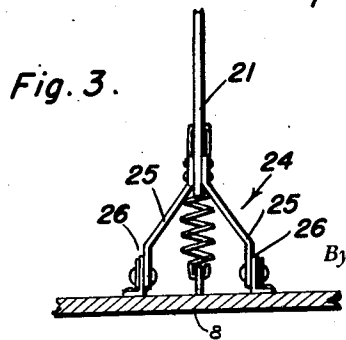
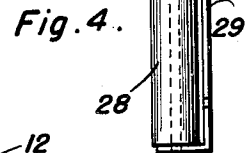
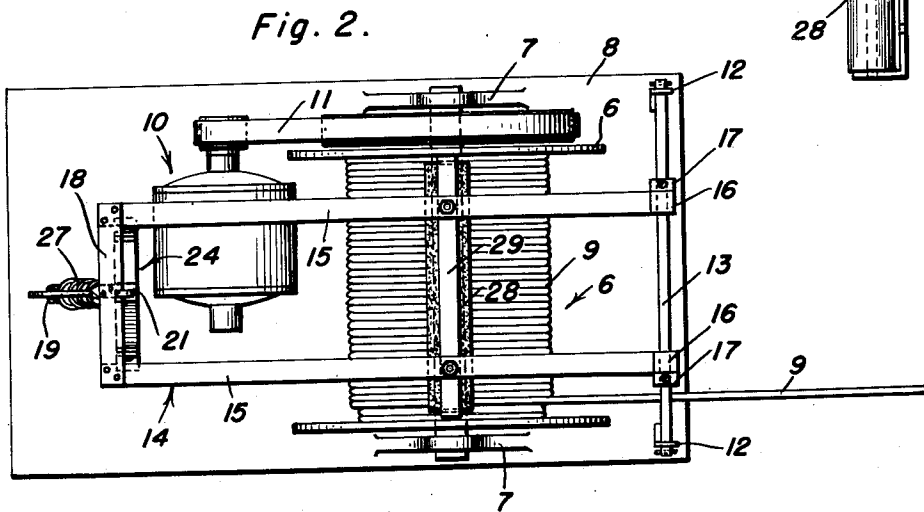
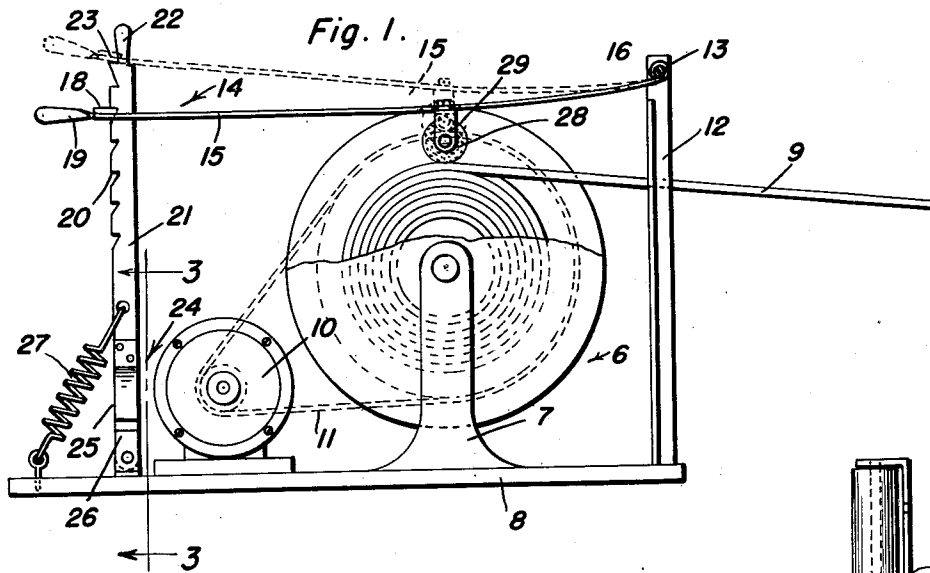


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REEL AND CABLE BRAKE  
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## REEL AND CABLE BRAKE

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9 Claims. (Cl. 242—156)

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The present invention relates to improvements in what is believed to be novel brake means which, in use, serves to prevent backlash of cable windings on a reel, for instance, reeling means such as is employed in connection with hoisting machines, stump pullers and the like.

