No. 726,350. PATENTED APR. 28, 1903.

S. ROBINSON.

ANIMAL TRAP.

APPLICATION FILED DEC. 27, 1897.

NO MODEL.

Fig. 1.

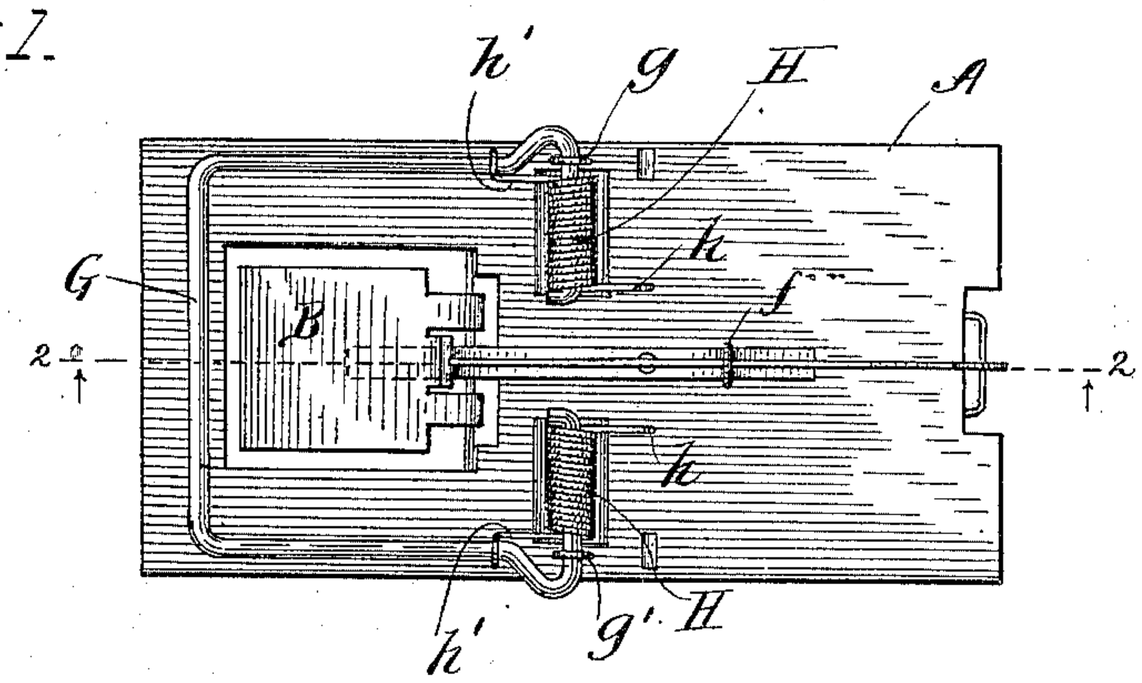


Fig. 2.

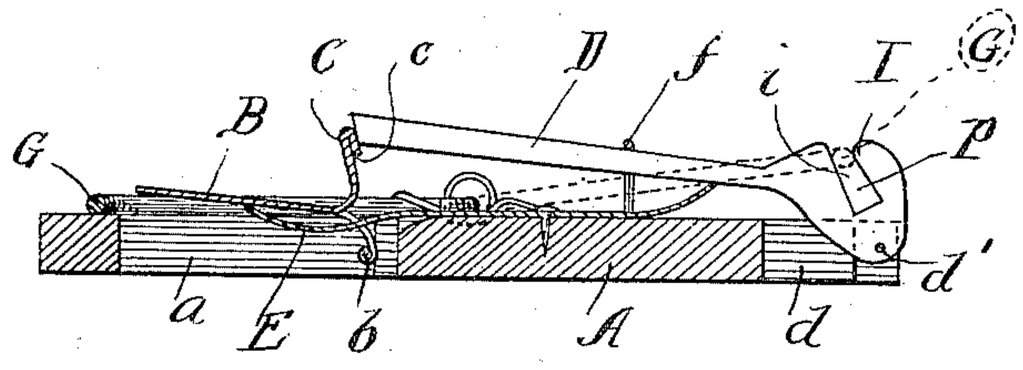


Fig. 3.

