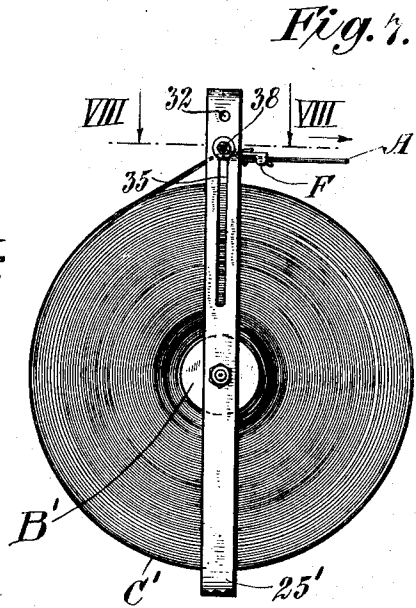
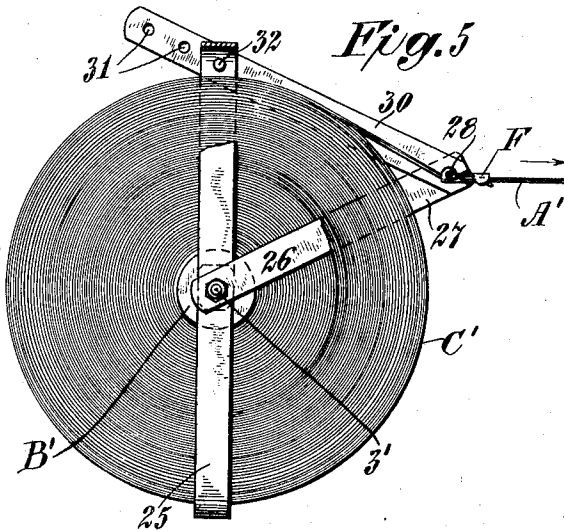
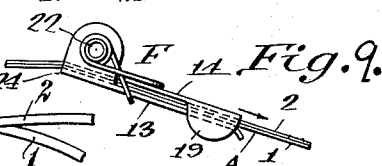
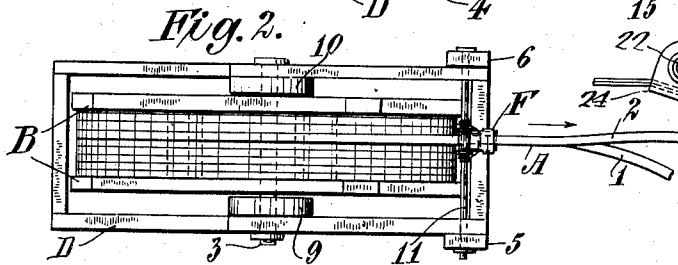
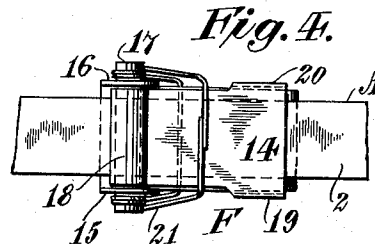
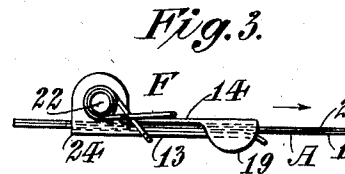
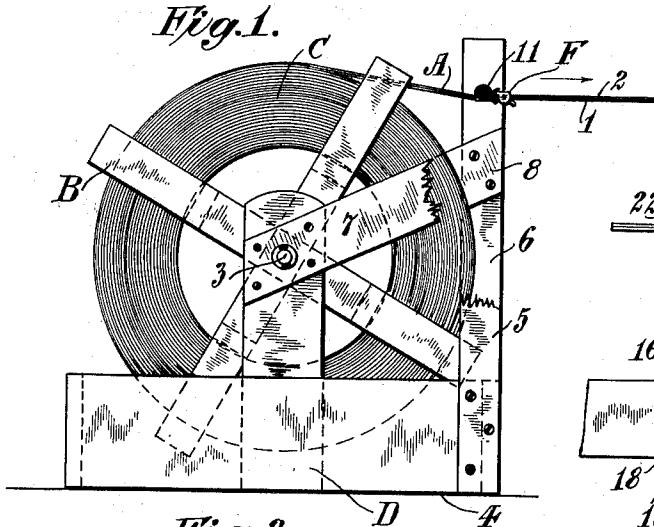


L. S. HOWE.
PLURAL STRAP DISPENSER.
APPLICATION FILED NOV. 25, 1911.

1,038,369.

