

No. 613,139.

Patented Oct. 25, 1898.

E. C. GRANT.  
GATE HOOK.

(Application filed May 2, 1898.)

(No Model.)

Fig. 1.

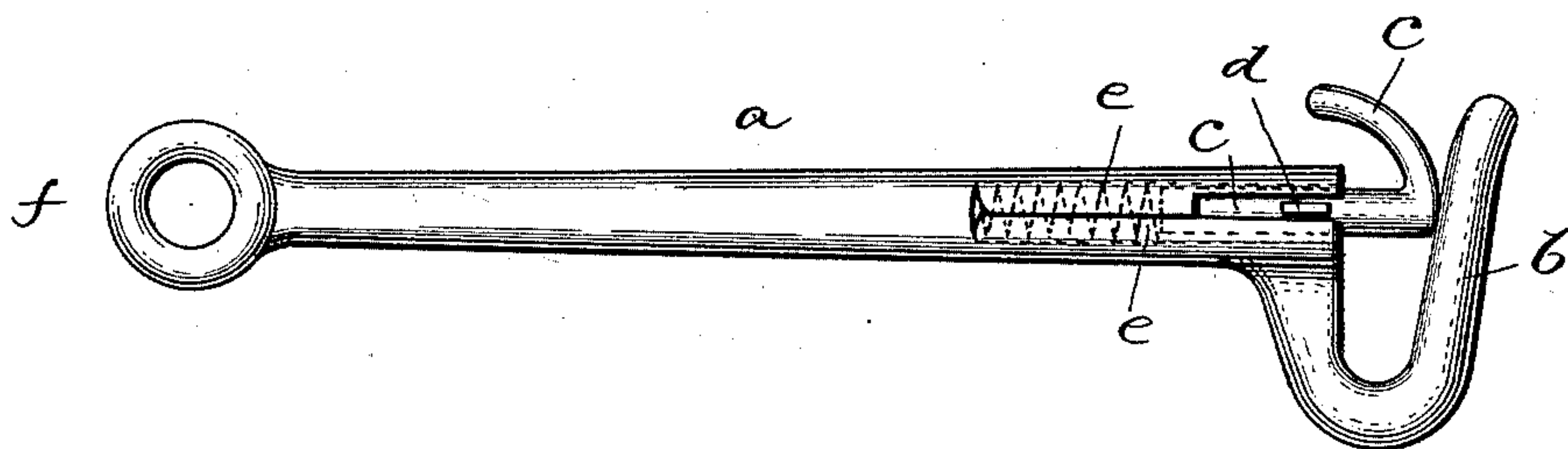


Fig. 2.