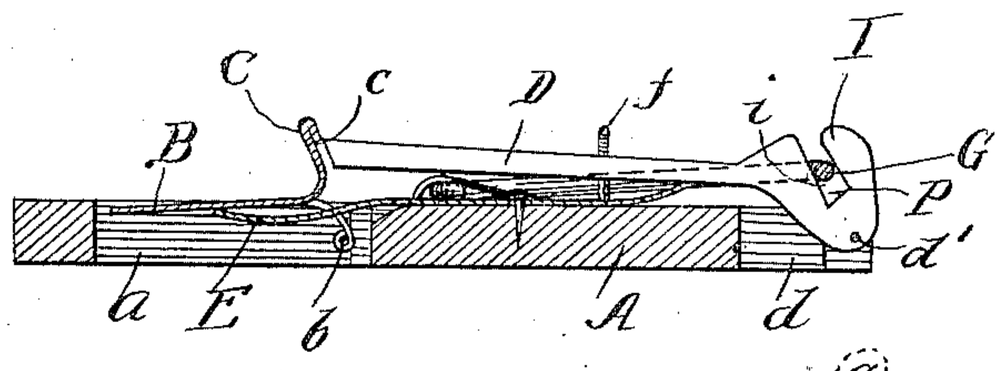


Fig. 4.

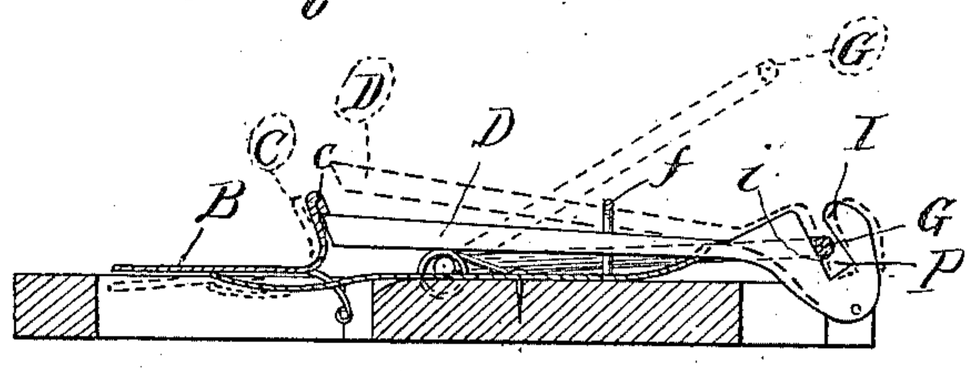
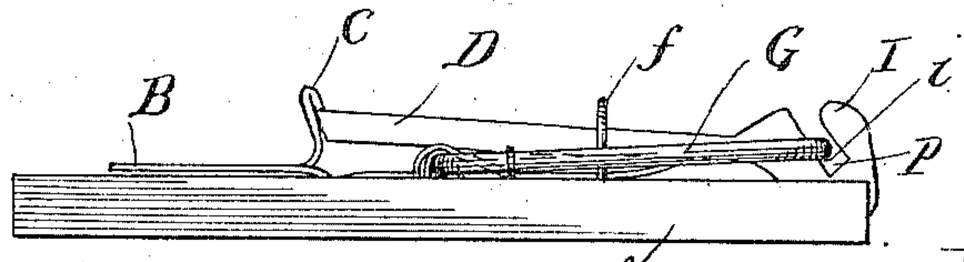


Fig. 5.



Witnesses
S. P. Richards.
J. B. Weir.

Inventor
Samuel Robinson
By Raymond & Quackenbush
Atty's.

UNITED STATES PATENT OFFICE.

SAMUEL ROBINSON, OF MONMOUTH, ILLINOIS.

ANIMAL-TRAP.

SPECIFICATION forming part of Letters Patent No. 726,350, dated April 28, 1903.

Application filed December 27, 1897. Serial No. 663,546. (No model.)

To all whom it may concern:

Be it known that I, SAMUEL ROBINSON, residing at Monmouth, in the county of Warren and State of Illinois, have invented certain new and useful Improvements in Animal-Traps, of which the following is a full description, reference being had to the annexed drawings and the letters of reference, forming a part of this specification.

The present invention relates to animal-traps, and particularly to that class known to the trade as "platform-traps." A trap of this class usually comprises a suitable platform or base, a spring-actuated clamping or striking jaw attached to the base at an intermediate point and adapted to be moved back and forth past the point of attachment, and means, including a trigger, for holding the jaw in set position and for releasing it when pressure is exerted upon the trigger.

