

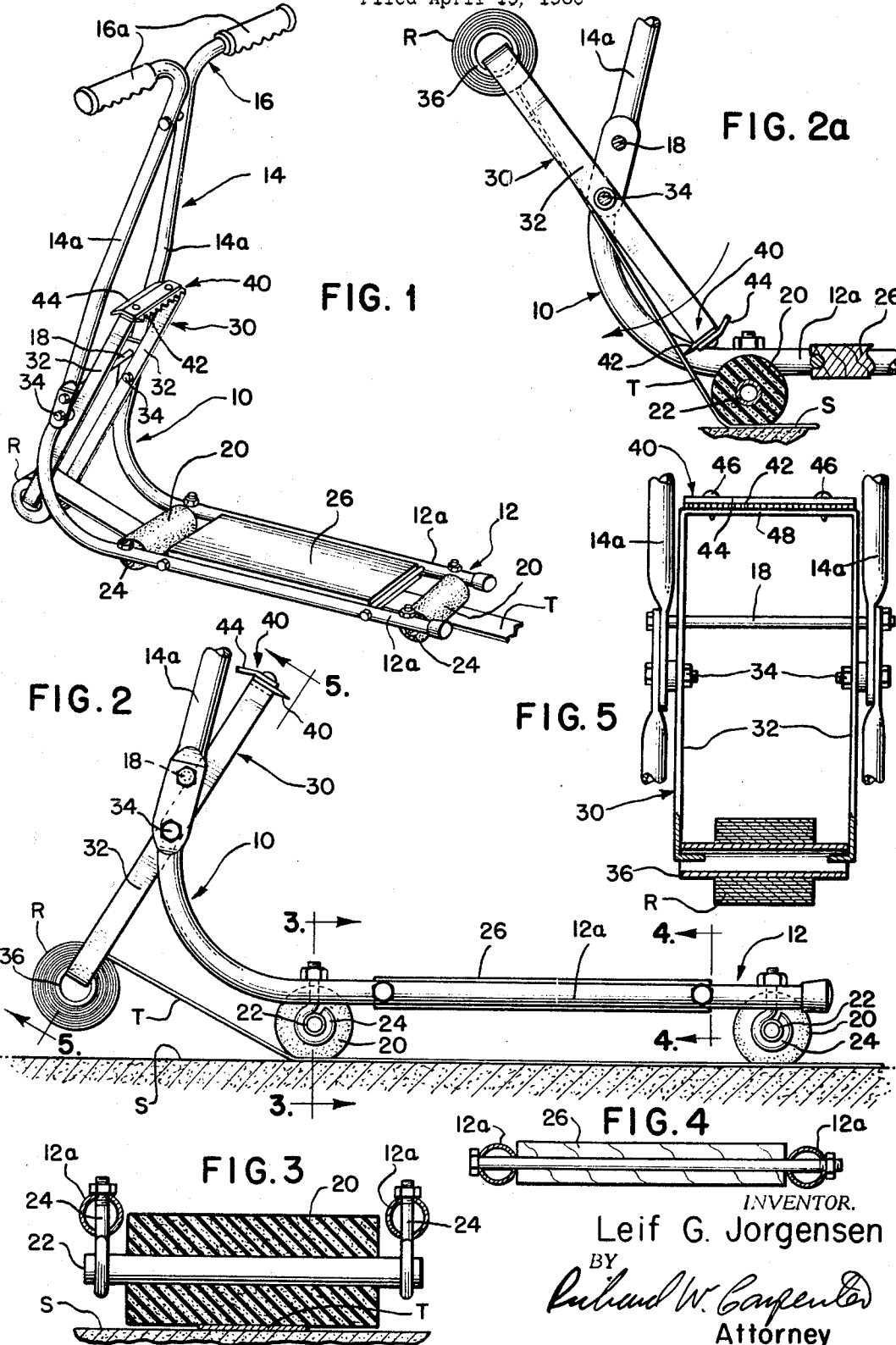
July 16, 1968

L. G. JORGENSEN

3,393,114

TAPE DISPENSING AND APPLYING MECHANISM

Filed April 19, 1966



INVENTOR.  
 Leif G. Jorgensen  
 BY  
*Richard W. Carpenter*  
 Attorney

1

2

**3,393,114**  
**TAPE DISPENSING AND APPLYING MECHANISM**

Leif G. Jorgensen, 517 W. St. Charles Road,  
Lombard, Ill. 60148

Filed Apr. 19, 1966, Ser. No. 543,654  
8 Claims. (Cl. 156—523)

This invention relates to an improvement in a device for dispensing adhesive marking tape from a roll and for applying it in strips to a horizontal, upwardly facing surface such as a warehouse or factory floor.

