

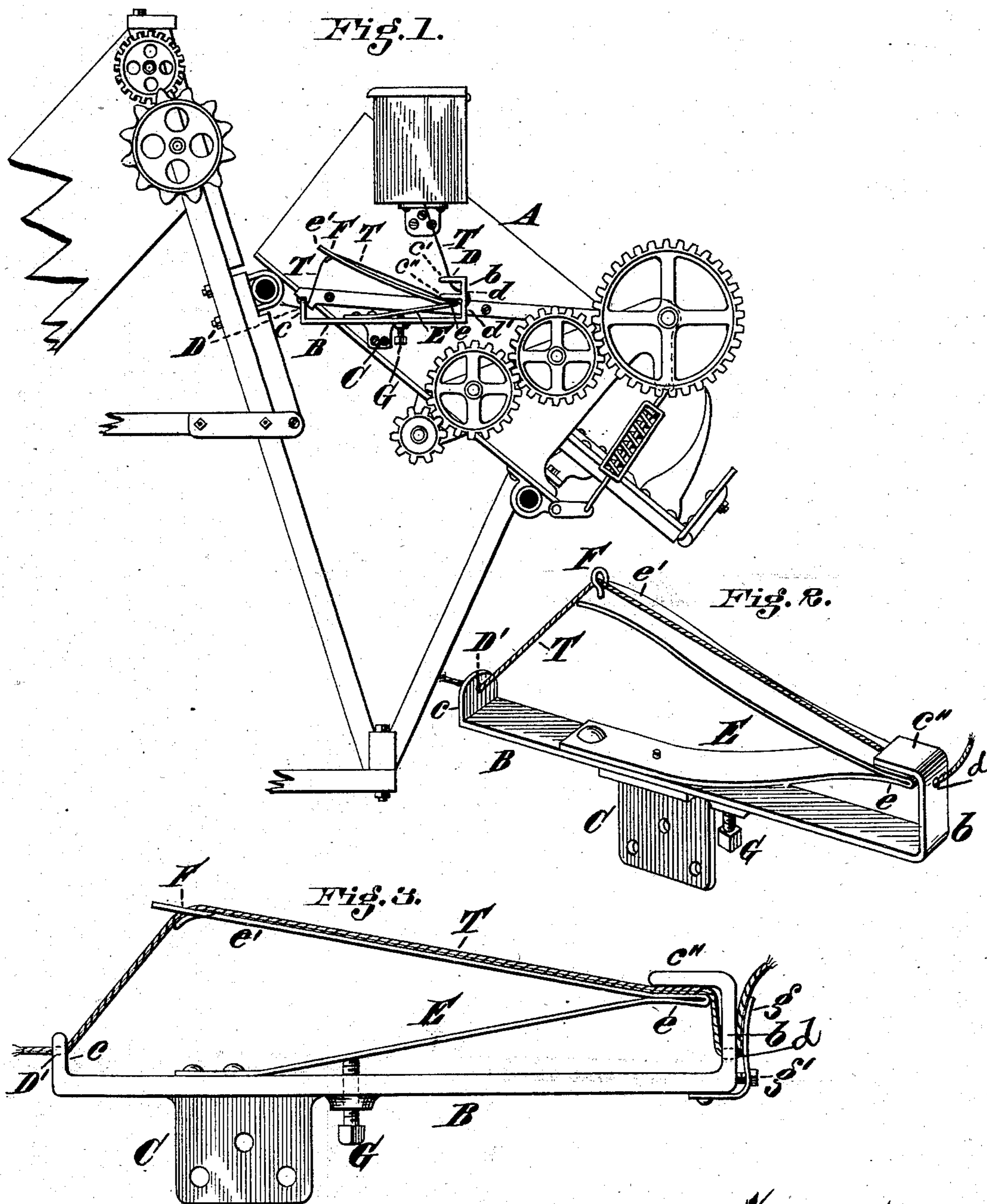
(No Model.)

N. T. REMY.

TWINE TENSION AND TAKE UP DEVICE FOR GRAIN BINDERS.

No. 274,822.

Patented Mar. 27, 1883.



Attest
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UNITED STATES PATENT OFFICE.

NOAH T. REMY, OF MILTON, INDIANA.

TWINE TENSION AND TAKE-UP DEVICE FOR GRAIN-BINDERS.

