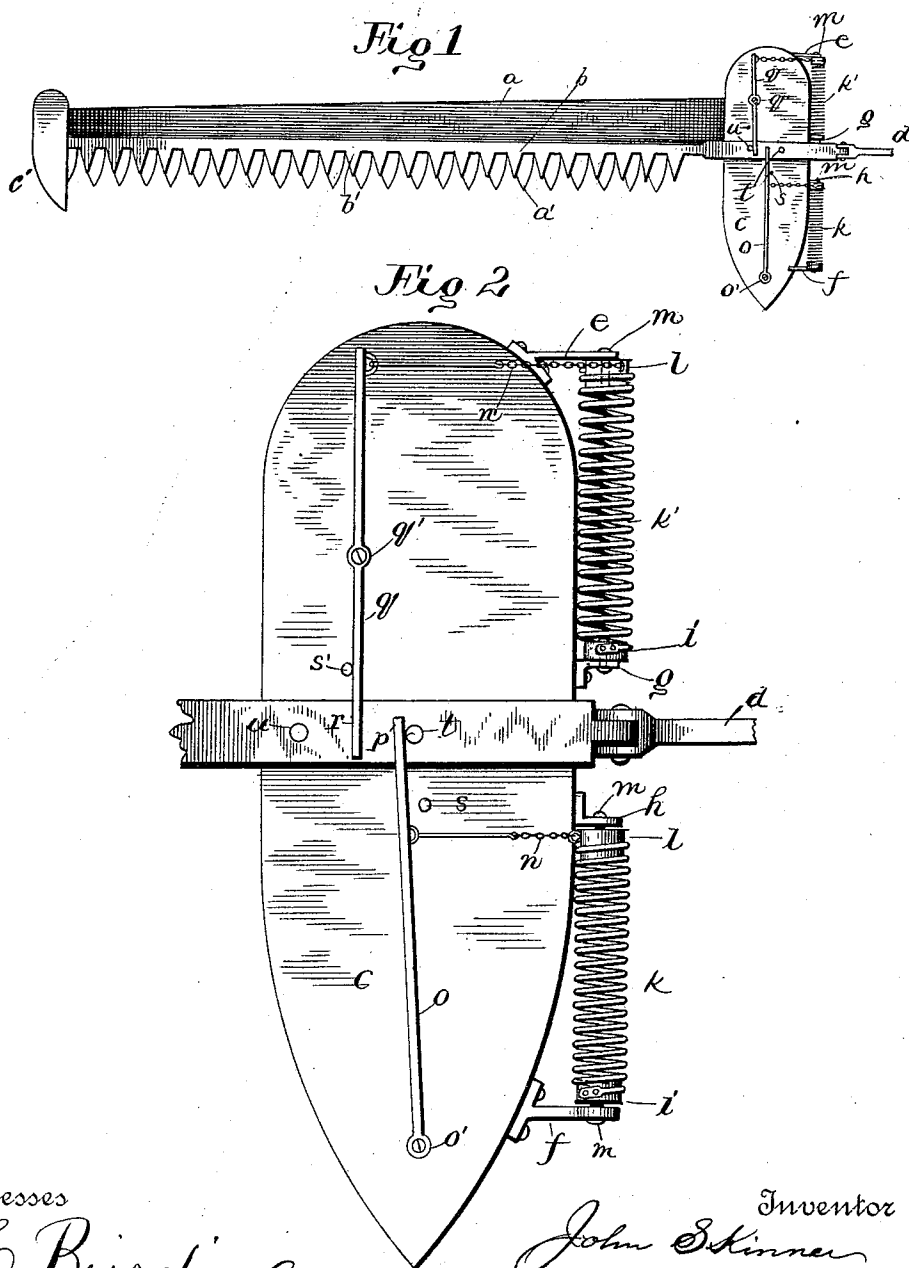


(No Model.)

J. SKINNER.
CUTTING APPARATUS FOR HARVESTERS.

No. 464,526.

Patented Dec. 8, 1891.



Witnesses
C.C. Burdine.
Geo. L. Wheelock.

Inventor
John Skinner
per R. H. Morris
his Attorney

UNITED STATES PATENT OFFICE.

JOHN SKINNER, OF FLINT, MICHIGAN.

CUTTING APPARATUS FOR HARVESTERS.

SPECIFICATION forming part of Letters Patent No. 464,526, dated December 8, 1891.

Application filed March 27, 1891. Serial No. 386,617. (No model.)