The primary object of the invention is to provide a trap of this character with improved means for automatically engaging the jaw as it is being moved to set position and for automatically locking it in set position, to the end that it shall not be necessary to manipulate the trigger or other locking device, thus avoiding the danger of having the fingers snapped by the jaw.

Another object of the invention is to provide improved means for holding the clamping or striking jaw in set position with certainty and with equal certainty releasing it when slight pressure is exerted upon the trigger.

Other objects will appear hereinafter.

In the accompanying drawings, Figure 1 is a top plan view of my improved animal-trap, showing the same in its normal sprung position. Fig. 2 is a central sectional view on a line 2 2 of Fig. 1. Fig. 3 is a similar view showing the parts in position during the operation of setting the trap. Fig. 4 shows the trap set, the dotted lines indicating the position certain of the parts take immediately after it is sprung. Fig. 5 is a side elevation of the trap set for operation.

Referring to the drawings, in which like letters of reference denote corresponding parts in all of the figures, A designates the base for the trap, which may be of any suitable size, shape, or material adapted for the purpose, and it may be provided with a recess *a* at the front thereof, in which the trigger B is disposed. This trigger comprises an actuating-plate, a tongue projecting therefrom and having a loop through which passes a pivot-pin *b*, secured to the base, and an upward extension C at its rear end, provided with a downwardly-presented hook or shoulder *c*, forming a catch with which the under side of the end of the forwardly-extending arm D of the latch engages when the trap is set. The actuating-plate of the trigger is normally held in an elevated position by means of the leaf-spring E, which is secured to the rear portion of the base and projects forward under said plate, as shown in Fig. 2. Preferably the latch is stamped up from a sheet of metal, although it may be otherwise formed, and is pivotally secured in a slot *d* at the extreme rear of the base by means of a pivot-pin *d'*. The pivoted end of the latch is enlarged and provided with a diagonally-arranged slot P, narrower at its mouth than at its bottom, as shown, and located at one side of the vertical plane of the pivot of the latch. That portion of the latch which overhangs the slot P forms a downwardly-projecting hook which engages and holds the jaw in its open position. The latch projects forward far enough to engage the hook on the trigger, and it is maintained in proper position by means of a guide *f*.

The clamping or striking jaw G is bent up from a piece of wire into substantially a rectangular shape, its ends being arranged in staples *g* or other securing means and provided with spiral springs H of high tension, one end, *h*, of said spring having a bearing against the base and the other end having a bearing against the jaw. The jaw is pivoted at or about the middle of the base, between the trigger and the pivoted end of the latch, and when the trap is to be set the jaw is raised up and swung backward in the arc of a circle until it engages the rounded cam I on the heel of the latch, which engagement results in forcing the heel backward and raising the forward end of the latch-arm D into the position illustrated in Fig. 2. The continued downward movement of the jaw carries the jaw beyond the cam and into engagement with the inclined surface *i*, which forms one wall

of the slot P and at all times lies in the path of the jaw. This forces the forward end of the latch-arm D downward and carries it beneath the hook on the trigger into the position shown in Fig. 4. In this operation the inclined or beveled end of the arm D acts as a cam and depresses the actuating-plate. The end of the arm D having passed the hook *c*, the spring E automatically forces the actuating-plate of the trigger up, so that the hook *c* engages the latch-arm, as shown in Figs. 4 and 5, and holds the latch, while the hook formed by that portion of the latch which overhangs the slot P engages and holds the clamping-jaw in position for operation.

