

W. J. KALINOUSKI & A. PETERS.

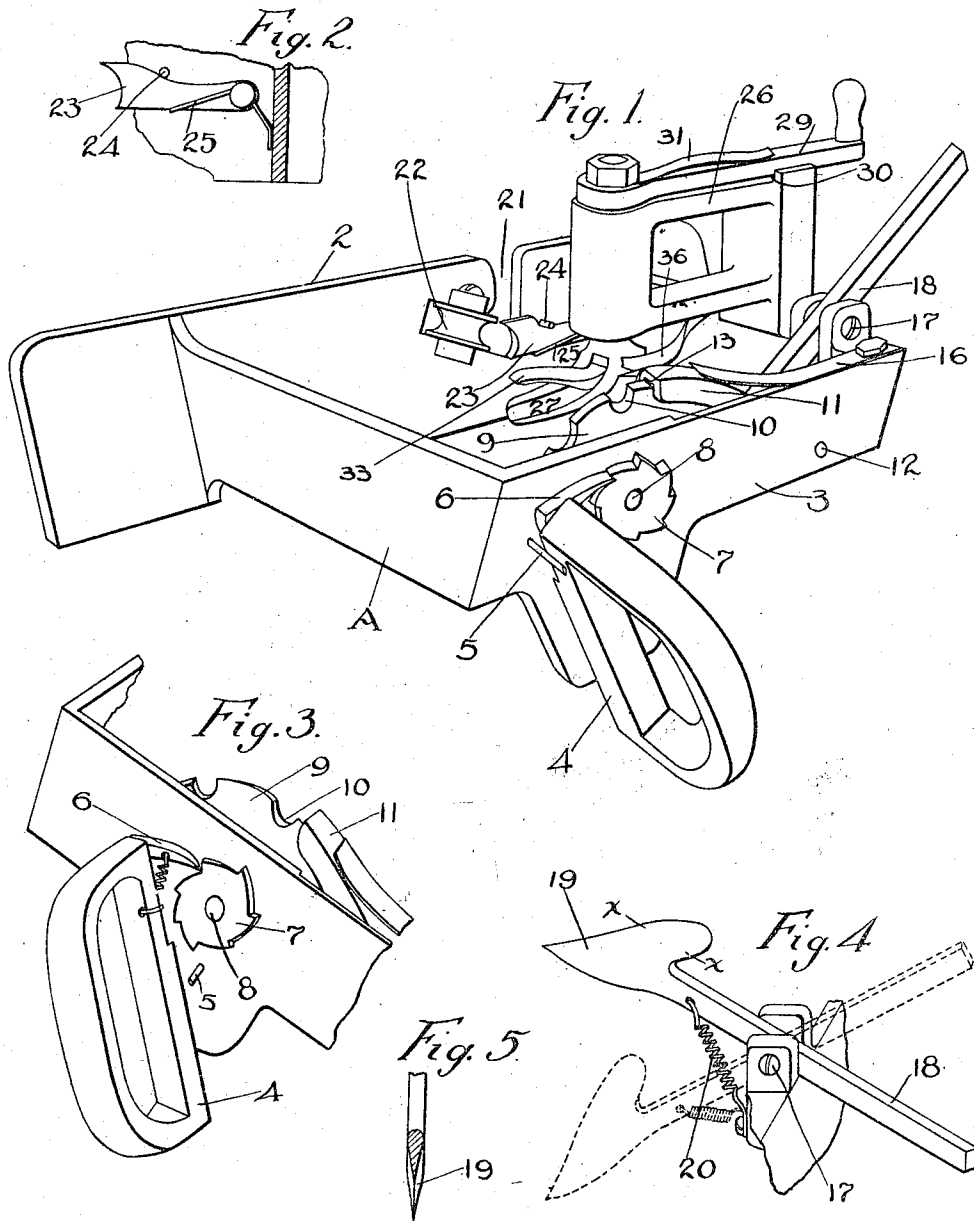
SHOCK CORD KNOTTER.

APPLICATION FILED JUNE 1, 1912.

1,052,592.

Patented Feb. 11, 1913.

2 SHEETS—SHEET 1.



WITNESSES

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2 SHEETS—SHEET 2.

Fig. 6.

