

(No Model.)

G. T. PARKER.

HORSE DETACHER.

No. 385,132.

Patented June 26, 1888.

Fig. 1.

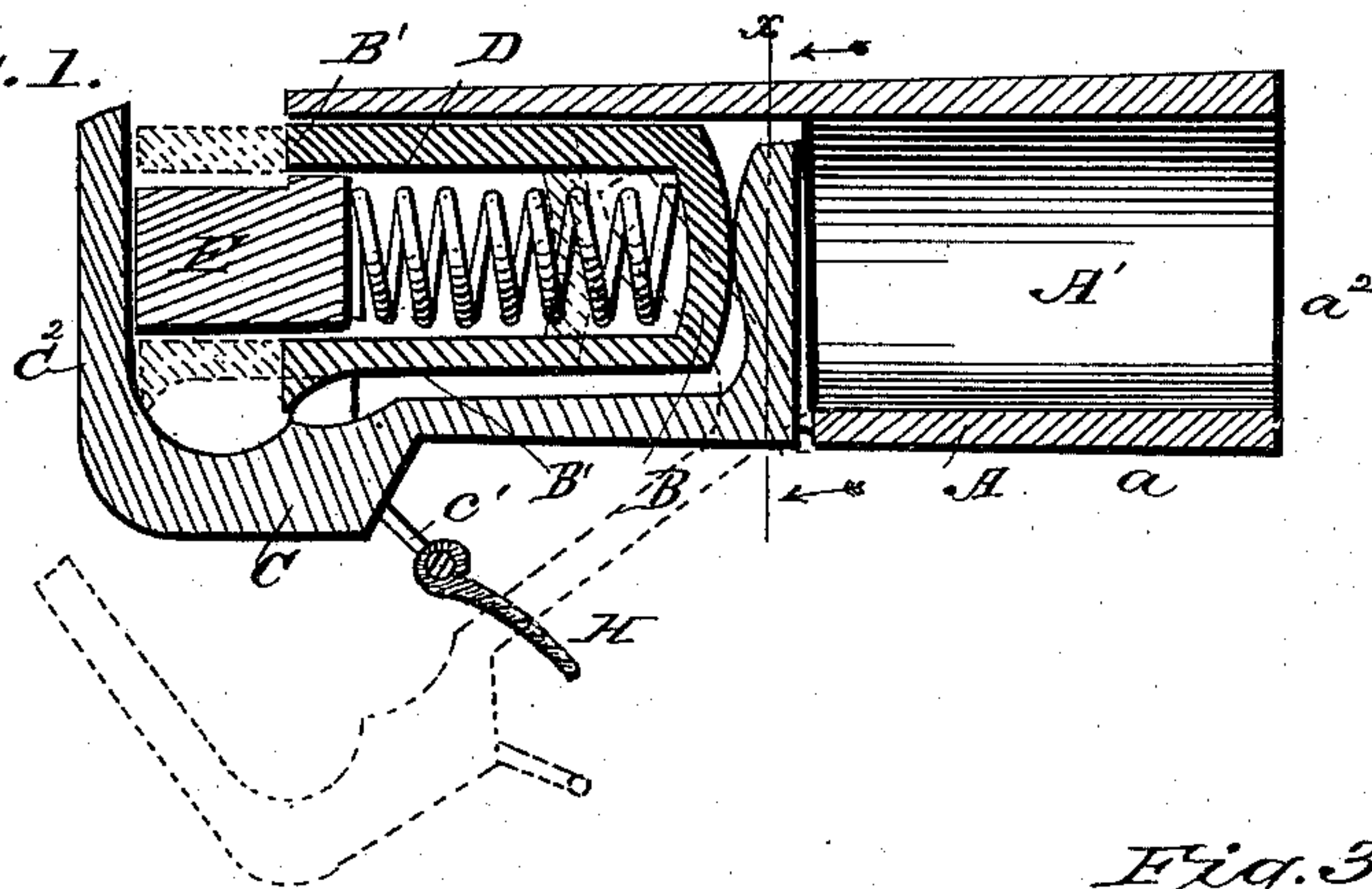


Fig. 2.

