

(No Model.)

L. R. EDWARDS.

SCYTHE FASTENER.

No. 377,022.

Patented Jan. 31, 1888.

Fig. 1.

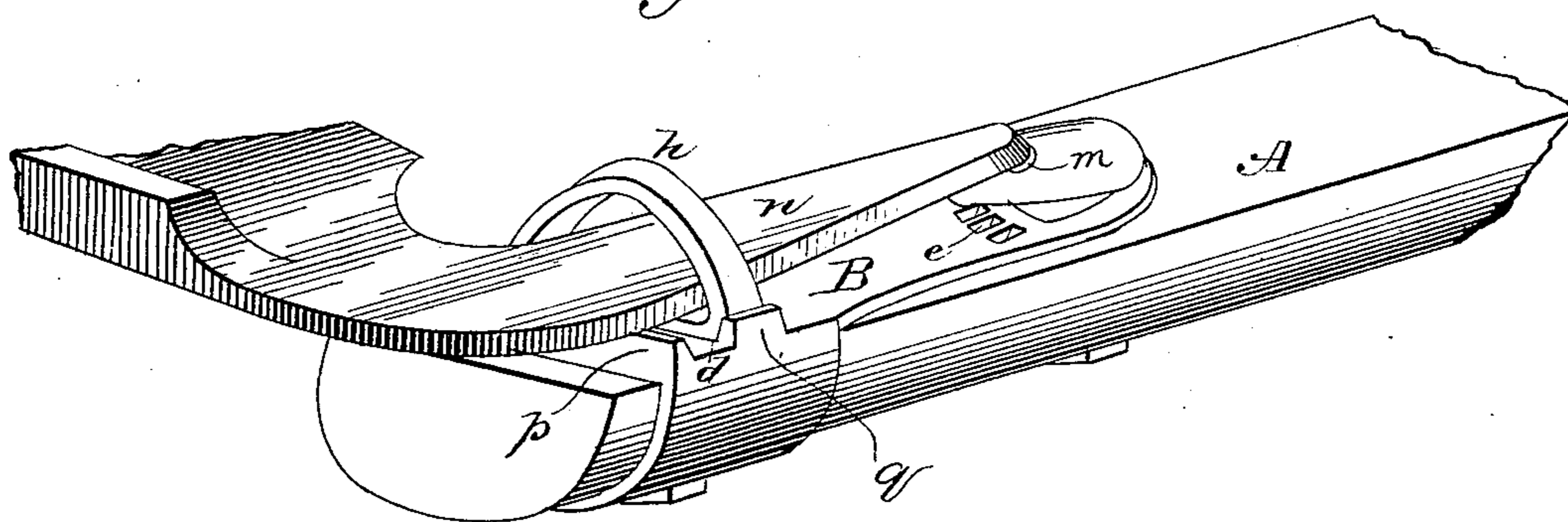


Fig. 2.

