the path of the shooting arm, substantially as set forth.

13. In a sporting trap, the combination with suitable supporting parts, of a spring-actuated shooting arm, a discharge chute located so as to be swept by one end of the arm, said arm having a curved end, substantially as and for the purpose specified.

14. The combination with a platform having an inclined top, of a frame piece, a spring-actuated shooting-arm thereon, an automatic shell dropping device, tripping mechanism for the same in the path of the arm, and a discharge chute, substantially as set forth.

In testimony of all which I have hereunto subscribed my name.

JACOB A. MELIUS.

Witnesses:
JAMES A. PARK,
DEAN PARK.