Patented Sept. 10, 1912.

2 SHEETS—SHEET 1.



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2 SHEETS—SHEET 2.

Fig. 6.

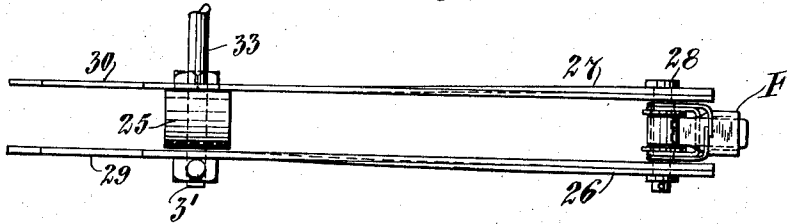
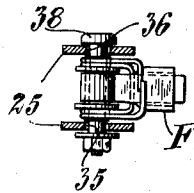


Fig. 8.



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PLURAL-STRAP DISPENSER.

1,038,369.

Specification of Letters Patent.

Patented Sept. 10, 1912.

Application filed November 25, 1911. Serial No. 662,270.

To all whom it may concern:

Be it known that I, LEON S. HOWE, a citizen of the United States, and a resident of the borough of Manhattan, city, county, and State of New York, have invented certain new and useful Improvements in Plural-Strap Dispensers, set forth in the following specification.

This invention relates to plural-strap dispensing packages in which a plurality of metallic straps, usually employed for strapping shipping boxes, are wound, as a set, in the same coil so that, by a single operation, the desired number of strap-lengths for strapping all the desired localities of a box may be unwound from the reel, measured off, and cut off all at the same time. In such a package in which a plurality of surface overlying strips are first combined as a unit or part and are then wound into a single package or coil, it is necessary merely to measure off the desired length along the surface of the top or exposed strip so that this top or exposed strip so measured does itself serve as a lineal measurer for all the strips of said set. Also if the package is to be self-measuring so as not to require the application thereto of a separate measuring device it is necessary to apply measuring marks only to the outer or exposed strip of said set, which does then, in the same way as if measured off by a separate measuring device, itself serve as a lineal measurer for all the strips of said set.

In packages of the above type, it has been found that there is a tendency for one or more of the strips of a set to unwind from the coil independently of the others of the set. In other words, there has been a tendency for the set of strips wound as a unit to separate so that the ends of the strips projecting from the coil are of materially unequal length so that it is then inconvenient to cause a single exposed strip of a set to serve as a lineal measurer for all the strips of said set.

An object of the present invention is to combine with such a plural-strap coil means for maintaining the unity of the set of a plurality of straps and at the same time to permit the desired lengths of such a set to be unwound from and drawn out from the coil with ease and quickness; and to hold the severed ends of the strips from drawing

back and flying apart to destroy the integrity of the set. This means is embodied herein as a feeding clip supported by a framework sustaining the coil and mounted on a pivot transverse to the coil. The feeding clip comprises preferably a pair of gripping jaws which project outwardly from their pivot mounting on the frame. Spring means causes these jaws to grip the plurality of straps at a locality outside of the clip-bearing and lateral confining ears are preferably formed on the jaws to prevent the lateral displacement of the plurality of straps.

In the embodiment of the invention which comprises a pan-cake structure with all the straps of the coil superposed the feeding clip is itself fixed against lateral movement, while in the embodiment of the invention comprising a reel wound with a set of plurality of straps so that the coil occupies a space several times the width of a single set of straps, the feeding clip is mounted so as to have an independent lateral movement along an extensive pivot bearing in the form of a cross rod.

The above and further objective features of the invention will be set forth more fully in the accompanying claims which should be read in connection with the following specification, which describes the illustrative embodiments of the invention shown in the accompanying drawings, which form a part of this application in which, like characters designate corresponding parts, and in which—

Figure 1 is a side elevation with parts broken away of the structure comprising a reel in its embodiment; Fig. 2 is a plan view of the structure shown in Fig. 1; Fig. 3 is a side elevation drawn to an enlarged scale of the feeding clip of the embodiment of Fig. 1 and showing its relation to a set of two straps; Fig. 4 is a plan view of the apparatus shown in Fig. 3; Fig. 5 is a side elevation of a pan-cake-like coil of a set of two straps and embodying the invention; Fig. 6 is a plan view of the structure shown in Fig. 5; Fig. 7 is a side elevation showing a modified embodiment of the invention applied to a pan-cake-like coil such as is shown in Fig. 5; Fig. 8 is a horizontal section along line VIII—VIII of Fig. 7 with the coil omitted; and Fig. 9 is a view corresponding

to Fig. 3, but showing the clockwise rotation of the clip F, and the consequent kinking of the straps 1 and 2.