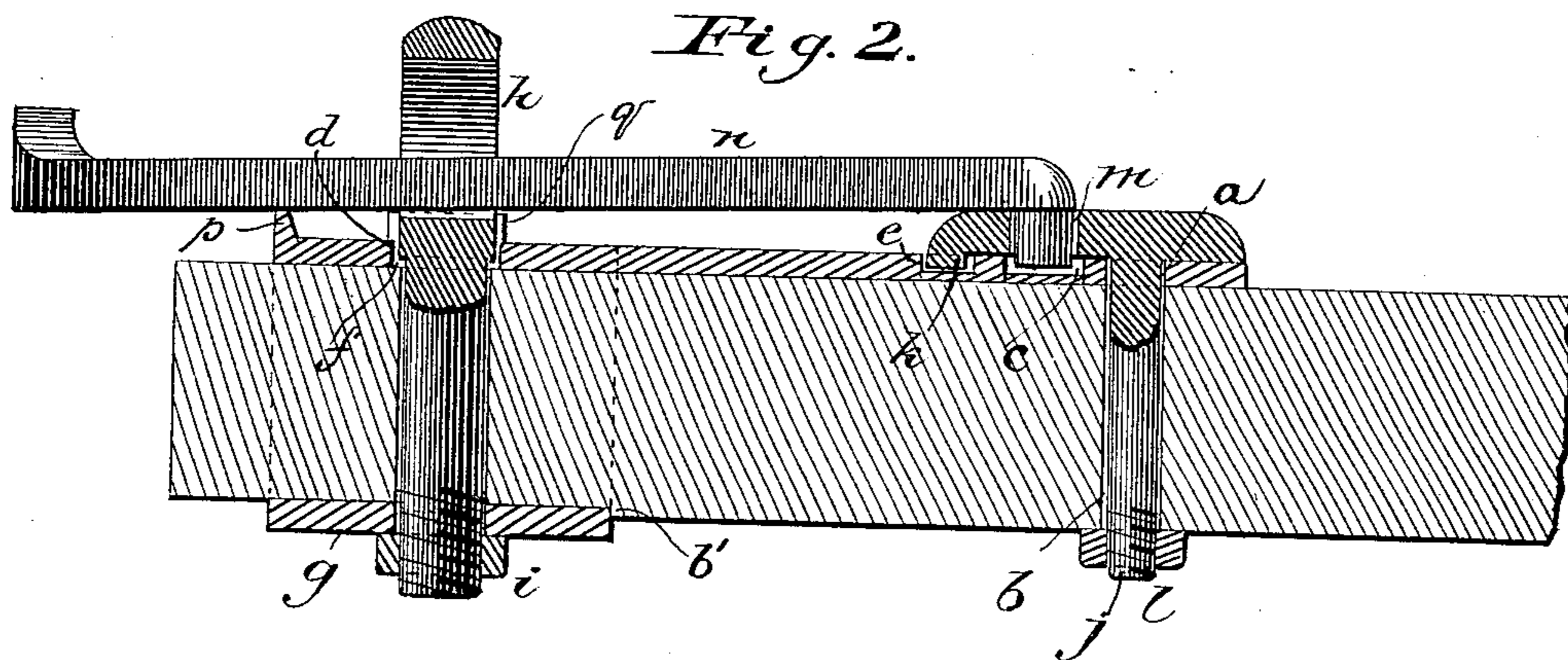


Fig. 3.

