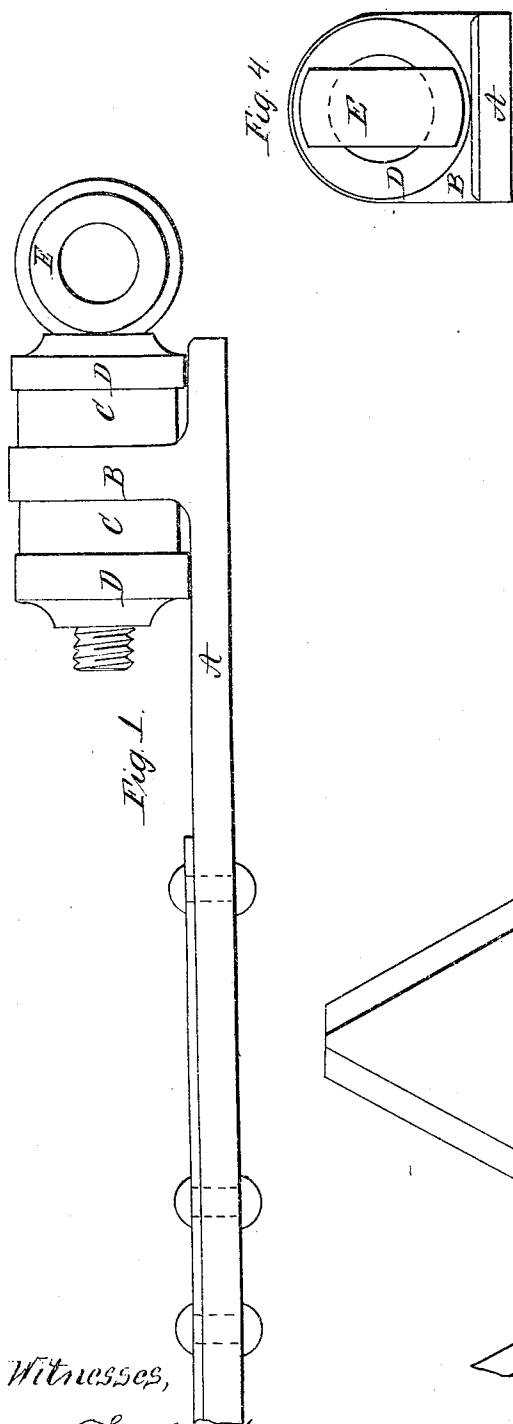


*G. S. & H. Curtis*  
*Harvester Pitman.*

*N<sup>o</sup> 42,930.*

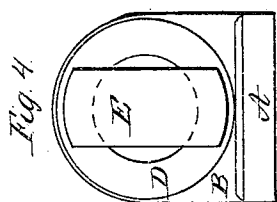
*Patented May 31, 1864.*



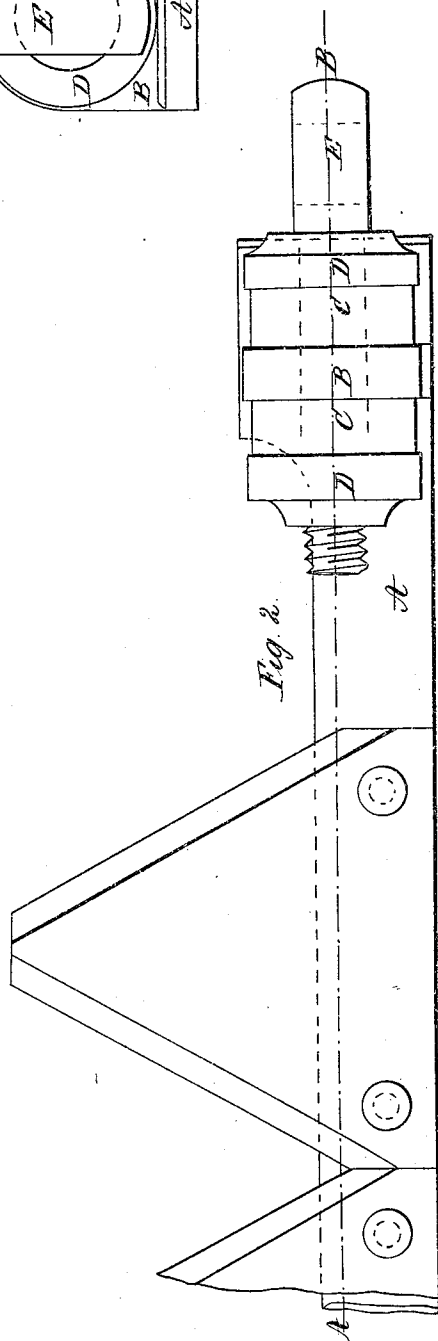
*Fig. 1.*

*Witnesses,*

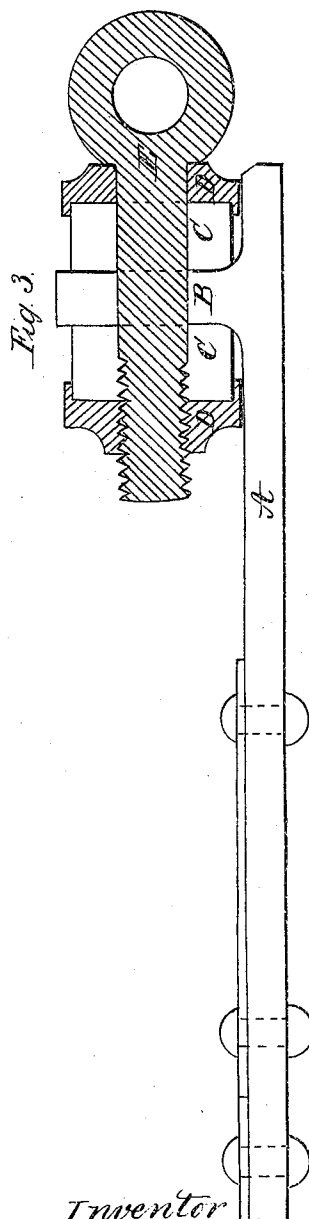
*T. C. Flood,*  
*J. A. Kingston*



*Fig. 4.*



*Fig. 2.*



*Fig. 3.*

*Inventor*

*Geo. S. Curtis*  
*Henry Curtis*

# UNITED STATES PATENT OFFICE.

GEO. S. CURTIS AND HENRY CURTIS, OF CHICAGO, ILLINOIS.

## IMPROVEMENT IN HARVESTERS.

Specification forming part of Letters Patent No. 42,930, dated May 31, 1864.

*To all whom it may concern:*

Be it known that we, GEO. S. CURTIS and HENRY CURTIS, of Chicago, in the county of Cook and State of Illinois, have invented a new and useful Improvement in Reaping and Mowing Machines; and we do hereby declare that the following is a full, clear, and exact description of the same, reference being had to the accompanying drawings, forming part of this specification, in which—

Figure 1 is a front elevation of a sickle-bar for reapers and mowing-machines, with our improvement applied to it. Fig. 2 is a plan; Fig. 3, a section through A B; Fig. 4, an end elevation.

Similar letters of reference in each of the several figures indicate corresponding parts.

The nature of our invention consists in the manner of constructing and arranging the heel of a sickle-bar for reaping and mowing machines when the sickle-bar is made with an eye or upright stem across the bar with an elastic or rubber ring on each side. The outer ends of the elastic rings enter recess-washers with an eyebolt passing through said parts, the forward washers of sufficient thickness for a thread in which the eyebolt is screwed up until the elastic rings are slightly compressed against the eye of the sickle. By these features a very cheap, durable, and simple remedy is formed, at or near the connection, against the great liability of breaking the sickle-bar when a reaping and mowing machine is driven at a speed necessary to insure good work, or from the cutters coming in contact with obstructions that will suddenly stop the machine, there being sufficient elasticity in the rubber rings to yield and gradually receive the shock, which is the main cause of breaking sickles and prematurely wearing out machines of this character. The object