

No. 686,819.

Patented Nov. 19, 1901.

J. MACPHAIL.

REEL BAT AND MEANS FOR SECURING SAME.

(Application filed Mar. 8, 1900.)

(No Model.)

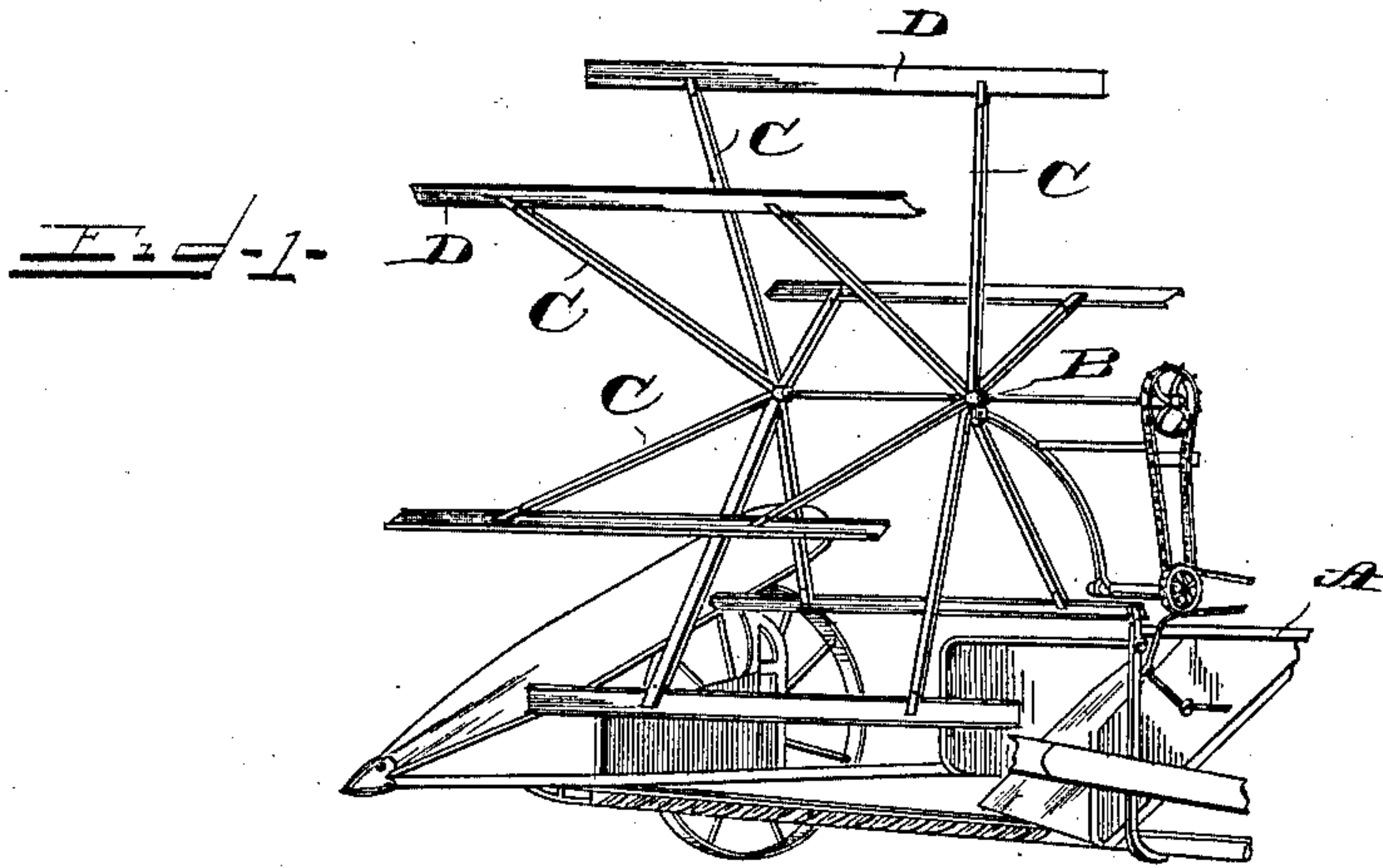


Fig. 2.