SPECIFICATION forming part of Letters Patent No. 274,822, dated March 27, 1883.

Application filed December 27, 1882. (No model.)

To all whom it may concern:

Be it known that I, NOAH T. REMY, a citizen of the United States, and a resident of Milton, in the county of Wayne and State of Indiana, have invented certain new and useful Improvements in Twine Tension and Take-up Devices for Grain-Binders, of which the following is a specification.

My invention relates to an improved tension and take-up device for use more particularly in connection with the binding mechanism of grain-binders.

My invention consists in the provision of a semi-elliptical or fork-shaped spring mounted between the upturned ends of a supporting-bracket, one of which ends is made in angular form to accommodate the converged ends of said spring, which are brought to bear against the under side of the angular extension by a regulating-screw. The twine passes from the feeding-ball through openings in said angular end and between the said converged ends of the spring and the angular end of the bracket to and through an eye in the free end of the spring, and thence downward through an opening in the other upturned end of the bracket to the knot-tying mechanism, all of which will be fully set forth in the following description of the accompanying drawings.

Figure 1 is an end view of a grain-binder, showing my improved device in its preferred form attached in position thereon. Fig. 2 is a perspective view of a modified form of my invention. Fig. 3 is a longitudinal elevation of another modified form thereof.

A represents the frame of the grain-binder, to the end wall of which my twine tension and take-up device is secured. The other parts shown in the drawings are the same as those in the binding apparatus in general use, and need no description herein, as they form no part of the invention, merely illustrating the application thereof.

B represents a bracket-frame formed of flat metal, and having upturned ends *b c*, the end *b* having double inward extensions *c' c''* at right angles thereto.

C is a plate, being integral with frame B, and by which it is secured to the grain-binder or other machine desired.

D D' *d d'* are holes or openings made in the extension *c'* and upturned ends *b c*, into and through which openings the twine passes to and from spring E.

E is a spring of semi-elliptical or forked form, and constructed preferably of a single piece of metal folded over at its converging ends *e*, and secured at one of its other ends to the flat frame B in any suitable manner.

e' is the free yielding portion of spring E, which acts as a take-up for slack in the twine.

F is an eye provided in the outer end of the part *e'* of spring E, for the passage and guidance of the twine to the opening D', and from thence to the binding mechanism.

G is a screw passing through the frame B, for regulating the pressure of the end *e* of said spring E on the passing twine for tension purposes.

In the operation of my improved tension and take-up device the twine T from the feeding-ball enters the opening D, passes from it through the openings *d d'*, and thence between the end *e* of spring E and the extension *c''*, the bends in the twine caused by its passage through the holes D *d d'* and the pressure of the end *e* on the twine effecting the proper tension thereon. The twine then passes over the spring-arm *e'* and through eye F, which arm *e'* yields in the progress of the twine through said eye F and opening D', but returns to its normal position when the pressure on it ceases, and thereby takes up such slack in the twine as is present or necessary.

In the forms shown in Figs. 2 and 3 the spring E is similar to that above described, and shown in Fig. 1; but the modifications occur in the construction of the turned-up ends of the bracket-frame B.

In the form shown in Fig. 2 there is but one extension, *c''*, and also but a single opening, *d*, in the upturned end *b*, which would form a tension device inferior to that hereinbefore described for the purpose I particularly design it, but which might in many cases answer where a light tension is necessary.

In the form shown in Fig. 3 the angular upturned end is similar to that shown in Fig. 2, but has its opening *d* arranged lower, and is provided with an accessory spring, *g*, whose

pressure against the twine which passes between it and the outer face of the upturned end *b* is regulated by a screw, *g*'.

I claim—

5 1. A tension and take-up device for the binding-twine of grain-binders, composed of the spring *E e c'*, mounted within a bracket-frame, *B*, and provided with a tension-regulating screw, *G*, substantially as herein set forth.

10 2. In a grain-binder, a tension and take-up device for the binding-twine, composed of the spring *E*, mounted within a bracket support-

ing frame, *B b c c' c''*, *D D' d d'*, and accessory spring-tension *g*, arranged, constructed, and adapted to operate substantially as here- 15 in set forth.

In testimony whereof I have hereunto set my hand in the presence of two subscribing witnesses.

NOAH T. REMY.

Witnesses:

W. T. GAINES,
AARON MORRIS.