To all whom it may concern:

Be it known that I, JOHN SKINNER, a citizen of the United States, residing at Flint, in the county of Genesee and State of Michigan, have
5 invented certain new and useful Improvements in Cutting Apparatus for Harvesters; and I do hereby declare the following to be a full, clear, and exact description of the invention, such as will enable others skilled in the art to which it appertains to make and use the same.

My invention relates to cutting apparatus for mowers and reapers, its object being to take the strain off the pitman, prevent the jar incident to the return strokes of the pitman, and to take the weight off the pitman at the commencement of each stroke.

To these ends my invention consists in certain features of novelty, to be hereinafter described, and then particularly pointed out in the claims.

In the accompanying drawings, Figure 1 is a plan of a cutting apparatus embodying my improvements. Fig. 2 is a detail view of the divider and attachments.

Referring to said drawings, *a* represents the finger-bar, having the usual guard-fingers *a'* and *b*, the reciprocating cutter-bar having the usual knives *b'*.

c c' represent the dividers at each end of the finger-bar. *d* represents the pitman.

My improvements are as follows: Projecting laterally from the divider *c*, near each end, are brackets *e* and *f*, and intermediate of the same and also projecting laterally from said divider are brackets *g* and *h*. Brackets *e* and *g* constitute one pair and brackets *f* and *h* constitute another pair, one bracket of each pair having a boss *i*, projecting inwardly toward the other bracket of the pair. The bosses of the respective pairs of brackets are surrounded by one of the ends of spiral springs *k* and *k'*, where said ends are fixed, while the other ends of the springs surround and are
45 secured to pulleys *l*, which move on pivot-pins *m*, projecting inwardly from the opposite bracket of each pair. Secured at one end to the pulleys *l* are chains, cables, or the like *n n'*, respectively.

o is a horizontally-oscillating lever pivoted at its outer end at *o'* on the divider *c*, and to

the other end of which the other end of chain *n* is secured, so as to leave an inwardly-projecting end *p*.

q is another horizontally-oscillating lever 55 pivoted intermediately of its length at *q'*, and to the outer end of which the other end of chain *n'* is secured.

The inner free ends *p* and *r* of the levers *o* and *q* project beyond a line extending longitudinally of the cutter-bar.

Projecting from the divider *c* at the inner sides of the levers *o q* are stop-pins or the equivalent *s s'*, respectively.

t u are lugs projecting from the cutter-bar 65 *a*, between which the inner ends of the levers *o q* extend.

The operation is as follows: The cutter-bar *a* being reciprocated by the pitman *d*, the lugs *t u* will be caused to engage the inner 70 ends of levers *o q*, the lug *t* engaging lever *o* just before the outstroke and the lug *u* engaging the lever *q* just before the end of the instroke, the oscillation of said levers *o q* causing the torsion-springs *j k*, respectively, 75 to twist, stopping the cutter-bar, so that the pitman does not have to do it. As the pitman makes a return stroke the torsion-springs return to normal position and bring the levers against the stop-pins. Hence it will be 80 seen that the cushions or springs are arranged in such juxtaposition that the cutter-bar will act freely during a portion of its stroke, but will be cushioned at each end thereof, thereby preventing sudden jar and afterward aid- 85 ing the pitman at the commencement of the stroke.

It is evident that instead of spiral torsion-springs other forms might be employed, and that my invention could be varied in many 90 slight ways that might suggest themselves to a skilled mechanic. Therefore I do not limit myself to the exact construction herein shown, but consider myself entitled to all such variations as come within the spirit and scope of 95 my invention.

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

1. In a cutting apparatus for mowers and 100 reapers, the combination of the cutter-bar provided with a pair of lugs, with spring-re-

tracted levers actuated by the lugs on the cutter-bar, between which lugs the ends of the levers extend, and stops on the divider, substantially as and for the purpose set forth.

- 5 2. In a cutting apparatus for mowers and reapers, the combination of the cutter-bar, pitman, and divider, with a spring-retracted lever pivoted to the divider at one side of the cutter-bar, and a fixed stop for limiting the
10 movement of the lever in one direction, said lever being actuated by the cutter-bar in the other direction, substantially as and for the purpose set forth.

3. In a cutting apparatus for mowers and

reapers, the combination of the cutter-bar 15 provided with a pair of lugs, the pitman and divider, with a pair of levers projecting between the lugs, springs for retracting the levers, and stops on the divider against which the levers are brought by springs, said levers 20 being actuated by the cutter-bar, substantially as and for the purpose set forth.

In testimony whereof I affix my signature in presence of two witnesses.

JOHN SKINNER.

Witnesses:

CHARLES H. JOHNSON,
GEO. N. GOLD.