The operation of setting the trap involves one of the distinctive features of my invention which constitutes an important improvement in the art, for it will be observed that as the jaw is carried backward it first engages cam I on the heel of the latch to raise the toe of the arm D thereof above the hook or shoulder of the trigger, and on its continued downward movement the jaw passes said cam, enters the slot P, and engages the inclined face *i* of the latch. Thereafter its continued downward movement will carry the toe of the latch-arm beneath the hook on the trigger, so that it will engage therewith and be held in said position until the trigger is tripped by pressure on the actuating-plate thereof. The trap being set in the manner previously described and some suitable bait being arranged upon the actuating-plate of the trigger, if the animal steps or in any way applies pressure to said plate the parts are adjusted with such nicety that the tension of the spring E will be overcome, the actuating-plate of the trigger depressed sufficiently to release the toe of the latch, and thereby permit the jaw to be carried back with great force by the springs H to strike and clamp the animal on the base. It will be observed that the pivots of the trigger and latch and their points of engagement with each other are so disposed that lines drawn from said pivots to said points of engagement form an angle approximating a right angle. As shown in the drawings, the angle is slightly acute. By reason of this construction the strains which the latch exerts upon the trigger are outward or substantially radial with respect to the pivotal axis of the trigger. The advantage of this arrangement is that it increases the sensitiveness of the trap without in the least impairing the security with which the trigger holds the latch. With the parts constructed and arranged as shown in the drawings when the latch and trigger disengage they will move in directions that are transverse to each other and that form an obtuse angle, so that in disengaging the trigger from the latch the shoulder of the trigger does not move in a direction opposed to that in which the latch tends to move under the influence of the jaw. On the contrary, the shoulder of the trigger simply slips off of the toe of the latch and is restrained only by its frictional contact with the toe.

I am aware that it has been proposed to hold the jaw of a platform-trap open by means of a trigger device having a hook which engages the jaw directly and upon which the jaw exerts a strain which is outward or radial with respect to the pivotal axis of said trigger device; but this is not the equivalent of my invention, which involves the interposition between the jaw and the trigger of a latch having an arm of considerable length, which has the effect of reducing through its leverage the pressure upon the trigger.

Having thus fully described my invention, what I claim, and desire to secure by Letters Patent, is—

1. In an animal-trap, the combination of a base, a spring-actuated clamping-jaw, a trigger located at the front of the base and provided with a hook, and a latch pivotally secured at the rear end of the base and provided with a slot to receive the jaw, the toe of said latch extending forward in position to engage the hook of the trigger, substantially as described.

2. In an animal-trap, the combination of a base, a spring-actuated clamping-jaw, a trigger pivotally mounted at the front of the base and provided with an upward extension, a hook on said upward extension, a latch pivotally mounted on the base at the extreme rear end thereof, said pivoted end of the latch being enlarged and provided with a slot to receive the jaw, a cam on the latch adapted to be engaged by the jaw to raise the forwardly-projecting toe of the latch above the hook of the trigger, and a part adapted to be engaged by the jaw to depress the toe of the latch so that it will engage the hook on the trigger, substantially as described.

3. In an animal-trap, the combination of a base, a spring-actuated jaw pivotally mounted on the base at or about the middle thereof, a trigger pivoted to the base in front of the pivot of said jaw and provided with a downwardly-presented shoulder, a latch pivoted on the base at the extreme rear end thereof, said latch having its heel provided with a downwardly-presented shoulder to engage the jaw and having its toe extended forward and adapted to engage the under side of the shoulder on the trigger, substantially as and for the purpose described.

4. In an animal-trap, the combination of a base, a spring-actuated jaw pivoted to the base, a pivoted latch for holding the jaw in its set position, and a pivoted trigger held in its normal position under yielding tension, and having a catch to hold the latch in its jaw-holding position, the latch being arranged to be moved by the jaw into its jaw-holding position and having a forwardly-extending arm for engagement by the trigger-catch, and by which as the latch is moved into its jaw-holding position, the trigger is thrown to enable its catch to engage the latch-arm,

the jaw being of such length that in opening it engages the latch between the pivots of the trigger and latch, substantially as described.

5. In an animal-trap, the combination of a base, a spring-actuated jaw pivoted to the base, a pivoted latch for holding the jaw in its set position, said latch having in the vicinity of its pivot a shoulder adapted to engage the jaw and a cam adapted to be engaged by the jaw as the latter is being opened, whereby the latch is moved to allow the jaw to pass the shoulder and the shoulder to move to its jaw-holding position, and a pivoted trigger adapted to engage the latch and hold it in its jaw-holding position, the pivots of the trigger and latch and their engaging points being so disposed that the strains upon the trigger will be outward with respect to its pivotal axis, substantially as described.

6. In an animal-trap, the combination of a base, a spring-actuated jaw pivoted to the base, a pivoted latch for holding the jaw in its set position, said latch having in the vicinity of its pivot a shoulder adapted to engage the jaw and a cam adapted to be engaged by the jaw as the latter is being opened, whereby the latch is moved to allow the jaw to pass the shoulder and the shoulder to move to its jaw-holding position, and a pivoted trigger adapted to engage the latch and hold it in its jaw-holding position, the pivots of the latch and trigger and their engaging points being so disposed that, in disengaging, said points will move in directions that are transverse to each other, substantially as described.