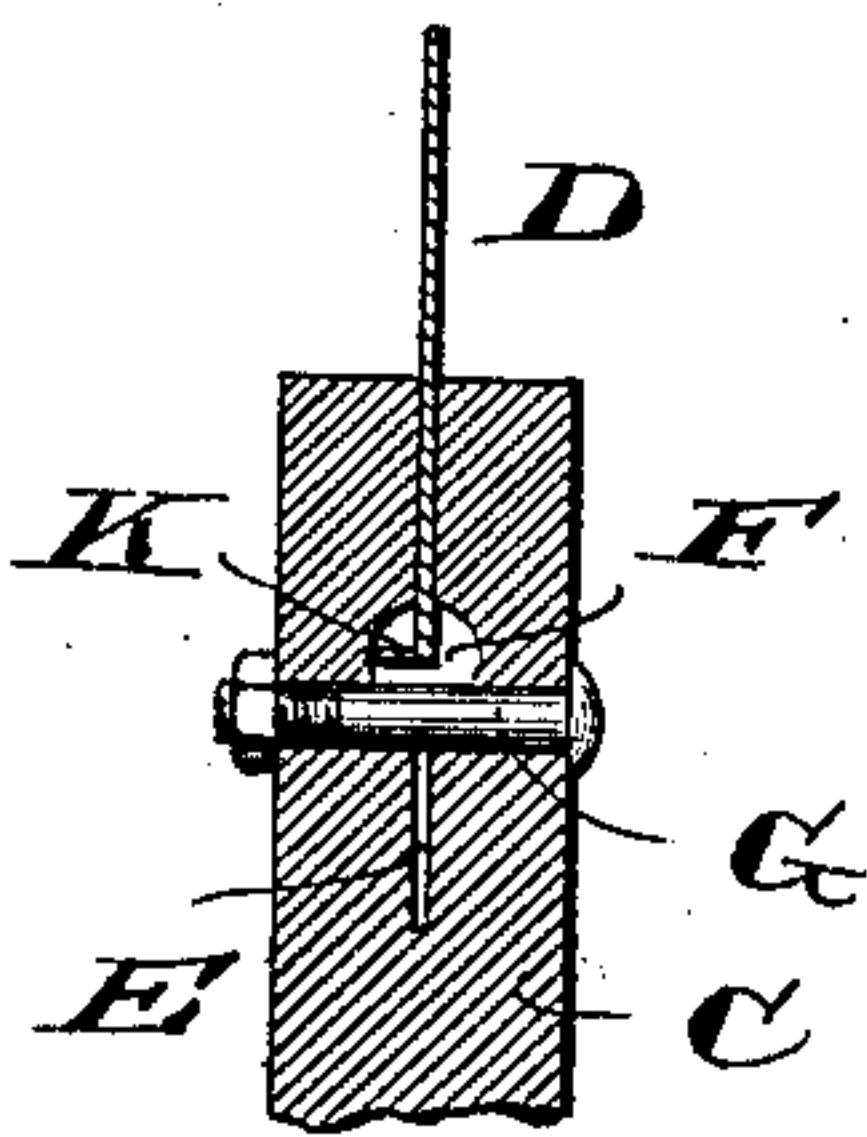


Fig. 3.