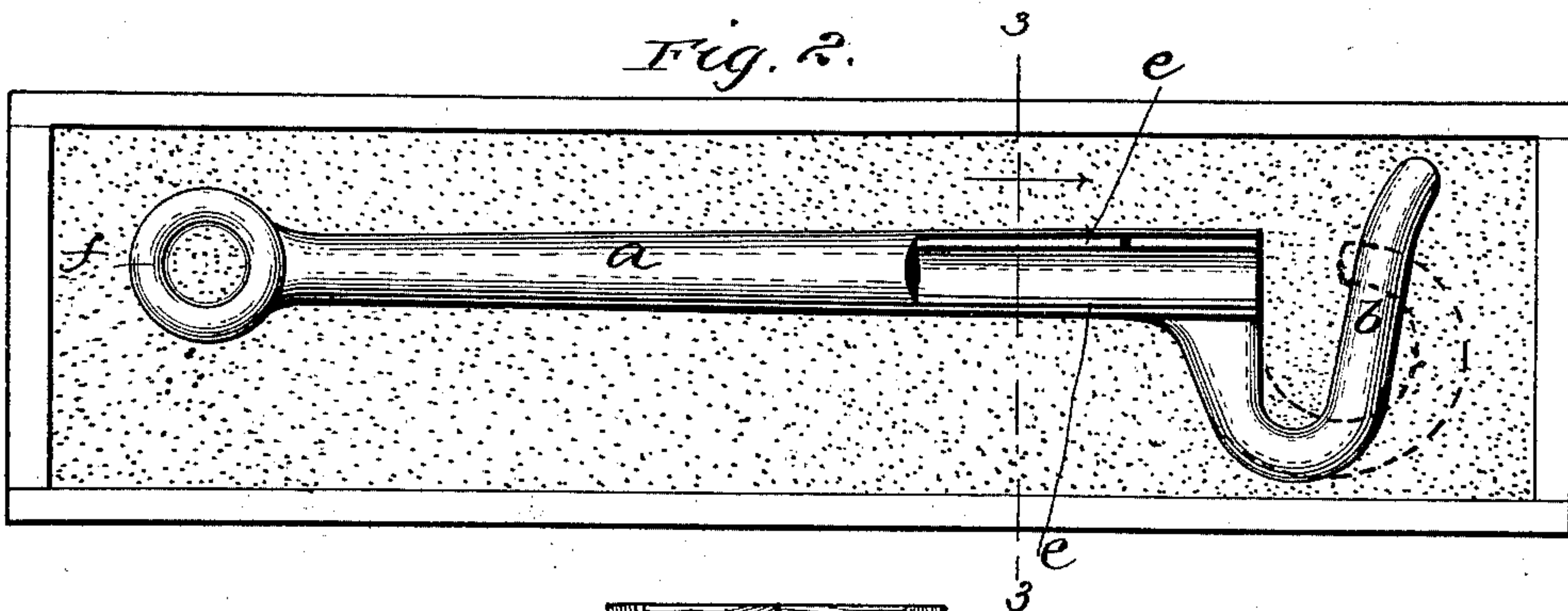
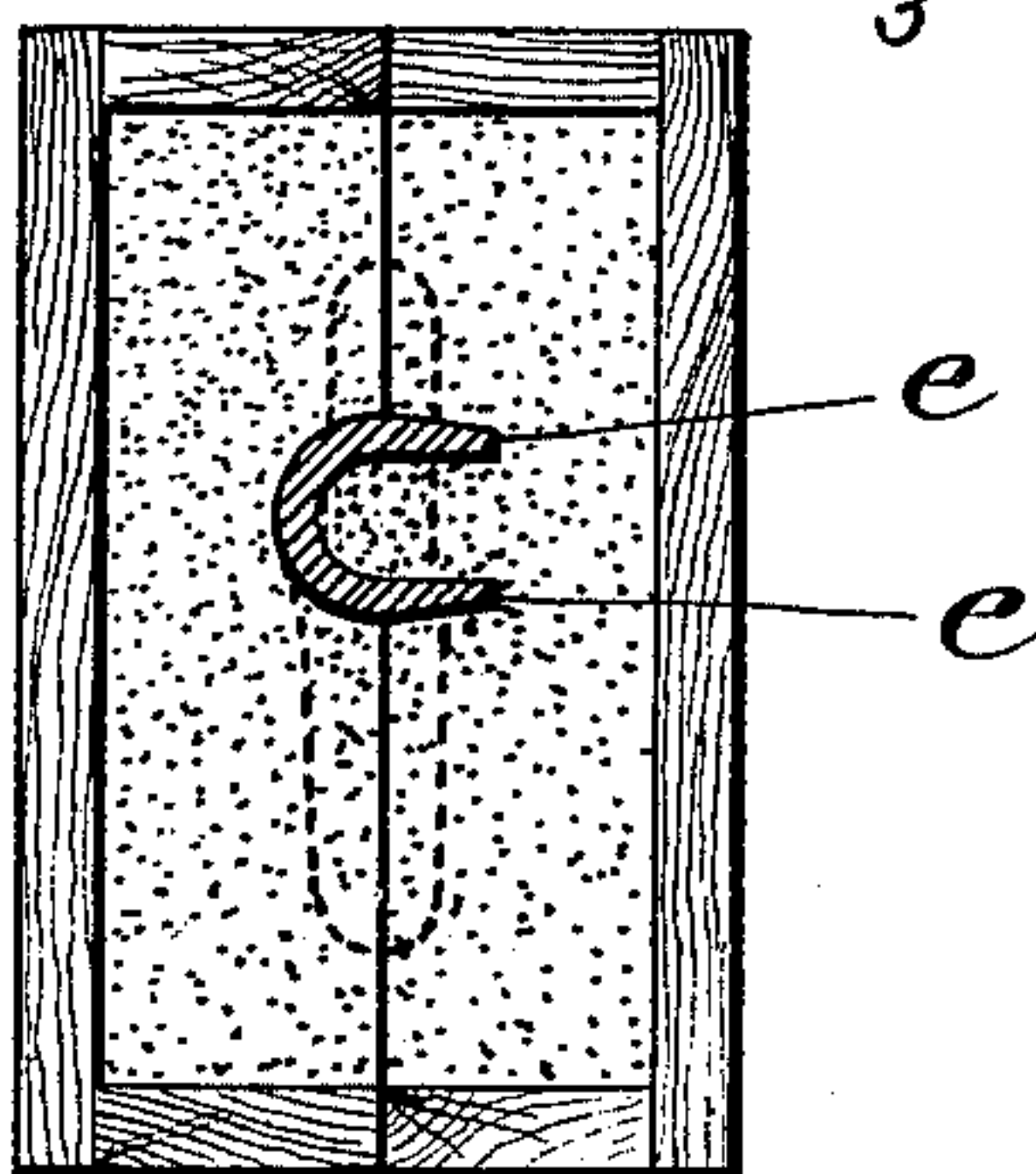