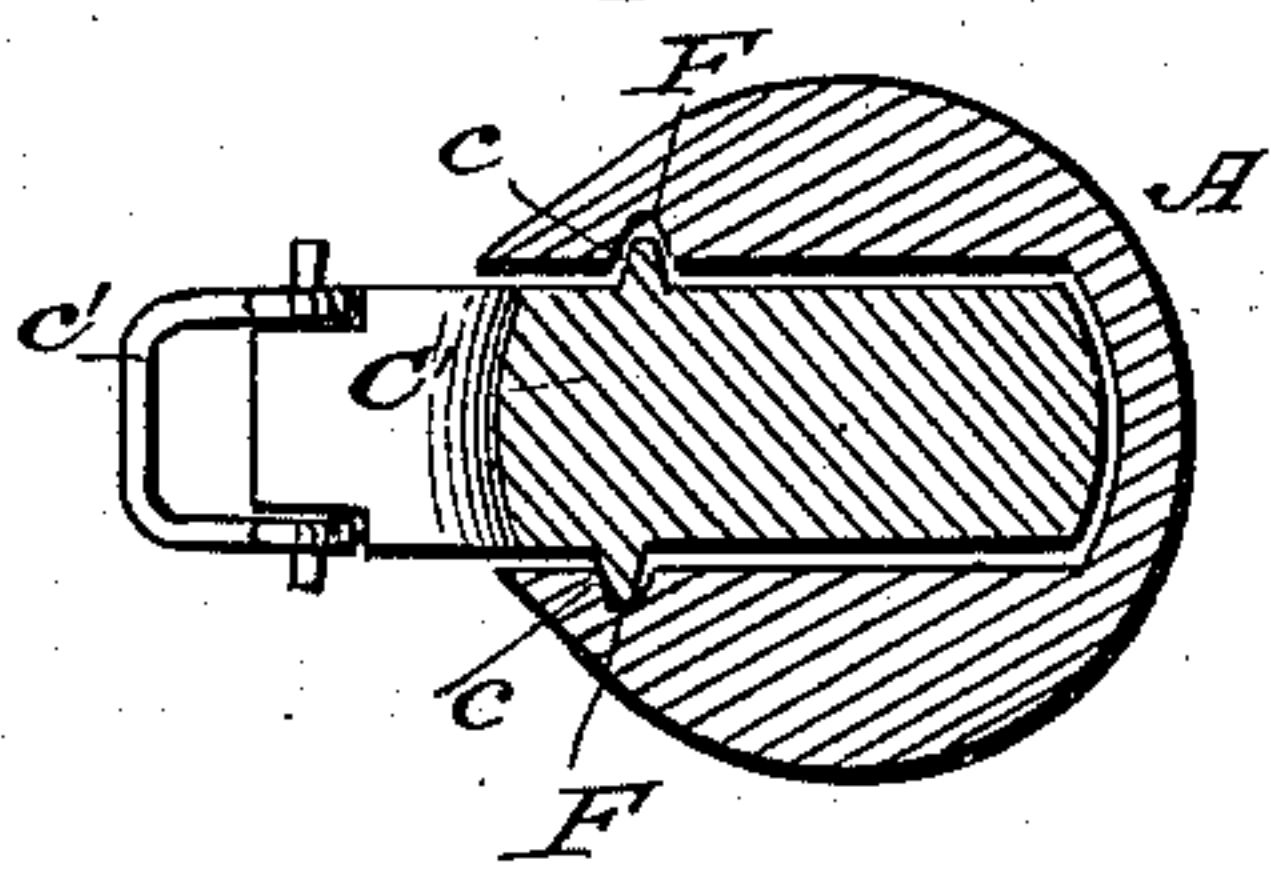


Fig. 3.