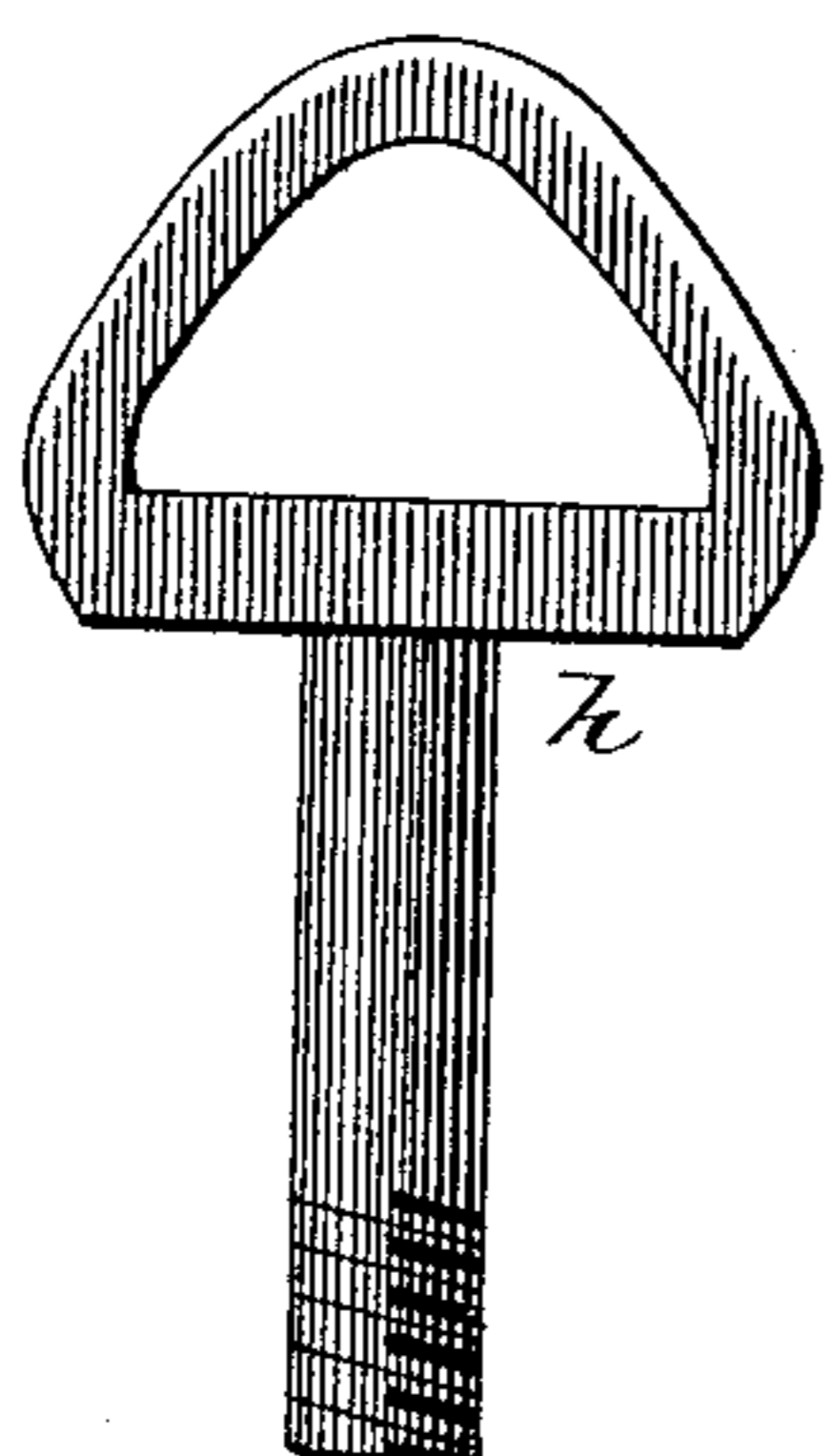
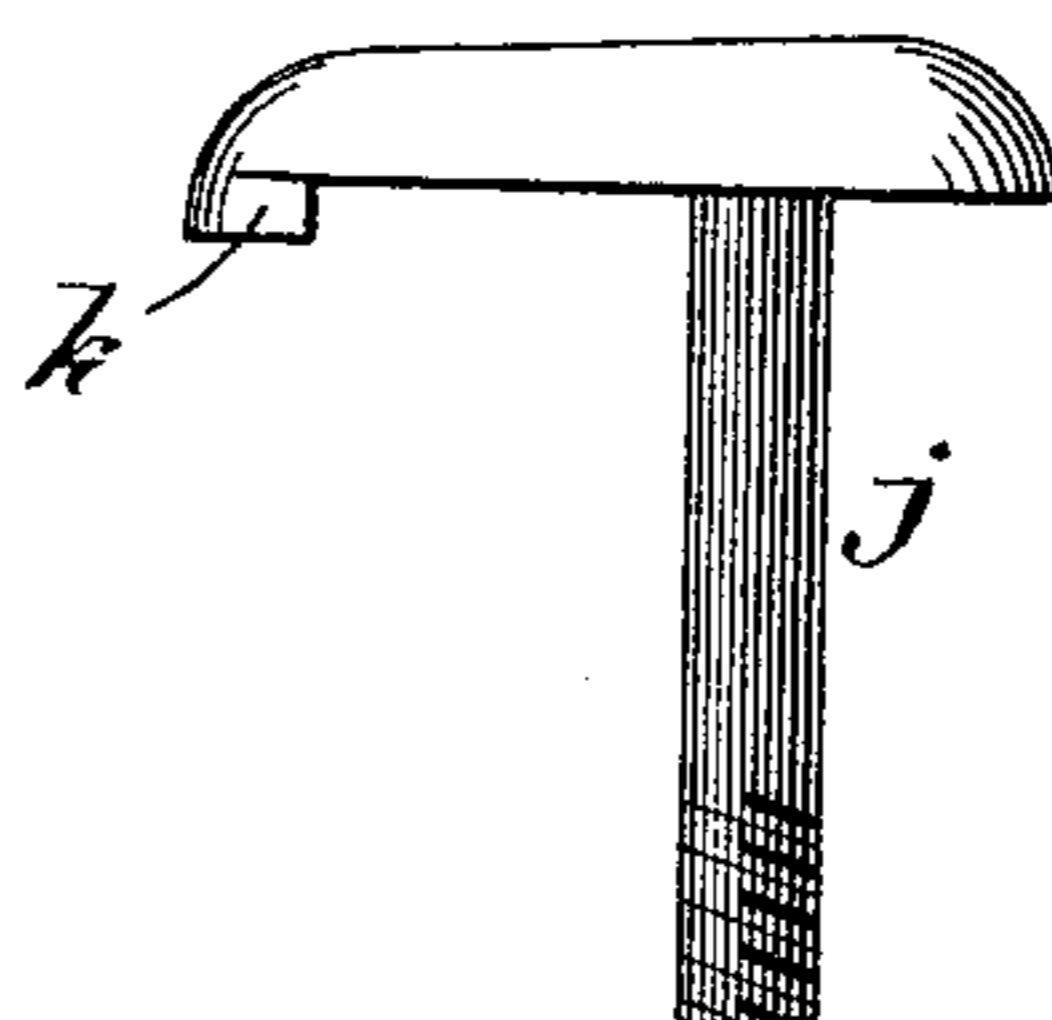