Until the present invention, there has not been a device available for laying down marking tape in a simple and efficient manner which is easy to operate and which will insure that the tape is applied evenly and uniformly in a straight, smooth line.

Some devices require a great amount of pressure to be exerted without providing a simple means for the operator to obtain the necessary leverage to make the devices function properly. Other devices require the operator to cut the tape by hand, knife or scissors, and yet other devices require the operator to manually pull off each new length of tape after one length of tape has been cut from the roll and applied.

It is an object of this invention to provide, in a device of the type described, a mechanism which can be easily operated by one person and which will automatically dispense a sufficient length of tape for a second application after a first strip has been cut from a roll.

A more specific object of the invention is the provision of a tape dispensing and applying device which includes a scooter-like frame with a pair of pressure rollers and a foot supporting plate on a horizontal member and a vertical member having a pivotally mounted bracket having mounted at opposite ends thereof a tape roll holding member and a foot-pedal, cutting blade member.

These and other objects of the invention will be apparent from an examination of the following description and drawing, wherein:

FIGURE 1 is a perspective view of a device embodying features of the invention with the bracket shown in the tape dispensing position;

FIGURE 2 is an enlarged side elevation of a portion of the structure illustrated in FIGURE 1;

FIGURE 2a is a view similar to FIGURE 2, but with the bracket shown in the tape cutting position;

FIGURE 3 is a transverse, vertical section taken on line 3—3 of FIGURE 2;

FIGURE 4 is a transverse, vertical section taken on line 4—4 of FIGURE 2; and

FIGURE 5 is a transverse, vertical section taken on line 5—5 of FIGURE 2.

It will be understood that, for purposes of clarity, certain elements have been intentionally omitted from certain views where they are illustrated to better advantage in other views.

Referring now to the drawing for a better understanding of the invention, and particularly to FIGURE 1, it will be seen that the novel tape dispensing and applying device embodying features of the invention is shown as including a generally L-shaped, scooter-like frame, indicated generally at 10, adapted to hold a roll R of adhesive, marking tape and to cut strips T therefrom and apply them to a horizontal surface S such as a floor.

Frame 10 includes a horizontal member 12 which comprises a pair of transversely spaced, longitudinally extending, parallel bars 12a and a vertical member 14 which comprises a pair transversely spaced, vertically disposed, bars 14a which are shown as connected to bars 12a, as at 18 and 34, but which may be formed integrally with bars 12a if desired. At its upper end frame vertical member 14 may be provided with a handle 16 which

includes a pair of horizontal arms 16a extending outwardly from the upper ends of bars 14a. At the lower end of vertical member 14, the bars 14 may be interconnected by a transversely extending cross rod 18 which also interconnects the forward extremities of frame horizontal member bars 12a. Cross rod 18 also serves as a stop to limit the rotation of bracket 30.

Still referring to FIGURE 1, it will be seen that frame horizontal member 12 is supported by a pair of generally cylindrical, preferably rubber, front and rear pressure rollers 20 rotatably mounted on horizontal shafts 22 which extend transversely between bars 12a and which may be supported at their ends from bars 12a by mounting elements 24. Disposed between front and rear rollers 20 is a flat, horizontal foot support plate 26 which is carried by the bars 12a of the frame horizontal member. Plate 26 is adapted to support one foot of an operator in scooter-like fashion in a manner hereinafter described.

As best seen in FIGURES 1, 2, 2a, and 5, a bracket, indicated generally at 30, is carried by frame vertical member 14 for limited rotation in a vertical plane extending lengthwise of the frame between bars 14a.