Referring first to the structure shown in Figs. 1 to 4 inclusive, a set A of a plurality of straps 1 and 2 of strap iron are wound on to the reel B to form the coil C, which coil has a thickness or width several times the width of the individual set of straps A. The reel B is shown sustained by a frame D of suitable material such as wood through the medium of the spindle 3. The bottom of the frame D is a box-like structure 4 to the sides of which two spaced uprights 5 and 6 are suitably secured. Stays 7 and 8 extending forwardly from the spindle supports 9 and 10 are secured to the uprights 5 and 6 to brace the same. A cross rod 11 is mounted horizontally in the upper ends in the uprights 5 and 6 so as to extend crosswise of the reel C. This rod serves as a clip-bearing. Upon this clip bearing 11 is mounted the feeding clip F. The feeding clip F comprises a pair of gripping jaws 13 and 14. At the rear of the jaw 13 a pair of wings 15 and 16 are struck-up at right angles and are perforated to receive the short bearing tube 17. The rear of the gripping jaw 14 is bent up and over-turned to form the cylindrical lip 18 embracing the tube 17. At the forward end of the jaw 14 a pair of ears 19 and 20 are struck down to embrace the lower jaw 13 and to serve as lateral confining ears to prevent the lateral displacement of the plurality of straps 1 and 2, the ears being spaced laterally a slight distance in excess of the width of the straps 1 and 2. The spring means, shown as the wire spring 21, encircles the projecting ends of the tube 17 after first passing under the jaw 13 and then terminates over the jaw 14 so as to cause the jaws 13 and 14 to grip the set of straps A at the locality of the ears 19 and 30 which is considerably forward of the bearing 22 formed by the tube 17 on the cross rod 11, so that the clip may have free pivotal movement on the rod 11 and also free lateral play thereon to accommodate itself to the varying lateral position of the set of straps A within the reel B, which set weaves from side to side throughout the width of the coil C.

From an inspection of the figures it will be seen that the set of straps A pass somewhat to one side, that is below the cross rod 11, while the gripping locality of the feeding clip F is well forward of this cross rod 11. When the set of straps A is pulled out from the feeding clip F, the friction of the clip upon the set of straps being at the forward end of the clip, tends to hold the clip substantially parallel with the set of straps, and therefore, possesses little or no retarding force to the withdrawal of the set of straps. On the other hand when the set of straps has been cut off forward of the clip

F, as is the practice, any tendency of the reel C to withdraw the end of the said straps A through the clip F is effectually prevented. This withdrawal movement tends to rotate the clip F clockwise about the bearing rod 11 so that the sharp shoulder 24 of the lower jaw member 13 is moved against the lower strap to grip the same so that there is a tendency to form a kink in the set of straps to prevent their withdrawal, see Fig. 9.

In the structure just described, the uprights 5 and 6 and the braces 7 and 8 which combine the clip-bearing 11 with the frame D which sustains the coil C may be shipped from the factory as an integral part of the dispenser or not according to convenience. The attaching means for these parts are shown as screws to permit of their ready mounting and removal and so as to facilitate shipment "knocked down."

Figs. 5, 6, 7 and 8 show the feeding clip F in combination with a pan cake like coil of a plurality-set of straps, previously referred to herein and of the kind claimed in my Patent No. 1,004,028, granted August 19, 1911, for metallic shipping packages.