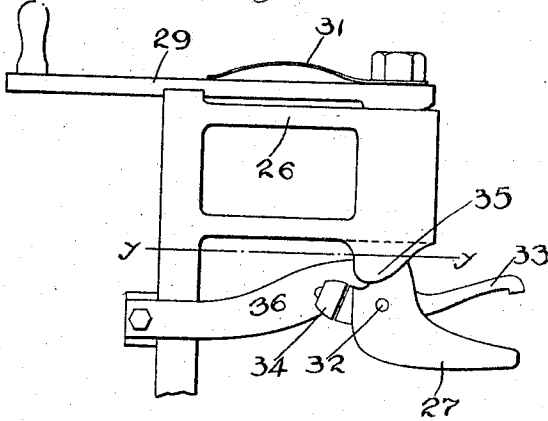


Fig. 8.

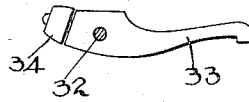


Fig. 7.

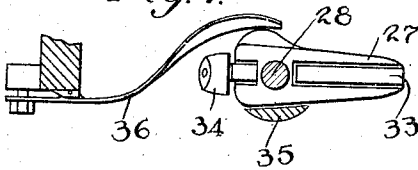


Fig. 11.

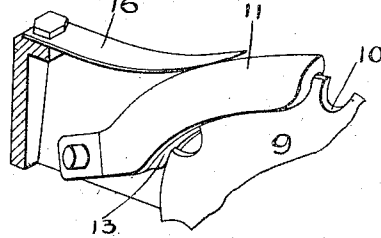


Fig. 9.

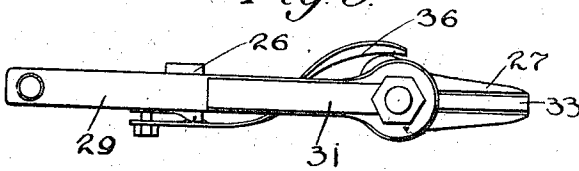
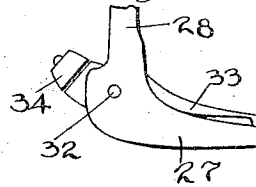


Fig. 10.



WITNESSES.

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UNITED STATES PATENT OFFICE.

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SHOCK-CORD KNOTTER.

1,052,592.

Specification of Letters Patent.

Patented Feb. 11, 1913.

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To all whom it may concern:

Be it known that we, WILLIAM J. KALINOUSKI and ALBERT PETERS, citizens of the United States, residing at Baldwin, in the county of St. Croix and State of Wisconsin, have invented certain new and useful Improvements in Shock-Cord Knotters, of which the following is a specification.

Our invention consists particularly in a hand actuatable device for tying together the ends of a binding cord, such as a binding cord carried around a shock of corn, said device including means for holding the cord under tension, cutting the same and knotting the cut ends.

To this end the invention consists in the features of construction, combination, and arrangement of parts hereinafter described and claimed.

In the accompanying drawings forming part of this specification, Figure 1 is a perspective view of our improved invention; Fig. 2 is a sectional detail of part of the same illustrating a spring pressed guide; Fig. 3 is a detail view showing the handle of the device and means for holding the cord under tension; Fig. 4 is a detail view of a cutting knife forming part of the invention; Fig. 5 is a section on line *x-x* of Fig. 4; Fig. 6 is a side elevation of a cord knotter forming part of the device; Fig. 7 is a section on line *y-y* of Fig. 6; Fig. 8 is a detail view of a hinged jaw forming part of the knotter; Fig. 9 is a top view of the mechanism shown in Fig. 6; Fig. 10 is a side view, broken away, of the jaws of the cord knotter; and Fig. 11 is a sectional detail of part of the means for holding the cord under tension.

Referring to the drawings A represents an inclosing framework having an extended front wall 2 designed in use to be held closely against the sides of the shock. Carried by the rear wall 3 is a pivotally supported handle 4, the rear movement of the upper end of said handle being limited by a stop 5. The upper end of the handle carries a pawl 6 which works in connection with a ratchet 7 secured upon the end of a post 8 journaled through the wall 3. Secured upon the opposite end of the post inside the wall 3 is a disk 9 formed with peripheral cord receiving notches 10. In order to grip the cord within the notches we provide the dog 11 having pivotal support 12 upon the inner face of the wall 3 and

formed with a groove 13 to receive the edge of the disk. The dog is held in engaging contact with the disk by a spring 16. Having pivotal support 17 adjacent the inner side of the disk 9 is a cutter 18, having at its lower end a cutter blade 19. The cutter is normally held in dotted position shown in Fig. 4 by a spring 20 connecting the cutter with the supporting framework. The front wall of the framework is formed with an inlet opening 21, in one side of which is journaled an anti-friction wheel 22. In the front face of the wall 2 at the opposite side of the opening 21 is a pivotally supported guide 23 normally held pressed upwardly against a post 24 by a spring 25. The free end of the guide is inwardly curved to cooperate with the grooved edge of the wheel 22 to form a passageway for the cord, the upper side of the free edge of the guide normally standing close to the upper side of the anti-friction guide wheel.