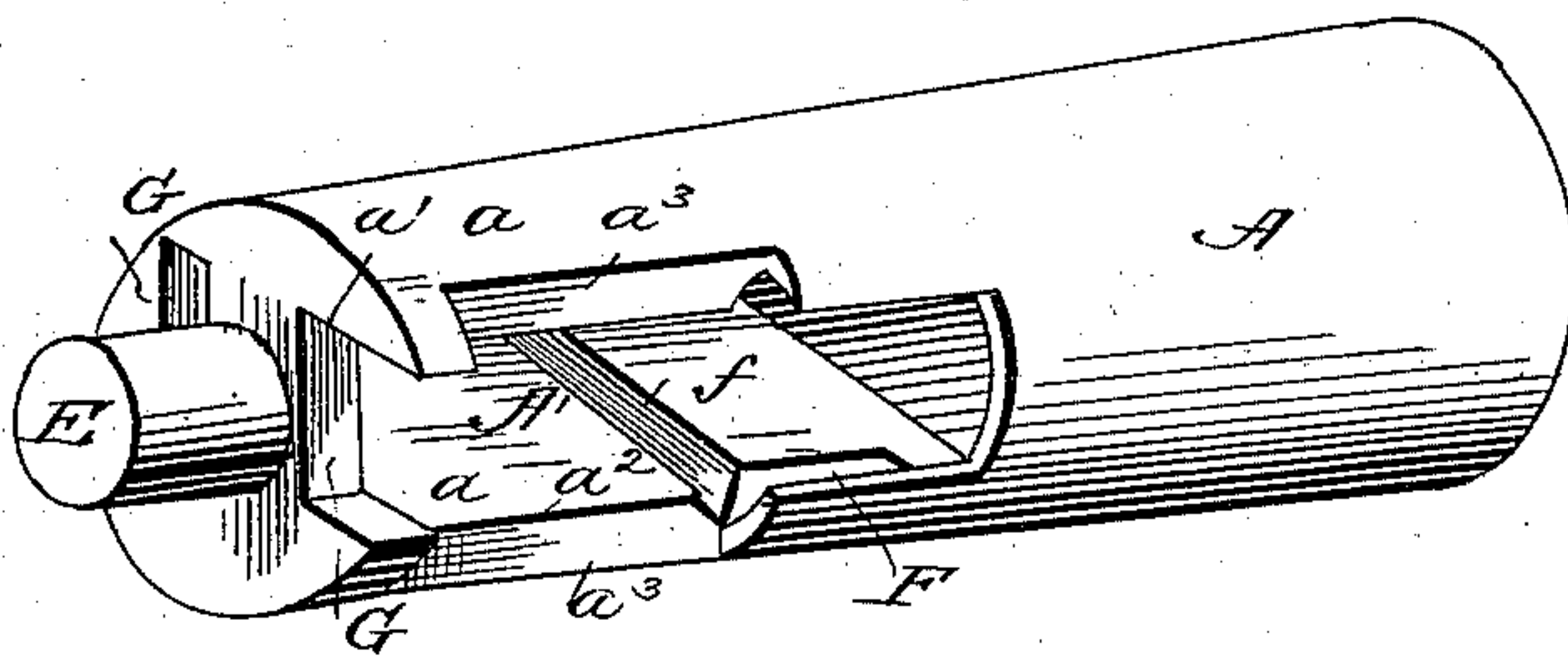


Fig. 4.