Fig. 4.



Witnesses:

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UNITED STATES PATENT OFFICE.

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SCYTHE-FASTENER.

SPECIFICATION forming part of Letters Patent No. 377,022, dated January 31, 1888.

Application filed March 5, 1887. Serial No. 229,822. (No model.)

To all whom it may concern:

Be it known that I, LEWIS R. EDWARDS, of Charlemont, Franklin county, Massachusetts, have made an invention of new and useful Improvements in Scythe-Fasteners, of which the following is a specification, which, taken in connection with the accompanying drawings, forming part thereof, will be found sufficiently full, clear, and exact to enable any one skilled in such matters to make and use the same.

In the said drawings, Figure 1 is a view in perspective of my device. Fig. 2 is a mid-section lengthwise of the snath. Figs. 3 and 4 show parts in detail.

My invention has relation to devices for securing a scythe to its snath; and the objects of the same are, first, to so construct the fastener that in its application to the snath the wood of the latter will be as little cut away as possible; second, that the device shall consist of as few parts as possible, and, third, that the angle of the scythe to the snath may be simply and readily varied and adjusted. These objects I attain by the mechanism hereinafter described and claimed.

In the drawings the same letter of reference indicates the same part in all the figures.

A represents the end of a scythe-snath to which the fastener is applied. It is flattened on one side, and has a shallow rabbet, *b'*, around the end, both fashioned to receive the plate and ring B, snugly fitted thereon. The rabbet is not essential, as the ring part may be applied immediately to the end of the snath; but it lends finish to the article. The ring and plate are formed in one piece and in the manner substantially as shown, the plate portion of it lying upon the flattened side of the snath and not requiring special fastening devices, the lower end thereof being held by the ring portion and the upper end being secured in the manner hereinafter to be described.

Near the upper end of the plate is formed a hole, *a*, registering with a hole, *b*, through the snath. Between said hole and the ring, and preferably near the former, is a segmental depression, *c*, in the plate, and adjacent to the depression a series of serrations or teeth, *e*. At the lower end of the plate is another depression, *d*, extending transversely to it, and in the depression a hole, *f*, which registers

with a hole running through the snath and through the ring upon the side of the snath opposite to the plate. Into this latter depression and hole is entered the loop-bolt *h*—that is to say, the loop and bolt, made in one piece, with the outer portion of the loop approximately V-shaped—for a purpose to be hereinafter mentioned. A nut, *i*, is fitted upon the threaded end of the bolt.

The depression in the plate which receives the loop-bolt may be extended quite through the full thickness of the plate, so forming a transverse slot, as clearly shown in the longitudinal sectional figure. Across the lower end of the plate and at some distance below the loop-bolt is formed a high rib, *p*, and short high ribs *q* are formed longitudinally of the plate and at the ends of the last-mentioned depression or slot. The purpose of the rib *p* is, in connection with the bolt-head, which receives the tang, to be hereinafter described, to cause the scythe-tang when applied to be supported at some elevation from the plate and so furnish space for the drawing down of the loop portion of the bolt in tightening it without having to cut out a mortise in the end of the snath to receive said loop portion; and the purpose of the short ribs *q* is to furnish support to the loop-bolt against strains which are transverse to the end of the snath, which strains are very great in mowing heavy grass.