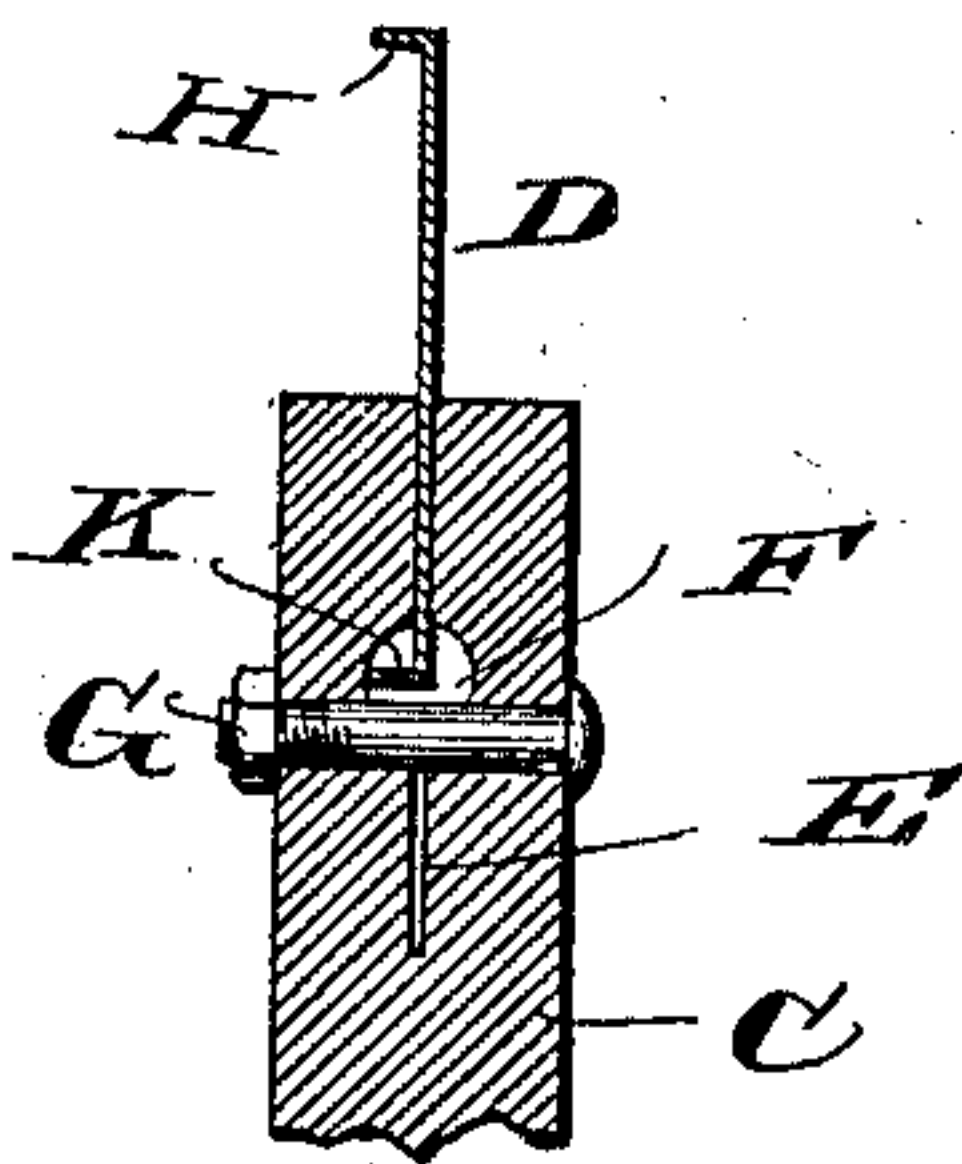


Fig. 4.