of this arrangement is to secure elasticity to the sickle-bar in such a manner as will insure it against getting out of order; and as the eyebolt passes through the elastic rings and the nut on the forward end secures them in position without the necessity of outside box for confining them, and leaves them free to expand by pressure without straining other parts of the arrangement.

To enable others skilled in the art to make and use our invention, we will proceed to describe its construction and operation.

A represents the sickle-bar; B, the eye of the sickle; C C, the elastic rings; D D, the washers, and E the eyebolt for attaching the driving rod or pitman.

The sickle-bar may be made of any desired thickness at the heel, with an eye, B, one-half inch thick, one and one-half inch high, and one and one-half inch wide welded across on the upper side one inch from the end of the bar, and rounded on the top one and one-half inch circle with one-half and one-sixteenth inch hole in the center to let the eyebolt pass through. The elastic rings may be of rubber tubing one and one-fourth inch diameter, one-half hole, and three-fourths inch long.

The washers may be of cast-iron or brass one and three-eighths inch diameter, and of sufficient thickness for a recess in one side to receive the elastic rings, which should enter them about three-sixteenths of an inch.

The eyebolt E is made with an eye at one end to receive the pitman, made thicker than the bolt, to prevent the eye from wearing. The shaft of the bolt is one-half inch, with a shoulder next the eye to come up against the washer, with a thread cut on the end to screw into the forward nut-washer when the parts are put together.

From these arrangements it is evident that when the pitman is actuated it will press the rubber rings against the eye of the sickle, which has sufficient elasticity to prevent the sickle from being started and stopped too sudden—consequently less liable to break from excessive motion or to elongate the boxing.

What we claim as our invention, and desire to secure by Letters Patent, is—

The elastic rings C C, the eye B, washers D D, and the eyebolt E, combined with a sickle-bar, A, of a reaping or mowing machine, substantially as and for the purpose herein set forth.

GEO. S. CURTIS.  
HENRY CURTIS.

Witnesses:

T. C. ALVORD,  
J. A. HOISINGTON.