Nov. 22, 1932. H. HARVEY 1,888,593

WIRE AND BAND DISPENSING MACHINE

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Fig. 1

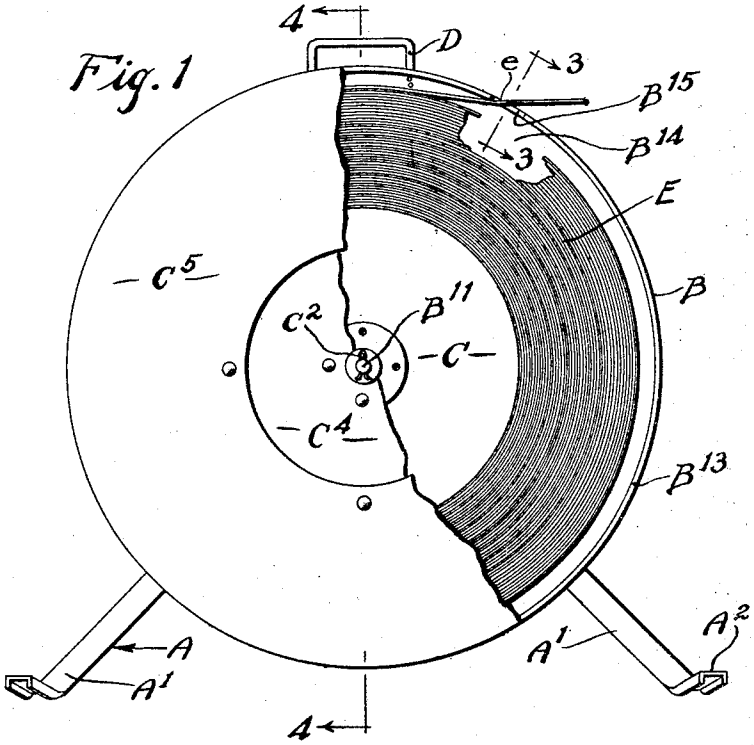


Fig. 3

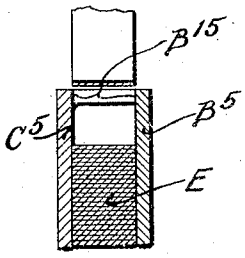
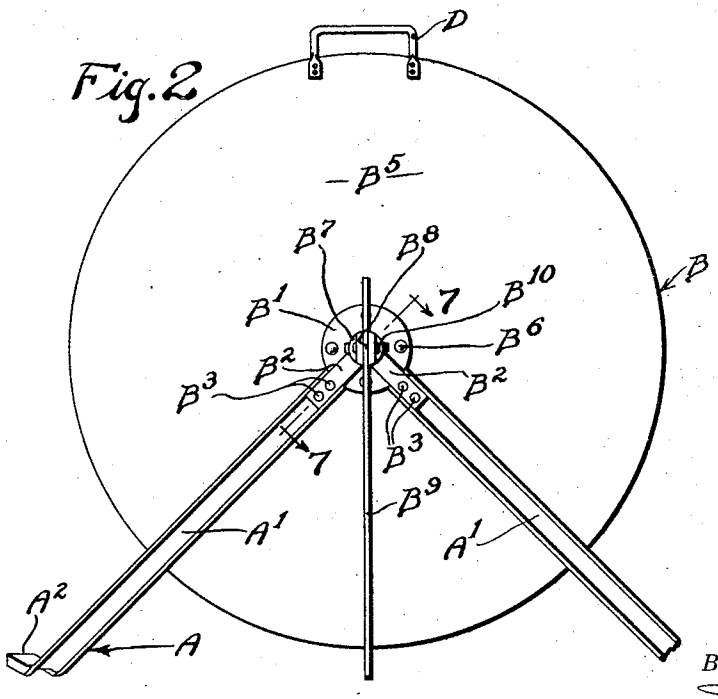


Fig. 2



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WIRE AND BAND DISPENSING MACHINE