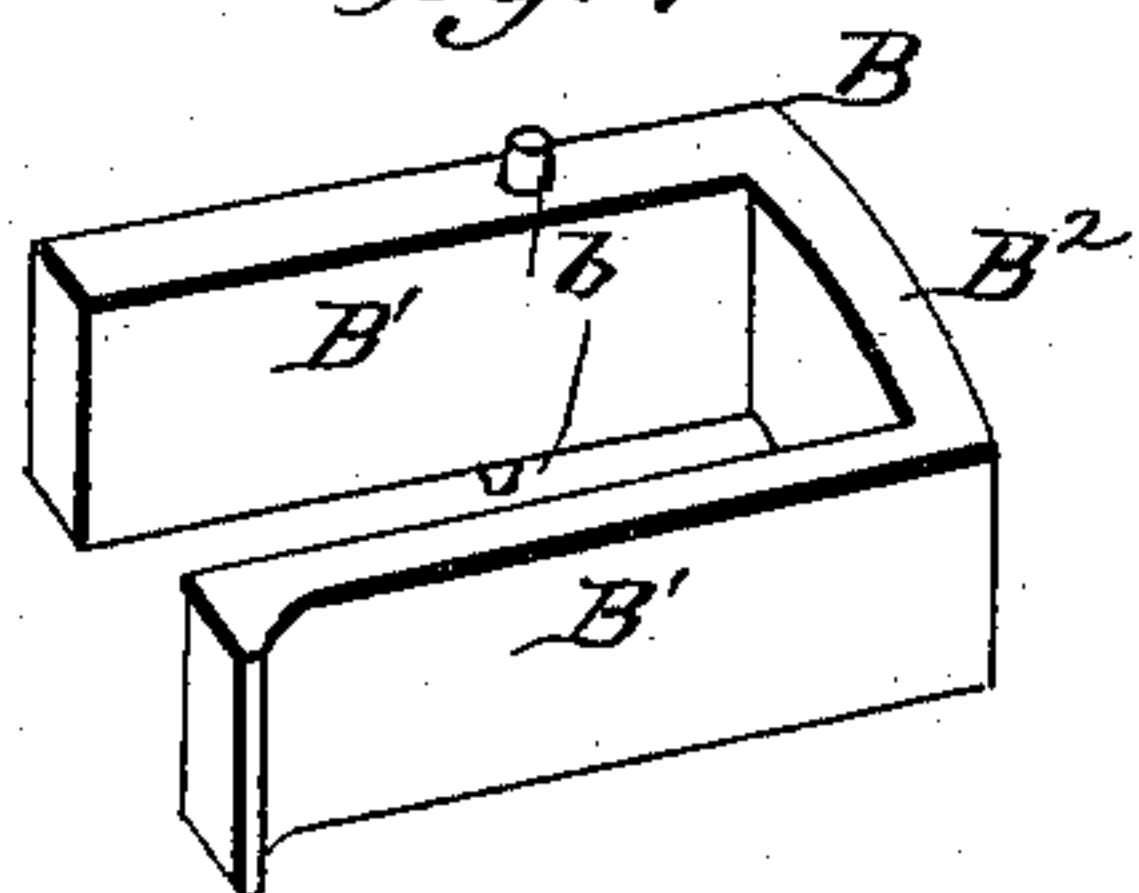


Fig. 5.