Fig. 3.



Witnesses

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Inventor

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Attorneys



# UNITED STATES PATENT OFFICE.

EMMETT C. GRANT, OF FARMER, NEW YORK, ASSIGNOR TO ENOCH  
COVERT, OF SAME PLACE.

## GATE-HOOK.

SPECIFICATION forming part of Letters Patent No. 613,139, dated October 25, 1898.

Application filed May 2, 1898. Serial No. 679,512. (No model.)

*To all whom it may concern:*

Be it known that I, EMMETT C. GRANT, a citizen of the United States, residing at Farmer, in the county of Seneca and State of New York, have invented certain new and useful Improvements in Gate-Hooks, of which the following is a specification, reference being had therein to the accompanying drawings, in which—

Figure 1 is a side elevation of a gate-hook constructed according to my invention; Fig. 2, a plan view of one-half of a two-part molding-flask, showing the complete blank lying therein; and Fig. 3 is a vertical section through a molding-flask inclosing the blank.

This invention has particular reference to gate-hooks provided at one end with a closed eye or loop to enable it to be pivoted on its support and at its other end with an open hook lying in substantially the same plane with the shank and the loop, the shank being hollowed out at the end next to the hook to receive a spring-actuated lock-bolt normally pressed against the free end of the hook to close the entrance thereof.

The object of my invention is to greatly cheapen the production of the same by so constructing the device that the blank may be cast in a single piece and without the use of a core, as more fully hereinafter set forth. The advantage of thus cheapening the manufacture of these devices will be appreciated when it is understood that they are now put on the market in large quantities and at a minimum of profit.

According to my invention the shank is cast open along one side at its forward end, a longitudinal channel or recess being formed therein, the longitudinal portions of whose edge project outward to one side at substantially right angles to the plane of the hook and eye, as shown in the drawings, the letter *a* designating the shank; *b*, the open hook; *c*, the sliding bolt, provided with a guide-lug *d*, working in a suitable open slot in the barrel; *e*, the two wings which are formed by the outward-projecting longitudinal portions of the edge of the recess or channel and are to be bent over toward each other to form the barrel, and *f* the eye or loop at the end opposite the hook. Thus making the opening along

one side of the shank and casting the wings at an angle to the plane of the hook and the eye enables the blank to be cast in one piece and without a core, as shown in Fig. 3, the pattern being pressed flatwise into the respective halves of the molding-flask. As will be evident, the hook may be given any desired shape and length, two common forms of the hook being shown in Fig. 2, one in full lines and the other in dotted lines. It will also be observed that the shank is not materially weakened by the slit running longitudinally of it, since the seam or slit is at one side thereof, out of the line of strain when outward pressure is exerted upon the bolt, it being obvious that were the slit formed along the bottom or top of the shank in line with the plane of the hook the direct tendency would be to spread the wings when outward pressure was brought on the bolt by any attempt to lift the hook off its staple without first withdrawing the lock-bolt.

