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SICKLE CUSHIONER

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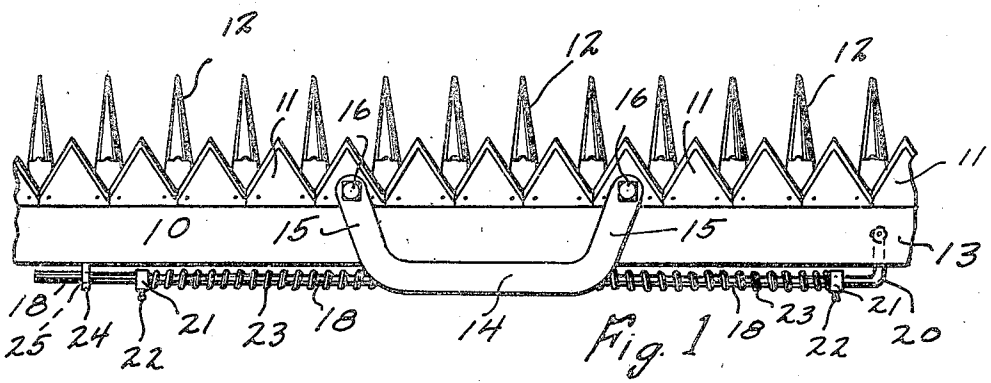


Fig. 1

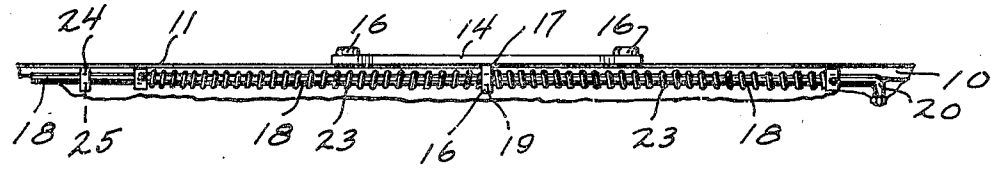


Fig. 2

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SICKLE CUSHIONER

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2 Claims. (Cl. 56—306)

Our invention relates to a shock absorber or cushioning device particularly adapted for a sickle attached to a mower or reaper.

One of the principal objectives of our invention is to eliminate breakage due to vibration and shock by properly cushioning the sickle reciprocating elements.

A further object of our invention is to provide means for cushioning the shock away from the pitman end of the sickle and towards the outer end thereof.

A further object of our invention is to provide the above mentioned objects in a construction of the greatest possible simplicity.

With these and other objects in view, our invention consists in the construction, arrangement and combination of the various parts of our device, whereby the objects contemplated are attained, as hereinafter more fully set forth, pointed out in our claims, and illustrated in the accompanying drawing, in which:

Figure 1 is a plan view of our device attached to a sickle, and

Figure 2 is a side elevation looking at the rear thereof.

We have used the character 10 to designate generally the stationary sickle member or bar, and the character 11 designates the cutter plates which are suitably attached in the usual manner and which reciprocate relative to the member 10. Attached to the member 10 is the usual pointed guards 12 which also are stationary. Further elucidation of these members is not necessary since they are well known in the art.

Our device is attached near the outer end of the sickle such as 13 since it is designed to absorb the shock at the end. To further provide such means, we provide the strap 14 having the inwardly turned extensions 15 which are bolted by means of the cap screws at 16 to the reciprocating portion of the sickle. The strap 14 includes the small downwardly extending lip 16 which is suitably welded at 17 thereto and at the center thereof. A continuous rod 18 passes through an opening 19 in the member 16. The rod 18 is bent inwardly at 20 and is bolted to any convenient bolt which is ordinarily used on the stationary frame adjacent the pointed members 12. The bar is bent under the stationary member 10 and bolted as shown in Figure 2. Spaced from the member 16 are the collars 21 having the set screws 22 threadedly engaged therewith. Between the collars 21 and the center member 16 are the compression springs 23 which receive the rod 18. The stationary bar 10 includes a further member 24 which is suitably attached thereto and which includes an opening 25 through which the rod 18 passes with a fairly substantial length of the rod projecting therebeyond.

It will now be seen from the foregoing description that as the cutting member 11 reciprocates to and fro that the member 16, which is attached to the strap 14, is carried together with this member. During such oscillatory motion, the shocks which are imparted to the reciprocating member are absorbed by the springs 23 alternately on each side of the member 16. In other words, a constant tension is exerted against the reciprocating parts by virtue of this construction which insures absorption of all shocks, particularly on the outer end where the same is most important, since the strains are set up at this point.

The collars 21 can be placed inwardly or outwardly as desired and locked by means of the set screws 22 so that, when desired, tension can be effected for the use intended. Such adjustment can be used whenever necessary, and also if it is necessary to compensate for a weakening spring and the like.

It will now be seen that we have provided a sickle cushioner which is efficient in operation, which absorbs shock at the outer end of the sickle where it is most necessary, which can be readily adjusted, and which can be manufactured at a minimum cost.

Some changes may be made in the construction and arrangement of the parts of our invention without departing from the real spirit and purpose of our invention, and it is our intention to cover by our claims any modified forms of structure or use of mechanical equivalents, which may be reasonably included within their scope.

We claim as our invention:

1. A sickle cushioner comprising a bracket attached to the sickle blade member and rearwardly thereof, a downwardly turned lip attached to the bracket, compression means bearing against said lip including a pair of helical springs on each side of the lip, said lip having an opening, a rod passing through said opening and said springs and attached to the stationary portion of the sickle, means for adjusting tension of the springs including a pair of slidable collars receiving said rod including set screw locking means for locking the collars against the rod, said structure attached toward the outer end of the sickle.

2. A sickle cushioner comprising a substan-

tially U shaped bracket attached to the reciprocating sickle blade member and extending outwardly and rearwardly over the stationary bar, said bracket having a downturned lip having an opening, a rod attached to the stationary portion of the sickle and extending parallel and adjacent the stationary bar of the sickle and through said opening, a pair of helical springs receiving said rod and bearing against said lip, adjustable collars receiving said rod and bearing against the outer ends of the springs, means for holding the inner end of said bar, and said lip adapted to alternately compress the said springs to cushion shock of the sickle, during slidable movement of the lip opening over the rod.

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