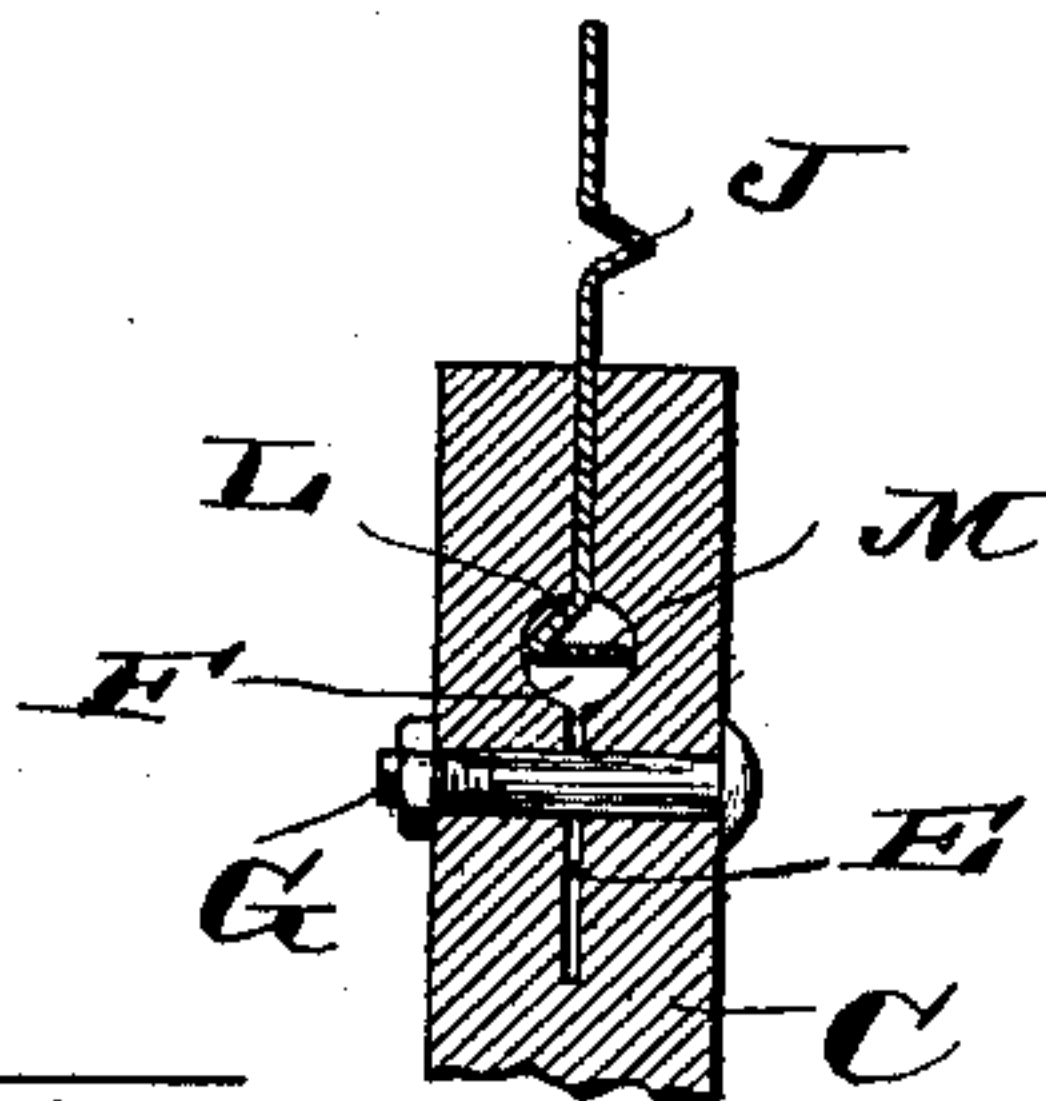


Fig. 5.