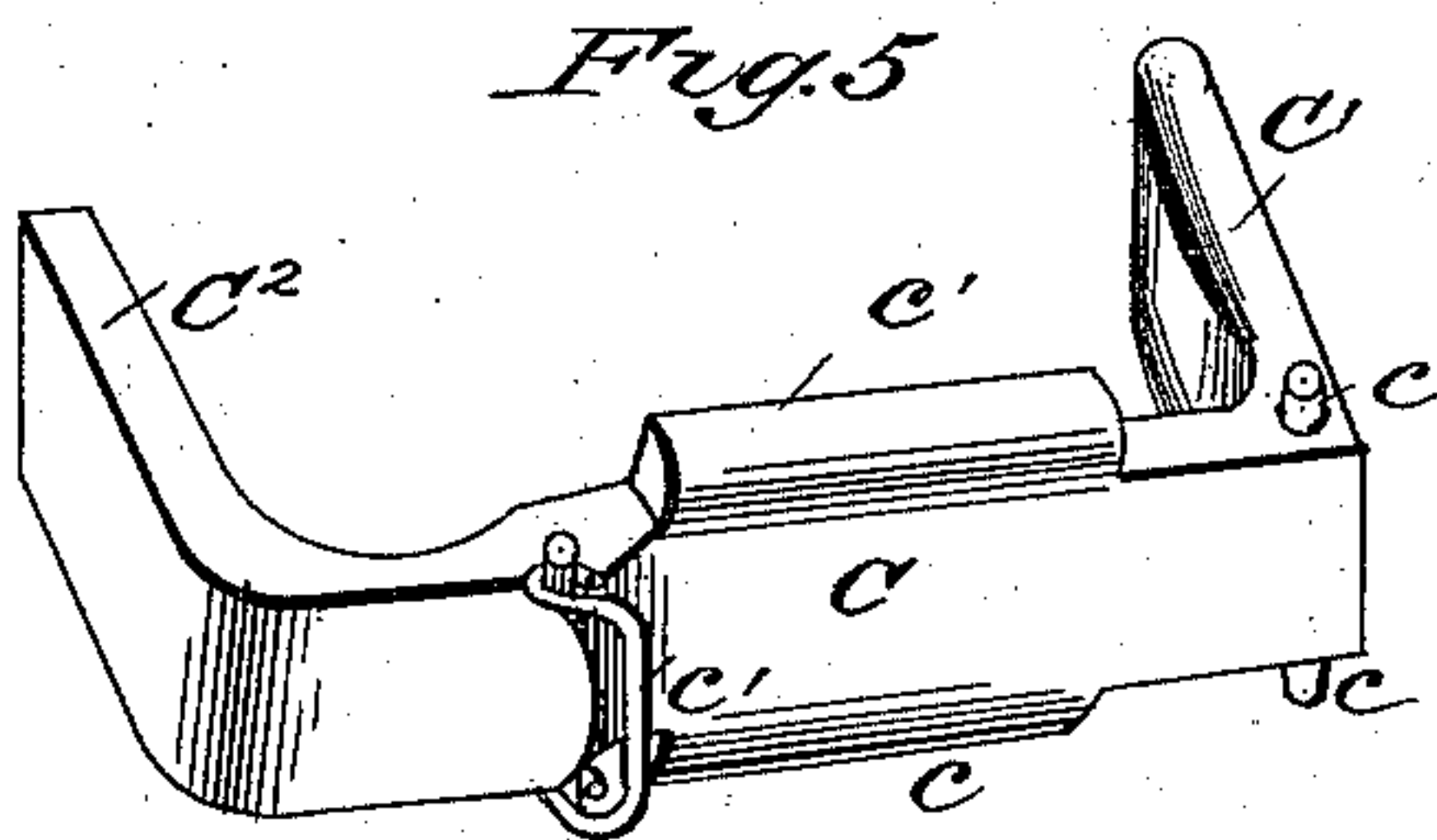
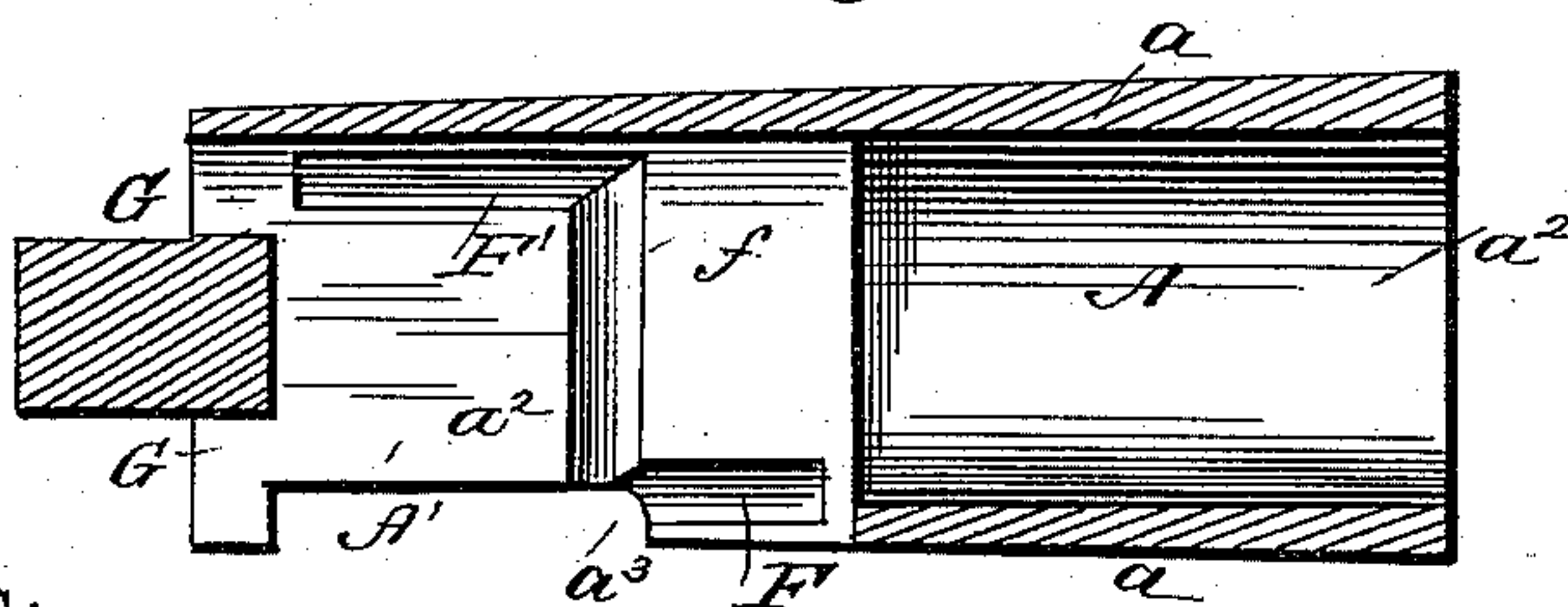