In the embodiment shown in Figs. 5 and 6, the set A' of two straps is wound into a compact pan-cake like structure C' upon the wooden disk B' which forms a central pivotal bearing for the bolt 3' which clamps the strap-iron yoke 25 diametrically looped about the coil C'. Two radial arms 26 and 27 are also pivotally secured by the bolt 3', their outer ends being cross-connected by the clip bearing bolt 28, which serves as the pivot-bearing for the clip F and also pierces the ends of the adjustable brace rods 29 and 30. The rear ends of the brace rods 29 and 30 are provided each with a series of relatively crossed spaced perforations 31. The upper portion of the loop strap 25 is likewise provided with corresponding opposed perforations 32, so that a nail or bolt 33 may be passed through the perforations 32 and a set of the perforations 31 for the combined purpose of securing the yoke 25 to a post or wall and of fixing the brace rods 29 and 30. When the coil C is comparatively full the adjustment of the parts should be that shown in Fig. 5. As the set A' of straps is unwound from the coil C', it has been found advisable to readjust the brace rods 29 and 30 by securing them to the bolt 33 through the medium of a set of perforations 31 nearer to the rear end of the brace bars 29 and 30, so that the feeding clip F is lowered to correspond with the lowering of the upper limit of the coil C' due to unwinding.

In Figs. 7 and 8 the radial supporting rods 26 and 27 for the feeding clip and also the brace rods 29 and 30 have been eliminated. In this embodiment the yoke 25 of

comparatively stiff strap iron finds its embodiments in the yoke 25', the upper portions of which, are provided with opposing vertical slots 35 and 36, in which the ends of the pivot bolt 38 serving as a pivot bearing for the clip F are loosely mounted so that the bolt may float freely up and down in the slots 35 and 36. As in the structure of Figs. 5 and 6, the perforations 32 provide means for attaching the structure to a post or wall by means of a bolt or nail.

In both the structures just described in connection with Figs. 5, 6, 7 and 8, the frames for sustaining the coils C' are respectively the yokes 25 and 25'. The clip-bearing 28 and 38 are combined with the yokes 25 and 25' respectively through the medium of the rods or arms 26, 27, 29 and 30 and the slot 35.

It is preferred that the clips F and F' be formed of sheet metal such as sheet iron or sheet steel.

What is claimed and what is desired to be secured by United States Letters Patent is:—

1. In a plural-strap dispensing package, the combination of a frame for rotatably sustaining a coil of a set of a plurality of metallic straps; a clip-bearing mounted cross-wise of said coil and secured to said frame; a feeding clip comprising two outwardly extending jaws pivoted at the rear to said clip-bearing, lateral confining ears formed on said jaw to prevent the lateral displacement of said plurality of straps; and spring means to cause said jaws to grip said set of straps at a locality forward of said clip bearing for preventing movement of one of said straps relative to the other.

2. In a plural-strap dispensing package, a frame for rotatably sustaining a coil of a set of a plurality of metallic straps occupying an axial space several times the width of a single strap; a clip-bearing of a length as great as the axial width of said coil and secured to said frame cross-wise of said coil; a gripping clip for confining and feeding said set of straps mounted on said clip-bearing and free to move lengthwise of said bearing to accommodate the lateral weaving of said set of straps upon unwinding; and lateral confining means formed on said

clip to prevent the lateral displacement of the straps of said set said gripping clip being adapted to prevent movement of one of said straps relative to the other.

3. In a plural strap dispensing package, the combination of a frame for rotatably sustaining a coil of a set of a plurality of metallic straps; a clip-bearing mounted cross-wise of said coil and secured to said frame; a feeding clip pivoted upon said clip-bearing having a pair of spring pressed jaws disposed eccentrically of said clip-bearing and adapted to rotate about said clip-bearing, said jaws clamping said set of straps between them; and a shoulder formed upon said feeding clip adapted to kink said set of straps for preventing movement of one of said straps relative to the other.

4. In a plural strap dispensing package, the combination of a frame for rotatably sustaining a coil of a set of a plurality of metallic straps; a clip-bearing mounted cross-wise of said coil and secured to said frame; a feeding-clip pivoted upon said clip-bearing having a pair of spring pressed jaws disposed eccentrically of said clip-bearing, said jaws clamping said set of straps between them and being adapted to be rotated about said clip-bearing by said set of straps; and a shoulder formed upon said feeding-clip adapted to kink said set of straps as said feeding clip is rotated, for preventing movement of one of said straps relative to the other.

5. In a box strap dispensing package, the combination of a delivery device pivotally mounted upon said support, said delivery device being formed with a passage eccentric of its pivot and an end of said strap being adapted to be fed through said passage; means adjacent said passage for gripping said strap; and means adjacent said passage adapted to kink said strap when said delivery device is rotated, to prevent withdrawal of said strap.

In witness whereof, I have signed my name to this specification, in the presence of two subscribing witnesses.

LEON S. HOWE.

Witnesses:

C. H. CURTIS,
F. J. C. ENSWORTH.