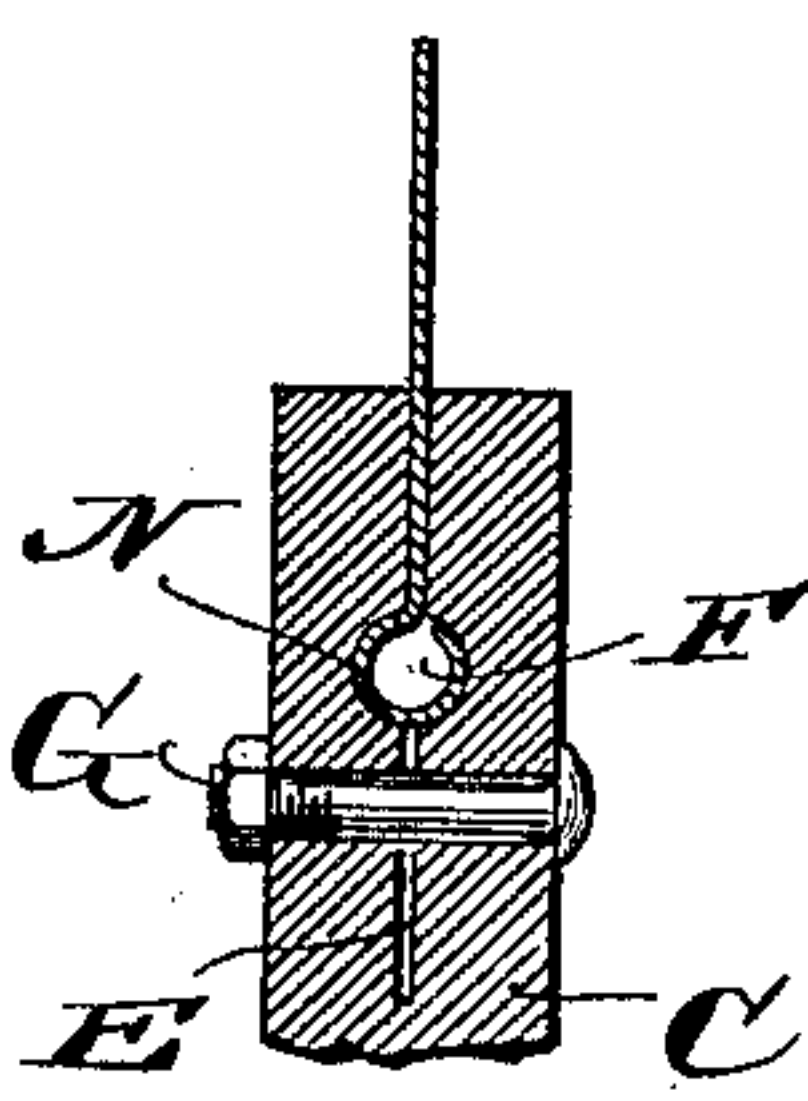
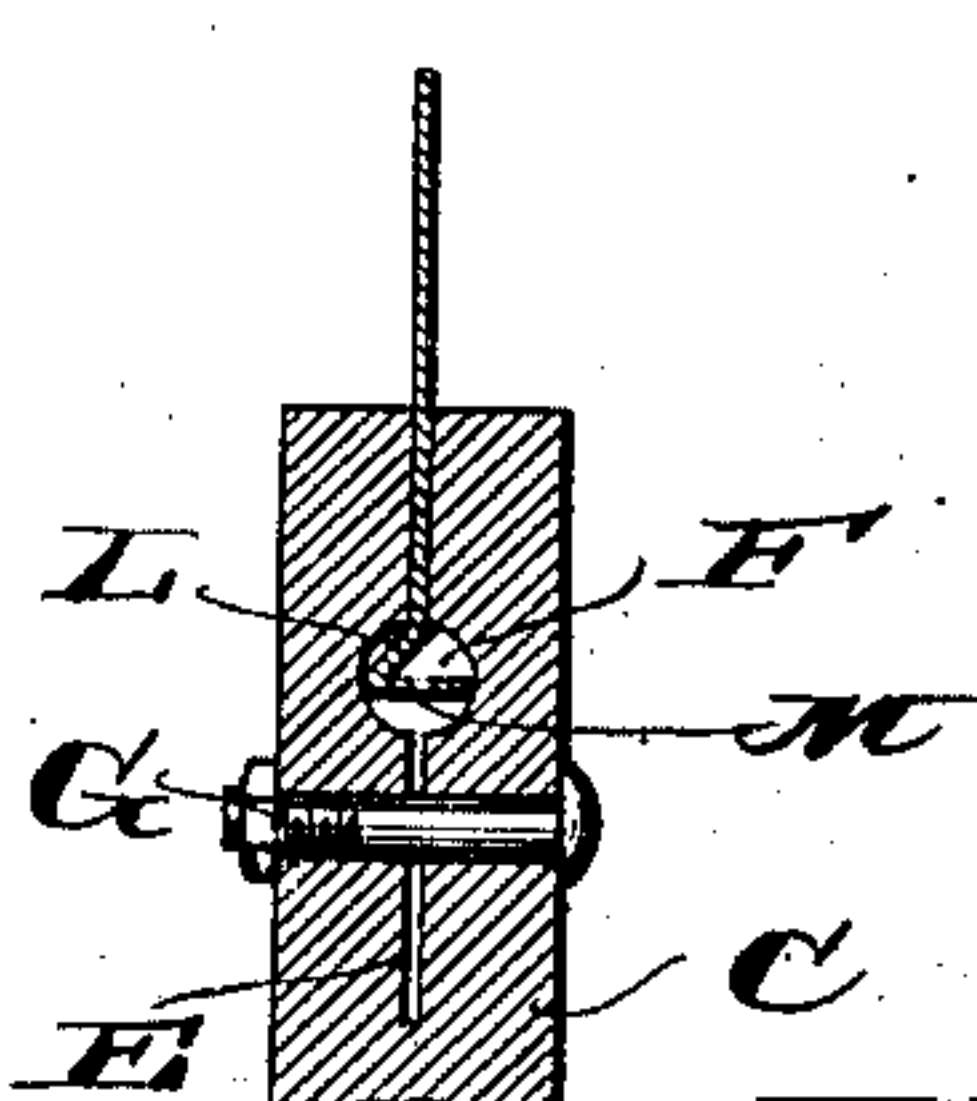


Fig. 6.



