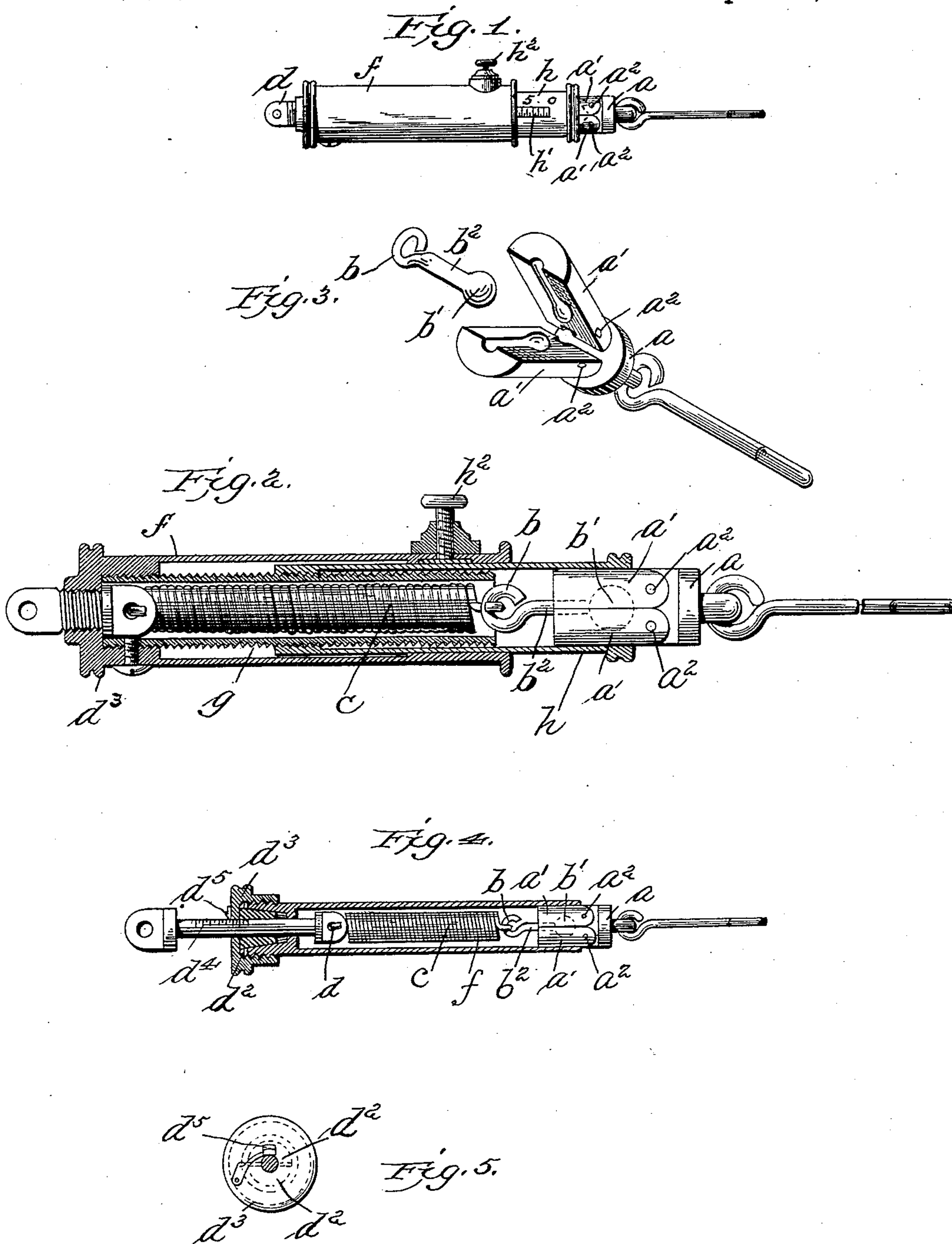


(No Model.)

D. L. TURNER.
RELEASING DEVICE.

No. 602,569.

Patented Apr. 19, 1898.



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UNITED STATES PATENT OFFICE.

DONALD LANGLEY TURNER, OF WELLINGTON, NEW ZEALAND.

RELEASING DEVICE.

SPECIFICATION forming part of Letters Patent No. 602,569, dated April 19, 1898.

Application filed August 24, 1897. Serial No. 649,394. (No model.)

To all whom it may concern:

Be it known that I, DONALD LANGLEY TURNER, a citizen of the United States, and a resident of 54 Lambton Quay, Wellington, in the Colony of New Zealand, have invented an Improved Releasing Device, of which the following is a specification.