Fig. 6.



WITNESSES:

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# UNITED STATES PATENT OFFICE.

GEORGE T. PARKER, OF GLASGOW, KENTUCKY.

## HORSE-DETACHER.

SPECIFICATION forming part of Letters Patent No. 385,132, dated June 26, 1888.

Application filed December 3, 1887. Serial No. 256,929. (No model.)

*To all whom it may concern:*

Be it known that I, GEORGE T. PARKER, of Glasgow, in the county of Barren and State of Kentucky, have invented a new and useful Improvement in Horse-Detachers, of which the following is a specification.

My invention is an improvement in horse-detachers in which the trace is detached from the singletree; and the invention consists in certain novel constructions and combinations of parts, as will be hereinafter described and claimed.

In the drawings, Figure 1 is a horizontal longitudinal section of the invention with dotted motion. Fig. 2 is a cross-section on line  $x x$ , Fig. 1; Fig. 3, a detail perspective view of the ferrule; Fig. 4, a detail view of the slide. Fig. 5 is a detail perspective view of the tripper. Fig. 6 is a detail horizontal section of the ferrule, all of which will be described.

In carrying out my invention I provide a ferrule, A, which in use is practically a part of the singletree, a slide, B, a tripper, C, and an actuating-spring, D. While the ferrule A might in some instances be formed integral with the singletree, it is preferably formed as an attachment to the staffs or bodies of such singletrees, as shown. I provide the ferrule at its end with a bolt or stud, E, to receive the eye of the trace, which fits thereon in the usual manner. The slide B is movable along said stud from its inner to its outer end in order to push the trace off the stud in the operation of the invention, and such slide is actuated by spring D into its innermost position, being moved thence outward to release the trace by means of the tripper C, which has a crank-arm, C'. This crank-arm engages the rear end of the slide, and when the tripper is drawn in the manner presently described forces such slide outward against the action of the spring and releases the trace.

The ferrule A has a socket, A', formed with side walls,  $a a$ , and a cross-bridge,  $a'$ , at its ends, from which bridge the stud E projects, as shown. This socket A' opens at  $a^2$  out of the rear side of the ferrule, and has the rear edges of its walls  $a$  mortised at  $a^3$  to form a seat for the lateral extensions of the tripper. In the inner faces of the side walls I form short horizontal grooves F, leading rearwardly from the mortises  $a^3$ . From the forward ends of

these grooves F grooves  $f$  lead downward nearly to the inner ends of the socket A', and grooves F extend forward from the inner ends of the grooves  $f$  nearly to the end of the socket. Ways G G are provided leading out of the end of the socket, forming ways for the arms of the slide. The slide, as shown, is formed of arms B' and the connecting or cross bar B<sup>2</sup>, uniting the inner ends of such bars, and also serving as a bearing for the spring D, which fits within the slide and bears between the cross-bar B<sup>2</sup> and the bridge  $a'$ , as shown. This slide has one of its arms B' provided between its ends with lateral teats or studs  $b$ , which operate in the grooves F', being movable into such grooves through the grooves  $f$ .