It is a matter of common knowledge that when a cable or the like is payed out rapidly from a reeling drum, centrifugal force will often loosen the windings and will promote lost motion during the initial stages of rewinding the cable on the reel. To minimize such backlash conditions friction brakes have been offered for use. In carrying out the principles of the present invention friction brake means has been adopted, and being of a structural character distinct in nature, constitutes the essence of the improvements herein specifically and otherwise under advisement. Briefly, in carrying out the principles of the present invention a suitable frame is provided and this is hingedly attached at one end to a relatively fixed shaft, carries a rubber friction brake roller which is in contact with the cable windings and embodies position setting and retaining means which is such in character as to impose the requisite braking contact against the cable windings.

Another object, structurally construed, has to do with a hingedly supported roller carrying frame provided with a detent which is engageable with keeper notches provided in a spring held member providing a contributory part of the overall improvements.

Other objects and advantages will become more readily apparent from the following description and the accompanying illustrative drawings.

In the drawings, wherein like numerals are employed to designate like parts throughout the same:

Figure 1 is a side elevational view, with a portion in section illustrating a reel and cable arrangement and supporting means therefor which means includes, as a part of same, the aforementioned backlash preventing means;

Figure 2 is a top plan view of the structure seen in Figure 1;

Figure 3 is a fragmentary detailed sectional view on the plane of the line 3—3 of Figure 1, looking in the direction of the arrows;

Figure 4 is an elevational view of the brake roller and assembling yoke therefor.

Referring now to the drawings by reference characters, the reel or drum is generally denoted by the numeral 6 and this is mounted in uprights 7 on a base 8. The cable is denoted by the nu-

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meral 9 and is wound or reeled in the usual manner on the reeling drum. In the instant case a motor 10 is mounted on the base and operates a belt 11 which drives the reeling drum. Additional uprights, in the form of angle irons 12 are attached to and rise from the base and these support a cross rod 13 which, in turn, is employed to support a hingedly mounted frame 14. The frame members, in the form of flexible limbs, are denoted by the numerals 15 and have eyes 16 rockably mounted on the cross-shaft 13. I provide adjusting and retaining collars 17 held in place by set screws and the collars are mounted on the cross-shaft and coact with the eyes 16 to properly position and hold the frame 14 in place. There is a transverse connecting member 18 at the outer end of the frame members 15 and this is not only a connecting member but is also a keeper as well. In Figure 1 it will be seen that the frame structure includes a hand grip 19 which serves to raise and lower the frame 14 for purposes of selectively engaging the member 18 thereof with keeper seats or notches 20 in a retaining post 21. The post is provided on its upper end with a hand grip 22 and just below the hand grip is provided with a shoulder 23 which serves as a rest when it is desired to lift the cross-piece 18 up to assume an out-of-the-way position. The post is provided at its lower end with a fork arrangement 24 (see Figure 3) and the fork members 25 are pivotally connected with angle brackets 26 attached to the base 8. A coiled spring 27 is also provided and this is anchored on the base 8 and is attached at its opposite end to the post 21. Hence, the spring tends to pull the vertical post in a direction from right to left and allows the post to be rocked by hand in a direction to easily disengage the keeper member 18 from the keeper notches for purposes of making elevational adjustments of the frame 14.

The frame carries the friction brake roller 28. This is a rubber unit and is horizontally disposed and is mounted in a yoke 29 which in turn is suitably fastened and suspended on the median portions of the frame members 15. It follows that the brake roller is carried by the frame and the frame is hingedly mounted and is connected with suitable retaining means. The frame is therefore liftable and lowerable on the pivot means as shown and when raised to the dotted line position shown in Figure 1 the braking roller is then free of frictional contact with the windings of the cable. By swinging the frame down and bringing the roller into contact with the windings it is

obvious that frictional pressure is exerted upon the latter and as the cable is payed out, the windings are kept under tension and are prevented from loosening up and expanding unnecessarily under action of centrifugal forces.