WITNESSES

Ira L. Perry.  
J. B. Keir

INVENTOR

James Macphail  
By Brown & Darby  
Attys



# UNITED STATES PATENT OFFICE.

JAMES MACPHAIL, OF BLUE ISLAND, ILLINOIS.

## REEL-BAT AND MEANS FOR SECURING SAME.

SPECIFICATION forming part of Letters Patent No. 686,819, dated November 19, 1901.

Application filed March 8, 1900. Serial No. 7,790. (No model.)

*To all whom it may concern:*

Be it known that I, JAMES MACPHAIL, a citizen of the United States, residing at Blue Island, in the county of Cook and State of Illinois, have invented a new and useful Improvement in Reel-Bats and Means for Securing the Same, of which the following is a specification.

This invention relates to reel-bats and means for securing the same.

The object of the invention is to provide a reel-bat which is light, economical in manufacture, strong, durable, and efficient in operation.

A further object of the invention is to provide means whereby the reel-bat is efficiently secured in the ends of the reel-arms.

Other objects of the invention will appear more fully hereinafter.

The invention consists, substantially, in the construction, combination, location, and arrangement, all as will be more fully hereinafter set forth, as shown in the accompanying drawings, and finally pointed out in the appended claims.

Referring to the accompanying drawings, and to the various views and reference-signs appearing thereon, Figure 1 is a broken view, slightly in perspective, of a portion of a reaping-machine with a reel applied thereto. Fig. 2 is a broken detail view in section, taken longitudinally of the reel-arm, showing a form of reel-bat embodying my invention and means for securing the same in the reel-arm.

Fig. 3 is a similar view showing a flanged construction of reel-bat. Fig. 4 is a similar view showing a corrugated form of reel-bat. Fig. 5 is a similar view showing a reel-bat with a beaded edge for securing the same in the reel-arm. Fig. 6 is a similar view showing another form of means for securing the bat in the reel-arm.

The same part is designated by the same reference-sign wherever it occurs throughout the several views.

In the usual construction of reels employed in connection with reaping-machines the reel-bats are made of wood bolted or otherwise secured to the reel-arms. In this construction of reel-bats it is necessary in order to secure longitudinal adjustment of the bats

to provide a number of holes therethrough, through some one or another of which pass bolts for securing the bat to the reel-arms, the securing-bolts being removed and the bat shifted longitudinally to effect the desired adjustment and then inserted in some other hole. Moreover, in case the bats are made of wood or solid metal bars they add materially to the weight of the reel and to the cost of manufacture. In the case of wooden bats breakages are liable to occur, thereby necessitating frequent repairs. It is the purpose of my invention to overcome these objections and to provide a construction of bat which is strong and durable, while at the same time light and economical in manufacture, and also to provide means for adjusting the bats longitudinally, when desired, without the provision of adjusting-holes.

Referring to the accompanying drawings, reference-sign A designates a portion of the frame of a reaping or other similar machine, upon which is mounted the reel B, which may be driven in any suitable, convenient, or well-known manner. As the construction of the reel, except in the manner of securing the bats to the arms thereof, and as the construction of the reaping-machine may be of any well-known or convenient type of construction familiar to persons skilled in the art and in the details of construction thereof form no part of my present invention, it is unnecessary to further illustrate or describe such constructions herein.