The tripper has at its inner end a crank-arm, C', which engages in rear of the slide, and it is provided at the juncture of such arm with the body of the trip with lateral teats or studs  $c$ , which operate in the grooves F.

I form the tripper between its ends with the extensions  $c'$ , to fit in mortises  $a^3$  of the ferrule, and it has at its outer end a hook, C<sup>2</sup>, which projects alongside the end of the stud E, and serves to retain the trace thereon when the parts are in the position shown in full lines, Fig. 1. Thus the tripper in such position retains the trace, while in its adjustment to the dotted position shown in Fig. 1 it operates through the aid of the slide to force the trace off the stud. It is usual in practice to connect a cord or chain, H, to the tripper, which cord may be conducted in any suitable way into convenient reach of the occupant of the vehicle.

The operation will be understood from the foregoing description. It will be seen that the ferrule, slide, and tripper are so formed that they may be made of cast metal, thus greatly cheapening the cost of the device.

In applying the slide and tripper to the ferrule the spring may be placed in the slide and the slide and spring inserted in the ferrule. The slide may then be pressed forward to its outermost position and the tripper inserted, when the spring will force the slide back and will operate to preserve the parts in proper position. Manifestly the reverse of the above operation may be followed in removing the other parts from the ferrule.

It will be seen that the combination of parts



is such that they may be put together and held in position without any drilling and without the use of screws or rivets.

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

1. The combination, with the ferrule having the trace-stud, of the double-armed stud whereby to force the trace off such stud, the retracting-spring operating between the arms of the slide, and a tripper, substantially as set forth.

2. The ferrule having a trace stud, the slide whereby to force the trace off the stud, and the tripper having a crank-like arm arranged to engage the rear end of said slide, substantially as set forth.

3. In a horse-detacher, the combination, with the trace-securing stud, of the double-armed slide having arms movable along said stud on opposite sides thereof, substantially as set forth.

4. The improved horse-detacher herein described, consisting of the slide, the tripper, and the ferrule constructed to receive such slide and tripper, substantially as described, whereby such parts may be cast ready for use and be operatively connected without the intervention of connecting-rivets and the like, substantially as set forth.

5. A horse-detacher comprising a ferrule provided with a trace-securing stud and with a socket having its walls grooved, the slide and tripper, and lateral teats to enter the grooves of the socket-walls, substantially as set forth.

6. The ferrule having a socket the walls of

which are provided with grooves  $F F'$ , connected by grooves  $f$ , the slide, and the tripper having lateral teats to enter the grooves of the socket-walls, substantially as set forth.

7. The ferrule having a socket and formed with a bridge,  $a'$ , and ways  $G G$ , combined with the slide having its arms movable through such ways and having their rear ends connected by a cross-bar, the spring fitted in said slide and operating between its rear cross-bar and the bridge  $a'$ , and the tripper, substantially as set forth.

8. The combination of the ferrule having stud  $E$ , socket  $A'$ , and mortise  $a^3$ , the slide, and the trip arranged to engage said slide and provided with extensions  $c'$ , to fit in mortise  $a^3$ , substantially as set forth.

9. The combination of the ferrule having socket  $A'$ , cross-bridge  $a'$ , and ways  $G G$ , the double armed slide operating in said ways, and the tripper, substantially as set forth.

10. The improved horse-detacher herein described, consisting of the ferrule having socket  $A'$ , cross-bridge  $a'$ , grooves  $F f F'$ , and mortise  $a^3$ , the double armed slide having lateral teats to enter the grooves of the ferrule, and the tripper having a crank-arm at its rear end, teats to enter the groove  $F$  of the ferrule, and provided at its outer ends with a trace-retaining hook, substantially as set forth.

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Witnesses:

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W. K. WALKER.