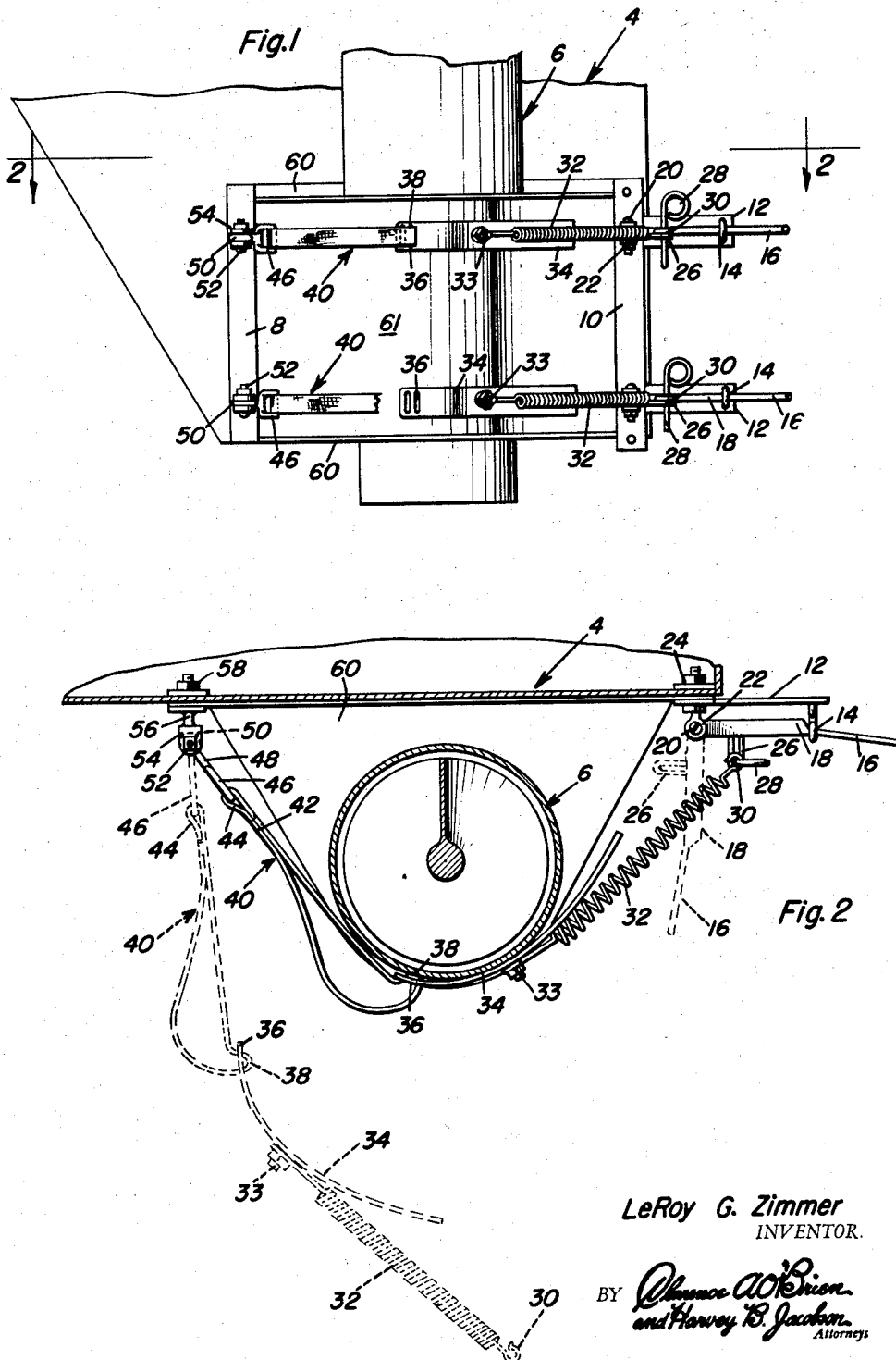


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LE ROY G. ZIMMER
GRAIN TANK AND ELEVATOR CLAMP

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1

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GRAIN TANK AND ELEVATOR CLAMP

Le Roy G. Zimmer, Rte. 1, Two Rivers, Wis.

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2 Claims. (Cl. 248—316)

The present invention relates to certain new and useful improvements in cradling, embracing and clamping means for a grain tank and elevator combination which is expressly, but not necessarily, designed and adapted to function on and in conjunction with combines of a type marketed by International Harvester Company, for example, those combines which are identified in the trade as Nos. 76, 127 and 141, respectively.

An object of the invention is to structurally, functionally and otherwise improve upon similarly constructed and performing cradling and clamping adaptations and, in doing so, to provide a construction which is practical and easy for transport, requires no special tools for installation, does not involve the need to remove nuts and bolts, promotes a saving of time and labor, and is otherwise suitably adapted to serve the purposes for which it has been appropriated for use.