Supported by a bracket 26 on one side wall of the frame A is our improved knotter shown specifically in Figs. 6 to 10. The knotter consists of an outwardly extending jaw member 27 carried by the lower end of a vertical post 28 journaled in the bracket. Secured upon the upper end of the post is a handle 29 normally held in the slot 30 in the bracket by means of the spring 31. The inner end of the handle may be rounded as shown to allow it to be lifted at its outer end out of locking engagement with the slot 30, the handle being suitably secured from turning upon the post as by having the post and the receiving opening of the handle squared. Having pivotal support 32 upon the fixed jaw 27 is a cooperating jaw member 33. The rear end of the jaw member 33 carries a shoulder 34 to engage with a cam shoulder 35 upon one side of the bracket to open the jaw. The continued turning of the post will carry the shoulder 34 away from the cam shoulder 35 into contact with a cam guide 36 closing the jaw.

In operation, the cord will be carried through one of the slots 10 of the disk 9 and the wheel then turned by the handle 4 to carry the cord underneath the dog 11, and hold the cord between it and the disk. The cord will then be carried over the knotting jaws 33 and 27 through the opening 21. In passing the cord through the opening 21 it may be forced below the free end of the guide to stand between the guide and

anti-friction roll. The cord is then passed around the shock, the end of the cord, after being passed around the shock, being passed through the opening 21, over the knotting jaws 27 and 33 and through one of the notches 10 in the disk 9, the free end of the cord then being pulled tight to cause it to tightly bind the shock, the disk then being again turned to bring the free end of the cord between said dog and disk. With the operation thus far carried out the cord that has been carried around the shock will be held under tension by the disk 9, the front plate being preferably held tightly against the shock to cause the tightest possible binding of the shock. The post 28 when rotated to turn the jaws will, by reason of the cord passing over the top of the jaws, wind the cord around the jaws, and as the jaws reach the open position shown in Fig. 6 the part of the cord passing from the jaws to the disk 9 will pass between the open jaws. As the jaws are turned beyond the position shown in Fig. 6 the cam guide 36 will close the pivoted jaw upon the cord and the knife can then be lifted to cut the cord. The device may then be pulled away, causing the cord to slip off the jaws. As the cord which is wound around the jaws slips therefrom it will pass over the cut ends of the cord which stands between the jaws, forming a knot in the free ends of the cord, and leaving the shock tightly bound.

We claim as our invention:

1. A hand actuatable cord knotting device of the class described comprising a frame formed at one side with a guide way, a disk rotatably supported at the other side of the frame and formed with a plurality of peripheral notches, an actuating handle for said disk, a dog peripherally engaging with said disk to independently hold the ends of

a cord extending through adjacent notches, an associated cord cutter and a knotting device comprising a fixed jaw rotatably supported inside said frame, and a jaw pivotally supported by said fixed jaw and cam means arranged to successively open and close said pivoted jaw, as said jaws are rotated, for the purpose set forth.

2. A hand actuatable cord knotting device of the class described comprising a frame formed at one side with a guide way, a cooperating spring pressed guide arranged in connection with said guide way and extending into said guide way thereby to be depressed by a cord passed through, a knotting device supported inside said frame, said knotting device comprising a fixed rotatable jaw, a cooperating pivotally supported jaw, cam means for successively opening and closing said pivoted jaw as said jaws are opened, a cord holding device comprising a disk formed with a plurality of peripheral notches rotatably supported upon the side of the frame opposite said cord guideway and a dog peripherally engaging said disk whereby the cord may be initially passed through one of said slots and secured under said dog, and the opposite end of said cord after being passed through said guideway and returned may be secured in one of the succeeding disk slots under said dog, and a cutting knife interposed between said cord holder and knoter.

In testimony whereof we affix our signatures in presence of two witnesses.

WILLIAM J. KALINOUSKI.
ALBERT PETERS.

Witnesses:

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Copies of this patent may be obtained for five cents each, by addressing the "Commissioner of Patents, Washington, D. C."