As is obvious, the hook may be readily cast a little to one side of the plane of the eye and shank and be bent back into the same plane therewith after the barrel is dressed out and the wings bent into place. It will also be obvious that the entire edge of the channel or recess need not extend outward, it being only necessary to extend a sufficient portion to bend over to complete the barrel. In the drawings the rear transverse edge of the recess is not extended outward, the longitudinal portions only being extended.

Safety gate-hooks and snap-hooks for use on harness have heretofore been made in large quantities having the eye and hook in the same plane; but these hooks have always heretofore been cast with a core, owing to the peculiar arrangement of the eye and hook with reference to the bolt barrel or socket. It is the special object of the present invention to greatly cheapen the manufacture of these hooks by avoiding the necessity of using a core. This is accomplished by forming an open channel along one side of the shank and forming longitudinal wings along the longitudinal portions of the edge of the said channel, said wings extending toward one side and being adapted to be bent over toward each other to complete the barrel, the longitudinal



seam of which runs alongside of the shank. In this way the blank can be cast in one piece without a core, the hook and eye being in substantially the same plane with each other and with the shank. I am aware of the Henn patent, No. 250,534, dated December 6, 1881, but in that patent the channel is along the under side of the shank and the hook is at right angles to the loop or eye. This form may be cast without a core, but only by having the hook and loop at right angles to each other, whereby the device is only adapted for special uses in connection with harness and cannot be employed as a gate-hook and in all classes of harness connections. In the Conde patent, No. 160,879, dated March 16, 1875, the shank is made in two pieces and, as the patentee states, is "cored out," while in my invention the shank is cast in one piece and no coring is required, whereby the production of these devices is cheapened.

Another advantage of my construction is that the seam in the barrel is brought to one side out of the line of strain, which is especially important in this form of device because one of the wings has to be cut away to form a slot for the guide-lug, which would materially weaken the shank if the seam were made along the upper or lower side of the same. By bringing the seam to one side will obviously permit the wings to be made thinner, and therefore more easily bent into place.

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

1. A blank for gate-hooks consisting of a shank having a longitudinal channel or recess extending along one side at one end, said channel or recess having a portion of its edge projecting outward and adapted to be bent to complete the barrel for the bolt, said shank being also provided with an open hook at one end and an eye at its other end, said hook and eye being in substantially the same plane as

the shank and at substantially right angles to the outward-projecting portion of the edge of the channel or recess.

2. A blank for gate-hooks consisting of a shank having a longitudinal channel or recess extending along one side at one end, said channel or recess having the longitudinal portions of its edge projecting outward toward the same side to form wings which are adapted to be bent toward each other to complete the barrel for the bolt, said shank being, also provided with an open hook at one end, and an eye at its other end, said hook and eye lying in substantially the same plane as the shank and at substantially right angles to said wings.

3. A gate-hook consisting of a shank provided with an open hook at one end and an eye at its other end and having a longitudinal recess or barrel formed in the end adjacent to said hook, said barrel being closed along one side by a pair of wings whose meeting edges extend longitudinally of the shank and at one side of the plane of the hook and eye, as and for the purposes set forth.

4. A blank for gate-hooks consisting of a shank having a longitudinal channel or recess extending along one side at one end, said channel or recess having a portion of its longitudinal edge projecting outward and adapted to be bent to complete the barrel for the bolt, said shank being also provided with an open hook at one end and an eye at its other end, said hook and eye being in substantially the same plane as the shank and at substantially right angles to the outward-projecting portion of the edge of the channel or recess.

In testimony whereof I hereunto affix my signature, in the presence of two witnesses, this 30th day of April, 1898.

EMMETT C. GRANT.

Witnesses:

F. L. RAPPEYE,  
A. C. MANNING.