To the other hole *a*, at the upper end of the plate, is fitted another bolt, *j*, the head of which is extended to one side to form a small plate, which may swing laterally, the bolt acting as a pivot therefor. Upon this bolt head or plate are formed teeth *k*, adapted to engage the teeth *e* upon the under plate, and when so engaged and in any lateral adjustment of the head, if the nut *l* upon the end of the bolt *j* be screwed up tight, it not only fastens the upper end of the plate firmly to the wood, but also secures the teeth on the elongated bolt-head in rigid engagement with the teeth *e* upon the plate. In this elongated bolt head or plate is formed a hole or socket, *m*, to receive the nib on the end of the scythe-tang *n*.

Now, it is obvious that by loosening the bolt *j* the teeth on its head may be disengaged from the teeth on the plate and said head or plate be swung laterally to be re-engaged in a differ-

ent adjustment, the result of which is to shift the lateral position of the socket in the head or plate and of the nib of the scythe-tang therein, and consequently the angular adjustment of the scythe to the snath, and the device admits of a very nice and accurate adjustment.

To enter the tang of the scythe the nut on the bolt *h* should be loosened sufficiently to admit the tang between the face of the plate and the bow of the loop. Then having fitted the nib of the tang in the socket *m*, the nut or bolt *h* should be tightened, and whatever the width of the tang the V shape of the loop will cause it to clamp said tang very firmly. It is to be noted here that the loop-bolt also operates as an additional fastening to retain the plate upon the snath, besides fastening the scythe.

It is evident that it is not essential that the ring and plate should be formed in one, as the lower end of the plate as a separate piece might be entered under the flattened side of the ring; but it is preferable to form them in one; also, it is not absolutely essential to have any ring, since by extending the plate to the end of the snath the balance of what forms the ring might be omitted; but the ring is preferable for the strength it gives to the end of the snath.

I am aware that a scythe-fastener has been devised in which a socketed plate pivoted by an ordinary wood-screw may oscillate in a segmental slot in a plate applied to the flattened side of the snath, the adjustment being effected by teeth in the edge of the wall of the slot and oscillating plate. Such device, however, lacks the necessary firm fastening to the plate and a reliable engagement of the adjusting-teeth; also, there are fasteners having oscillating or rotary plates with teeth upon their under faces to engage serrations upon the faces of the fixed plates. Such features, therefore, I do not claim. In my device the fixed plate has but two openings—the bolt-holes.

The oscillating plate is in one piece with the bolt, which holds it in firm engagement with the teeth on the plate and the upper end of the plate on the snath, and also operates as a pivot for the vibrating plate.

In using a scythe where grass is heavy the resistance of the grass or the back strain on the long blade of the scythe is very great; and when it is remembered that a scythe and its tang are practically a bell-crank lever, the

blade forming a very long arm and the tang a very short arm thereof, it will be apparent that the leverage strain upon the plate or head holding the nib of the tang is very great and requires a very strong fastening. Screws and small separate bolts have been tried and found insufficient; but I have found that the plate and bolt formed in one piece and the latter of comparatively large size answers the purpose completely.

The V form of the loop also enables various sizes of tangs to be used with the same snath, and the whole constitutes a very firm fastening, with but few parts and very little cutting away of the snath.

What I claim is—

1. The combination, with the bolt *j*, having its head offset or elongated to one side only, and provided with the socket *m* and teeth *k*, of the fixed under plate perforated at its upper end to receive said bolt, and provided with teeth to engage those upon the head, and with a perforation at its lower end for a loop-bolt, and said loop-bolt securing the tang near its junction with the blade directly to the end of the snath, the said offset bolt-head being arranged to depend toward the lower end of the snath, as set forth.

2. The combination, with the ring and plate, of the bolt *h*, having the acute V-shaped loop, the bolt *j*, having its head offset or elongated to one side only and provided with the socket *m* and teeth *k*, and the plate perforated at its upper end to receive said bolt and provided with teeth to engage those upon the head, the said head being arranged to depend from the shank of the bolt toward the lower end of the snath, as set forth.

3. The combination, with the plate provided with the transverse rib *p* and the short ribs *q*, arranged as described, of the bolt *j*, having the head offset or elongated to one side only, and provided with the socket *m* and teeth *k* and arranged to depend from the shank of the bolt toward the lower end of the snath, as and for the purpose set forth.

In testimony whereof I have hereunto signed my name in the presence of two witnesses.

LEWIS R. EDWARDS.

Witnesses:

H. H. MAYHEW,
HENRY M. PUFFER.