The invention may be interpreted as a cable brake, a reel or drum brake, or a brake which in effect produces the necessary drag and effect on both cable and drum.

A careful consideration of the foregoing description in conjunction with the invention as illustrated in the drawings will enable the reader to obtain a clear understanding and impression of the alleged features of merit and novelty sufficient to clarify the construction of the invention as hereinafter claimed.

Minor changes in shape, size, materials and rearrangement of parts may be resorted to in actual practice so long as no departure is made from the invention as claimed.

Having described the invention, what is claimed as new is:

1. In a structure of the class described, a relatively fixed support, a drum mounted for rotation on said support, a cable wound for use on said drum, a yoke, a brake roller of compressible material mounted for idling in said yoke, a flexible frame, means for mounting said frame on said support, said yoke being mounted on said frame, said frame embodying a keeper, and tiltable spring held means on said support with which that keeper is selectively engageable.

2. In a structure of the class described, a relatively fixed support, a drum mounted for rotation on said support, a cable wound for use on said drum, a yoke, a brake roller of compressible material mounted for idling in said yoke, a frame, means for mounting said frame on said support, said yoke being mounted on said frame, said frame embodying a keeper, and means on said support with which said keeper is selectively engageable, said means embodying an adjustable post having notches forming keeper seats with which said keeper has releasable and connectable association.

3. In a structure of the class described, a support embodying a base, a reel mounted on said base, a cable wound on said reel, means for driving said reel, uprights on said support, a cross-shaft on said uprights, a frame structure hingedly mounted on said cross-shaft, a post on said support having keeper notches, said frame member having a cross-piece forming a keeper and said keeper being releasably engageable with said notches, and a rubber braking roller mounted on said frame and engageable with the convolutions of said cable.

4. In a reel and cable brake structure of the class shown and described, a relatively fixed support embodying a horizontal base, uprights attached to and rising vertically from said base, a drum horizontally disposed and mounted for rotation on said base, a post pivotally mounted on and rising from said base, the uprights being

at one end of the base, the post at the opposite end of the base and said drum between the uprights and post, said post having keeper notches, a spring attached to the base and post for holding the post in a predetermined position in relation to the base and drum, a horizontally disposed braking frame hingedly mounted between the uprights, said frame extending in a plane above the top of the drum, and keeper means carried by the free swingable end of the frame and engageable with keeper notches.

5. The structure specified in claim 4, together with a handle on the free swingable end of the frame and a separate and independently operable handle on the upper end of said post.

6. The structure specified in claim 4, said frame being longitudinally flexible, and a compressible friction-type braking roller carried by the intermediate portion of the frame and situated directly above the drum for coaction with cable adapted to be wound on said drum.

7. In a reel and cable brake construction of the class shown and described, a relatively fixed support including a horizontal base, uprights attached to and rising vertically from one end portion of the base, a cross-shaft mounted between the upper ends of the uprights parallel to the base, a horizontally disposed cable winding drum mounted for rotation on the base, a vertically disposable post hingedly mounted at its lower end of the base, said post having keeper notches, a tensioning spring connected to the post at one end and to the base at the opposite end, a horizontally disposed frame above the drum and pivotally connected at one end with said cross shaft, the opposite end of said frame having a keeper member, said keeper member being releasably engageable with said keeper notches, and a braking roller mounted transversely on the intermediate portion of said frame and above said frame.

8. The structure specified in claim 7, said frame embodying longitudinal frame members and said frame members being flexible.

9. The structure specified in claim 7, said frame embodying longitudinal frame members and said frame members being flexible, said post being provided at its upper end with a hand grip, and said keeper member being a separate hand grip.

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