7. In an animal-trap, the combination of a base, a spring-actuated jaw pivoted to the base, a pivoted latch for holding the jaw in its set position, said latch having in the vicinity of its pivot a shoulder adapted to engage the jaw and a cam adapted to be engaged by the jaw as the latter is being opened, whereby the latch is moved to allow the jaw to pass the shoulder and the shoulder to move to its jaw-holding position, and a pivoted trigger adapted to engage the latch and hold it in its jaw-holding position, the pivots of the latch and trigger and their engaging points being so disposed that, in disengaging, said points will move in directions that form an obtuse angle with each other, substantially as described.

8. In an animal-trap, the combination of a base, a spring-actuated jaw pivoted to the base, a pivoted latch for holding the jaw in its set position, said latch having in the vicinity of its pivot a shoulder adapted to engage the jaw and a cam adapted to be engaged by the jaw as the latter is being opened, whereby the latch is moved to allow the jaw to pass the shoulder and the shoulder to move to its jaw-holding position, and a pivoted trigger adapted to engage the latch and hold it in its jaw-holding position, the pivots of the latch and trigger and their engaging points being so disposed that lines drawn from said pivots to said points form an angle approximating a right angle, substantially as described.

9. In an animal-trap, the combination of a base, a spring-actuated jaw pivotally mounted upon the base, a latch pivoted to the base and having a part which at all times lies in the path of the jaw and is adapted to be engaged thereby whereby the toe of the latch is depressed, and a trigger having means for engaging the toe of the latch for holding the latch in its jaw-holding position, substantially as described.

10. In an animal-trap, the combination of a base, a spring-actuated jaw pivotally mounted upon the base, a jaw-latch pivoted to the base and having a part which at all times lies in the path of the jaw and adapted to be engaged thereby as the jaw is opened, whereby the latch is moved to its jaw-holding position and its toe depressed, a trigger having means for engaging the toe of the latch for holding the latch in its jaw-holding position, and means for automatically moving the trigger into its latch-holding position, substantially as described.

11. In an animal-trap, the combination of a base, a spring-actuated jaw pivotally mounted upon the base, a latch and a trigger both pivoted to the base and projecting in the same direction from their respective pivots, the latch being provided with means for engaging the jaw and the trigger being provided with means for engaging the latch for holding the latch in its jaw-holding position, and the latch being provided with an arm which projects forward to such a point that its point of engagement with the trigger will move away from the pivotal axis of the trigger as the parts disengage, substantially as described.

12. In an animal-trap, the combination of a base, a spring-actuated jaw pivotally mounted on the base, a latch pivoted to the base at a point beyond the sweep of the jaw and having within the sweep of the jaw a cam-surface adapted to be engaged by the jaw for lifting the toe of the latch, said latch having also a part which at all times lies in the path of the jaw and is adapted to be engaged by said jaw, after passing said cam-surface, for moving the latch to its jaw-holding position and depressing its toe, and a trigger having means for engaging the toe of the latch for holding the latch in its jaw-holding position, substantially as described.

13. In an animal-trap, the combination of a base, a spring-actuated jaw pivotally mounted upon the base, a latch pivoted to the base beyond the sweep of the jaw and having an arm extending in the direction of the jaw-pivot, and terminating in a toe, said jaw being adapted to engage the latch between its pivot and toe whereby the latch is moved to jaw-holding position and its toe depressed, and a trigger pivoted to the base and projecting from its pivot in the same direction as

does the latch, said trigger having means for engaging the toe of the latch, substantially as described.

14. In an animal-trap, the combination of a base, a spring-actuated jaw pivotally mounted upon the base, a jaw-latch pivoted to the base and having a toe provided with a cam-surface, a trigger having a part located in the path of said cam-surface, whereby the trigger is moved by the latch as the latch is moved by the jaw, said trigger having also a downwardly-presented shoulder adapted to engage the latch and hold it in its jaw-holding position, and means for automatically moving the trigger to its latch-holding position, substantially as described.

In testimony that I claim the foregoing as my own I have hereto affixed my signature in presence of two witnesses.

SAMUEL ROBINSON.

Witnesses:
F. M. MILLER,
FRANK MCCRAY.