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Fig. 4

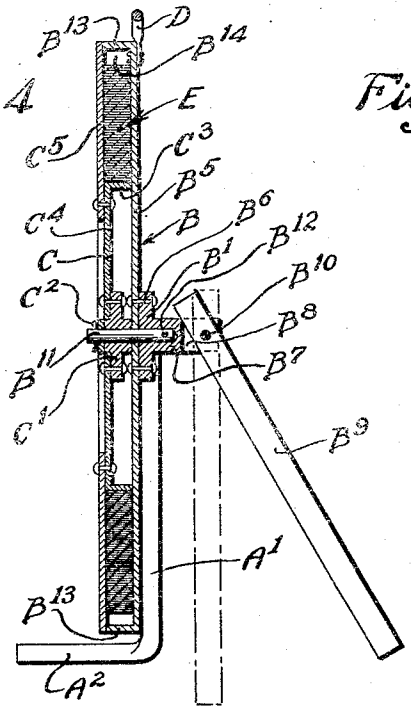


Fig. 5

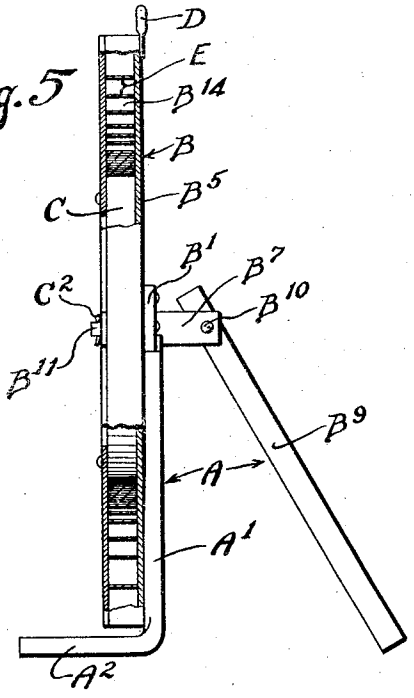


Fig. 6

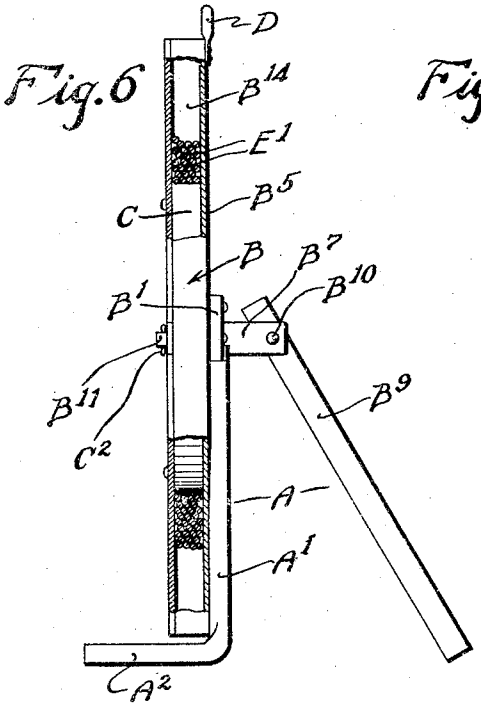
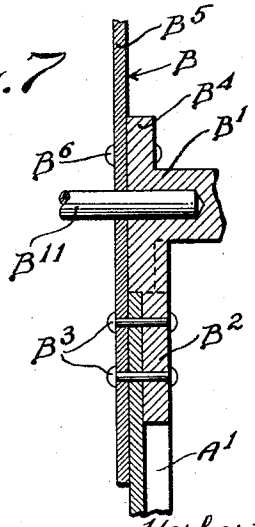


Fig. 7



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Patented Nov. 22, 1932 1,888,593

UNITED STATES PATENT OFFICE

HERBERT HARVEY, OF LOS ANGELES, CALIFORNIA

WIRE AND BAND DISPENSING MACHINE

Application filed August 31, 1929. Serial No. 389,775.

This invention relates to and has for an object the provision of new and novel improvements in band and wire dispensing machines whereby a roll of metal band or wire may be supported in position so that selected lengths of the band or wire may be fed outwardly from the machine for use.

In the consideration of my invention it may be understood that heretofore rolls or reels of band or wire have been rotatably mounted on a suitable support and provided with some sort of friction brake for retarding the rotation of the drum on which the band or wire is carried.

It is characteristic of rolls of band or wire, however, that in the unwinding of a roll the outermost convolutions tend to unwind and expand so that the dispensing of the band or wire is troublesome and inconvenient, and in many cases the band or wire becomes entangled and bent and requires a substantial period of time for straightening out before it can be used.

It is an object of my invention, therefore, to provide a machine including a rotatable drum for carrying the band or wire, and a stationary circular housing encompassing the drum and providing an annular space between the drum and the rim of the housing whereby the outermost convolution of the roll of band or wire will engage the rim of the housing and other convolutions will frictionally engage each other so as to provide sufficient friction that the unintentional unwinding of the roll will be prevented.

A particular object of my invention is to provide a confined annular space for receiving the roll of band or wire, together with a suitable aperture in the rim of the housing for playing out the band or wire in desired lengths.

Other and more detailed objects of invention may appear as the description progresses. I have shown a preferred form of my invention in the accompanying drawings, which is subject to modification within the scope of the appended claims without departing from the spirit thereof.

In said drawings,

Fig. 1 is a front view of the assembled machine with the front partially broken away to show a roll of metal band supported in the machine.

Fig. 2 is a rear view of the machine.

Fig. 3 is a fragmentary transverse section of the same on line 3—3 of Fig. 1.