Reference-sign C designates the reel-arms, adapted to receive the reel-bats D in the outer ends thereof. At their outer ends the reel-arms C are slitted longitudinally for a portion of the length thereof, as indicated at E, and at a convenient point in the length of said slits an enlargement or opening (indicated at F) is provided, as by boring or otherwise forming a hole or opening transversely through the reel-arm, as clearly indicated in Figs. 2 to 6, inclusive. The reel-bat (indicated generally in Fig. 1 by reference-sign D) I form of sheet metal of suitable or desirable width. These bats are then inserted edgewise into the slits E of the corresponding or cooperating reel-arms C, and a bolt G, passing through the split ends of the arms, may



serve to clamp the spring-jaws of the ends of the arms formed by slitting such ends together, so as to clamp or grip the flat sides or faces of the bats therebetween, thus efficiently clamping and holding the bats in said slits. It will be noted that the clamping-bolts G do not pass through the bats, but operate merely to draw the spring-jaws of the arms together to frictionally clamp and hold the bats in said slits. The form of tightening or clamping bolts shown are headed at one end and threaded at the other, a nut working on the threaded end. By this construction it will be readily seen that the bats may be readily inserted in or removed from the ends of the arms by loosening up the clamping-bolts and, if necessary, slightly prying apart the jaws and inserting the bat edgewise in the slits, and then tightening up the clamping-bolts. The desired longitudinal adjustment of the bats may be readily effected by loosening the clamping-bolts and shifting the bats longitudinally.

The bat may be in the form of a thin flat sheet of metal of the desired width, and in order to impart additional strength and rigidity to the bats the bat may be stiffened by being provided with a flange H at its outer edge, (see Fig. 3,) or, if desired, the bat may be otherwise suitably stiffened or strengthened, as by longitudinally corrugating the same, as indicated at J, Fig. 4.

It is desirable to provide more efficiently than by merely the clamping effect of the spring-jaws of the reel-arms against lateral displacement of the bats through centrifugal action in the operation of the reel. In such case the transverse enlargements or openings F are provided, and the inner edge of the bat may be flanged, as indicated at K, Figs. 2 and 3, or otherwise formed, said flanges being received in the enlargements or openings F. In Figs. 4 and 6 the inner edge of the bat is shown bent or deflected, as at L, such angular projection terminating in the right-angle flange M. In Fig. 5 the bat is shown as provided with a circular bead N, which is received in the enlargement or opening F of the reel-arm. It will be observed that in the constructions illustrated in each of Figs. 2 to 6, inclusive, the flange K or deflected portion L and flange M or the bead N, being received within the enlargement or opening F, serves to prevent lateral displacement of the bat, while at the same time not interfering with the efficient clamping of the bat in the reel-

arms or the longitudinal adjustment of such bat.

From the foregoing description it will be seen that I provide an exceedingly simple, economical, light, strong, and durable reel-bat and means for securing the same in the ends of the reel-arms.

Having now set forth the object and nature of my invention and various forms of construction embodying the same, what I claim as new and useful and of my own invention, and desire to secure by Letters Patent of the United States, is—

1. The combination with reel-arms, said arms being slitted longitudinally at the outer ends thereof to form spring clamping-jaws, of a thin sheet-metal reel-bat arranged to be inserted edgewise in said slits, and bolts passing transversely through the slitted ends of said arms for clamping said spring-jaws together to retain said bat, as and for the purpose set forth.

2. The combination with a reel-bat having an offset edge extending longitudinally thereof, of reel-arms having clamping-jaws recessed to receive the offset portion of said bat, as and for the purpose set forth.

3. The combination with a reel-bat, having one edge thereof offset or bent, of reel-arms having longitudinal slits in the ends thereof, and having enlargements or openings extending transversely of said slits, and adapted to receive said offset or bent edge of the bat, as and for the purpose set forth.

4. The combination with a reel-bat having an offset or bent edge, of reel-arms having longitudinal slits in the ends thereof, and an enlarged opening transversely of said slits adapted to receive the offset or bent edge of the bat, and means for clamping the bat in said slits, as and for the purpose set forth.

5. The combination with reel-arms having longitudinal slits in the ends thereof, and a transverse opening or enlargement, of a reel-bat adapted to be received edgewise in said slits, said bat constructed at its inner edge to engage said enlarged opening, and means for clamping said bat in said slit, as and for the purpose set forth.

In witness whereof I have hereunto set my hand, this 6th day of March, 1900, in the presence of the subscribing witnesses.

JAMES MACPHAIL.

Witnesses:

E. C. SEMPLE,  
S. E. DARBY.