This invention relates to and its object is to provide a device for releasing lines, sheets, and the like when they are subjected to an undesirable strain—as, for example, when the sheets of boats or yachts are strained to such an extent that they must be released to avoid dangerous results. The device is applicable for many purposes where two bodies must be separated or a cord or the like must be released after a certain strain is exerted to avoid breaking the same or damaging the structure to which such cord is attached—as, for example, it may be used for tethering a horse and save the reins from being broken should the horse start away from fright or other cause, or it may be used with stirrup-leathers to release a rider when the foot has been caught in the stirrup after the rider has been thrown from his horse.

The invention is carried into effect by making a clutch which normally passes within a tube and grips an eyebolt hooked to one end of a spring, the other end of said spring being secured to the farther end of the tube, so that with ordinary work the clutch remains within the tube; but when the strain exceeds that for which the device is set the clutch will be pulled out of the tube and the release effected.

In order that the invention may be most easily understood by a skilled person, the invention is illustrated on the accompanying drawings, to which reference will be made while giving a detailed description.

Figure 1 is an exterior view of the device as arranged for fine adjustment. Fig. 2 is a section of the same. Fig. 3 is a perspective view of the clutch when opened and the eyebolt released. Fig. 4 is a section of a cheaper form and as arranged for coarser adjustments. Fig. 5 is a view of the end of Fig. 4.

Similar letters refer to similar parts.

Referring to the drawings, and more particularly to Figs. 1, 2, and 3, the clutch *a* has jaws *a'* pivoted at *a²* and hollowed to receive

the ball *b'* and stem *b²* of eyebolt *b*, which engages with spring *c*. The other end of the spring is attached to the eyebolt *d*, fixed in the head of the tube *f*. The exterior of tube *g* is threaded with any suitable thread to receive the adjustable tube *h*. The thread shown on the drawings is a fine pitch; but the pitch may be increased to any desirable extent.

With ordinary work the clutch *a* will remain wholly or partially within the adjustable tube *h*; but under an abnormal strain the said clutch will be drawn out of the tube and then opening out, as shown on Fig. 3, will be released from the tube.

The tube *h* may be adjusted by screwing or unscrewing the same upon the interior tube *g*, so that it will pass more or less upon the clutch *a* and make it necessary that the spring *c* shall be more or less extended before the clutch can escape. The tube *h* is provided with a scale *h'*, which may be read while making fine adjustments and may be secured from turning by set-screw *h²*. In some cases the set-screw may be replaced by a lock and key, so that the device cannot be tampered with, but be adjusted by an authorized person only.

On Figs. 4 and 5 the adjustment is made by sliding the eyebolt *d* in the head of tube *f* and then securing the same by means of the conical wedges *d²* and nut *d³*. The stem of the eyebolt is serrated at *d⁴* to engage with a spring-catch *d⁵* to enable adjustment to be made and in the dark to indicate to an operator the distance he has moved the stem, and thus to what degree he has decreased or increased the strength of the device. The various parts may be made of any suitable metal, and preferably of brass or similar metal, which will not readily deteriorate when exposed to the weather.

I wish it to be understood that I do not confine myself to the exact details hereinbefore set forth, as these may be modified in several ways without departing from the spirit of the invention.

What I claim, and desire to secure by Letters Patent of the United States, is—

1. A releasing device comprising the clutch, the bolt held thereby, and a casing for holding the clutch closed, said clutch being movable relative to the casing and adapted to fly

open when moved out of said retaining-casing, substantially as described.

2. In combination, the releasing-clutch, the bolt engaged thereby, the retaining-casing for holding the clutch closed on the bolt, the spring for holding the clutch within the casing under tension and the rope or draft device connected to the clutch, substantially as described.

3. In combination, a draft connection as a rope or the like, a movable clutch connecting the parts of said draft device and comprising the pivoted members, and a casing for holding the clutch to its work until a predetermined strain is reached, said clutch being located within the casing, substantially as described.

4. In combination, the clutch, comprising the pivoted members, the eyebolt engaged thereby, the spring connected with the eyebolt at one end, and the casing to which the other end of the spring is connected, said casing holding the clutch to its work, the said

clutch and spring being arranged within the casing, substantially as described.

5. In combination, the clutch, comprising the pivoted clutch members, the bolt engaged thereby, the spring and the casing with means of adjustment for changing the amount of strain necessary to release the clutch from the casing, the said casing inclosing the clutch and the spring, substantially as described.

6. In combination, the clutch, the two-part casing engaging the same, the eyebolt engaged by the clutch, and the spring connected to the eyebolt and to the casing, the said parts of the casing being adjustable to vary the strain necessary to release the clutch from the casing, the said casing containing the said clutch, eyebolt and spring, substantially as described.

In witness whereof I have hereunto subscribed my name this 10th day of June, 1897.

DONALD LANGLEY TURNER.

In presence of—

J. J. DEVINE,
FRED. J. FOOT.