Fig. 4 is a sectional elevation of the machine on line 4—4 of Fig. 1 showing the convolutions of the metal band closely wound together.

Fig. 5 is a similar view partly in section showing the outermost convolutions of the band partially unwound.

Fig. 6 is a view similar to Fig. 5 but showing a roll of wire carried on the dispensing drum in lieu of the metal band.

Fig. 7 is a section of the machine on line 7—7 of Fig. 2.

Briefly described, my machine includes a suitable standard A on which is mounted a stationary circular housing B and a drum C rotatably supported on the standard and within the housing B.

In its simplest form the standard A may be provided with diagonally disposed legs A1, A1 with feet A2 formed thereon and extended beneath the housing B. The housing B is provided with a hub B1 having radially extended arms B2, B2 preferably formed integral with the hub and suitably attached to the legs A1, A1 of the standard by means of bolts or rivets B3. The hub B1 is provided with a flange B4 which is attached to the wall B5 of housing B by means of bolts or rivets B6.

An axial extension B7 is also provided on the hub which is slotted at B8 to receive the upper end of a brace B9. Said brace is pivotally connected to the extension B7 of the hub by means of a bolt or rivet B10, and the lower end of the brace is adapted to rest upon the floor or supporting surface for the feet A2 so that the standard will support the housing B in an upright position.

A pin or stud B11 is supported in and extended forwardly from the hub B1. Said pin may be stationarily held in the hub by means of a pin B12 or otherwise.

The drum C is provided with a hub C1 adapted to rotatably support the drum on

the pin B11. The drum may be detachably held in position on the housing B by means of a cotter pin C2 or otherwise. The housing B has a circular rim B13 concentric with the rim C3 of drum C substantially spaced from the drum so as to provide an annular space B14 within the housing B to support the roll of metal band E or of wire as at E'. The web C4 of the drum may be provided with suitable means, as for instance a disc C5, forming a closure for the space B14 of the housing. The disc C5 is preferably of a size substantially conforming to the housing B so that the peripheral portion of the disc will overlie the edge of the housing rim B13.

The rim B13 of the housing is provided with a transversely disposed aperture B15 preferably on the upper portion of the housing as shown in Fig. 1 so that one or more convolutions *e* of the band E may be dispensed thru said aperture on a line tangent to the outermost convolution of the roll.

Usually a suitable handle, as at D, may be provided on the upper portion of the housing B whereby the machine may be rendered readily portable.

In operation, a roll of metal band E or wire E' is positioned on the drum C with its innermost convolution resting upon the rim C3 of the drum and the outer convolutions usually compactly wound one upon the other. The roll of metal may be positioned on the drum by removing the drum from the housing and resting the disc C5 upon a flat surface while the roll of metal is placed thereon. Thereafter the drum with the rolled metal is rotatably mounted on the pin B11, as shown in Fig. 4 for instance.

The outer end of the metal may be then detached from the roll and threaded thru the aperture B15 in the rim B13. A quick jerk of the portion *e* of the outermost convolution of the band will effect the rotation of drum C and the roll E and serve to loosen the outermost convolutions of the roll in the manner shown in Fig. 5. The outer convolution will thus frictionally engage the inner surface of the rim B15, and when the outer end of the roll is thereafter pulled a plurality of sections of the metal may be easily withdrawn without undue friction or retardation without further rotating the drum C. In other words, the drum is only occasionally rotated by jerking the portion *e* of the metal band or wire, thus effecting several revolutions of the drum and a sufficient unwinding of the metal so that thereafter the metal may be more easily withdrawn thru the aperture B15 than would be possible if the drum were rotated at each dispensing operation. The successive dispensing operations in such case will tend to compact the roll again, and a further rotation of the drum will become necessary only when the loosened material is entirely withdrawn.

I may employ arms or other means in lieu of the disc C5 for retaining the roll E in position within the space B14, and I may otherwise modify the structure shown and described without materially changing my invention.

What I claim is:

1. A wire or band dispensing machine comprising a frame, a shaft journaled in said frame, a drum rotatably mounted on said shaft and detachable from said frame, a housing including a wall at one end of said drum, and an annular rim concentric with and spaced from the drum to provide space for supporting a band on the drum and within the housing, said rim having an aperture thru which the band may be dispensed and a side member on the outer end of said drum forming a closure for said space.

2. A wire or band dispensing machine comprising a standard with base portions adapted to rest upon a supporting surface, an adjustable brace forming an additional support therefor, a housing on said standard having a stationary wall and an annular rim, a drum rotatably mounted on said standard and concentrically supported relative to and spaced from said rim to provide a space for supporting a plurality of convolutions of wire or band material, said rim having an aperture therein thru which the wire or band may be dispensed, and a side on the outer end of said drum cooperating with said rim to enclose said band or wire against displacement.

HERBERT HARVEY.