In carrying out the principles of the invention two cradling and clamping devices are preferably used for uniformity of support and more satisfactory results. These devices are mounted on frame members and each device is the same in construction. Briefly, each device is characterized by a rigid arcuately bowed bar, a strap adjustably connected at one end portion to an adjacent end portion of said bar, means at the other end of said strap for hingedly anchoring said other end portion on a grain tank, a coil spring having one end fastened to an intermediate portion of said bar, a latch-lever having means at one end for hingedly attaching said one end of said grain tank, a stationary keeper for the free end portion of said lever, and means operatively connecting the other end of said coil spring to an intermediate portion of said latch lever.

Novelty is also predicated on the above arrangement wherein the means last-named comprises a U-shaped staple fixed on the latch lever. This serves to accommodate a retaining pin and the coil spring terminates in a hook which is releasably connectable with the pin, making it possible to quickly and readily detach the coil spring and to swing the clamping device to an open out-of-the-way position.

Other objects, features and advantages will become more readily apparent from the following description and the accompanying drawing.

In the drawing, wherein like numerals are employed to designate like parts throughout the views:

Fig. 1 is an elevational view showing a fragmentary portion of the grain tank and the associated auger or elevator and illustrating the improved cradling and clamping means.

Fig. 2 is a view which may be said to be taken on the plane of the line 2—2 of Fig. 1, looking in the direction of the arrows, and showing one of the clamping devices closed in full lines and also open in dotted lines.

In the drawings and as seen in Fig. 2 the grain tank is denoted generally by the numeral 4 and the auger or elevator is denoted at 6, these parts being conventional in form.

2

The improvement referred to as the cradling and clamping means is characterized at the left in Fig. 1 by a first vertical frame member 8 and at the right by a similar spaced frame member 10. The right hand vertical edge of the frame member 10 is provided with a pair of upper and lower outstanding arms 12 and each arm is provided at its outer end with a lateral keeper-hook 14. In practice this serves to accommodate the handle portion 16 at the free swingable end of a latch lever 18. The latch lever is hingedly mounted at 20 between the spaced eyes 22 of a twin eye bolt passing through the frame member and secured at its threaded end by a nut 24 on the interior of the tank. On its intermediate portion the lever is provided with a U-shaped staple 26 which serves to accommodate an insertable and removable retainer pin 28 similar to a cotter key. This pin in turn permits a hook 30 on an end of the coil spring 32 to be connected thereto. The opposite end of the spring is fastened in any suitable manner, as by a nut and bolt 33, to an intermediate portion of a longitudinally bowed cradling bar 34. The opposite slotted end portion 36 of this bar serves to permit the coacting looped end portion 38 of a suspension strap 40 to be adjustably connected thereto. The strap portions are secured together at 42 and the loop 44 at the opposite end is connected to the link portion 46 of a clevis 48. The clevis, that is the stem thereof, has an eye 50 hingedly mounted at 52 between the ears 54 on the shank 56 which is secured in place at 58.

As before stated by securing the frame members 8 and 10 in the manner seen in Fig. 1 and providing the expedients described, two cradling and clamping devices of identical construction may be used.

As shown in Figures 1 and 2, the conventional grain tank and elevator construction includes a generally triangular shaped web or support bracket 60 by which the elevator 6 is secured to the wall of the tank 4.

As suggested by the numeral 61 in Figure 1, a sheet of suitable material may be interposed between the straps 40 and the elevator 6.

The foregoing is considered as illustrative only of the principles of the invention. Further, since numerous modifications and changes will readily occur to those skilled in the art, it is not desired to limit the invention to the exact construction and operation shown and described, and accordingly all suitable modifications and equivalents may be resorted to, falling within the scope of the invention as claimed.

What is claimed as new is as follows:

1. A clamp for removably securing a grain elevator vertically on a grain tank, said clamp including a pair of vertical bars on the tank on opposite sides of the elevator, bolts securing one of the bars to the tank, eyebolts securing the other of said bars to said tank, arms on said other bar, hooks on said arms, levers journaled on the eyebolts, straps having one end swivelly connected to the first named bolts and engageable circumferentially with the elevator for clamping same against the tank, and coiled springs connecting the other ends of said straps to the lever for tightening said straps on the elevator, said levers being engageable in the hooks for retention thereby in operative position.

2. A clamp for removably securing a grain elevator on a tank, said clamp comprising an arcuate bar engaged circumferentially with the elevator and having a pair of slots in one end portion, a strap connected to the tank on one side of the elevator and including on one end a loop slidably threaded through the slots for adjustably connecting said strap to said bar, a lever pivotally mounted on the tank on the other side of the elevator, and a coiled spring operatively connecting said lever to the bar for tightening said bar on the elevator and

2,945,664

3

engaging the loop therewith for frictionally anchoring
the strap in adjusted position.

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