Bracket 30 is generally rectangular in shape, as best seen in FIGURE 5, and includes a pair of transversely spaced, parallel side bars 32 which are disposed inside of respective bars 14a and which are pivotally connected intermediate their ends to respective bars 14a by pivots 34, which may also serve to interconnect adjacent ends of bars 12a and 14a.

At one end bracket 30 carries a transversely extending roller or spindle 36 on which is carried the roll R of adhesive or pressure sensitive floor marking tape.

At the opposite end of bracket 30 is mounted a blade member 40 which includes a preferably serrated blade 42 on one side and a foot pedal 44 on the opposite side. Blade member 40 may be removably attached by a pair of screws or bolts 46 to a crosspiece 48 extending transversely between corresponding ends of side bars 32.

Now to describe the operation of the device, it will be seen that bracket 30 is rotatable in a vertical plane between the tape dispensing position of FIGURES 1 and 2, where the tape roll is in its lower position, and the tape cutting position of FIGURE 2a, where the tape roll is in its upper position and the blade member is in its lower position.

For the initial application of a strip T of tape from the roll R to the surface S of the floor, a length of tape sufficient to reach under the forward pressure roller 20 is pulled from the roll and placed under the forward pressure roller between the roller and the floor surface, with the sticky side of the tape against the floor.

The operator then stands with one foot on the foot plate 26 and, grasping the handle 16 of the frame vertical member, propels the device forward with his other foot in a scooter-like manner. As the pressure rollers engage the upper or non-sticky side of the tape they force it flat against the floor surface to cause it to adhere uniformly and smoothly to the floor surface.

After a strip T of tape of sufficient length has been laid down on the floor the operator engages the foot pedal 44 of blade member 40 and rotates the blade member in a clockwise direction, as shown in the drawings, from the tape dispensing position of FIGURES 1 and 2 to the tape cutting position of FIGURE 2a, at which point blade 42 engages the tape and cuts it. The operator then propels the device forward a distance sufficient to cause the pressure rollers to pass over the remaining portion of the strip of tape which has been cut from the roll.

The blade member is spaced on the bracket from the tape dispensing spindle a distance greater than the distance between the tape dispensing spindle and the for-

ward pressure roller, when the bracket is in its tape dispensing position, so that when the bracket is in its tape cutting position and the tape is cut, the remaining length of free tape on the roll will be long enough to reach to the forward pressure roller when the bracket is returned to its tape dispensing position for the next application of tape without requiring the operator to pull tape from the roll.

Thus, it will be seen that the invention provides a device of relatively simple design and construction which can be easily operated by one person and which will lay down tape in uniformly straight, smooth strips and which can be quickly operated to cut one strip of tape and automatically provide a new length of tape for providing the next application.

I claim:

1. In a device for dispensing and applying adhesive marking tape to an upwardly facing horizontal surface such as that of a warehouse floor, the combination of:

- (a) a generally L-shaped frame having a horizontal member and a vertical member upstanding from the forward end thereof;
- (b) a pair of horizontally disposed, cylindrical pressure rollers mounted adjacent opposite ends of said frame horizontal member for movably supporting said frame on said horizontal surface and for engagement with the upper non-adhesive side of said tape to urge the tape against said surface;
- (c) a horizontal foot supporting plate carried by the frame horizontal member between said rollers for supporting one foot of an operator in a scooter-like manner;
- (d) a handle adjacent the upper end of said frame vertical member;
- (e) a bracket mounted intermediate its ends on the frame vertical member for rotational movement in a vertical plane extending longitudinally of the frame;
- (f) a spindle for carrying a roll of tape carried adjacent one end of said bracket on a horizontal axis;
- (g) a blade member carried adjacent the other end of said bracket and including a cutting blade on one side and a foot pedal on the other side;
- (h) said blade member being spaced on said bracket from said tape carrying spindle a distance greater than the distance between the tape carrying spindle and the forward pressure roller, when the bracket is in its dispensing position, so that, when the bracket is in its tape cutting position, the cutting blade can be urged by the foot of the operator against the tape to cut said tape and thereby leave a length of free tape remaining which is long enough to reach to said forward pressure roller and, said horizontal surface, when said bracket is returned to its tape dispensing position, for the next application of tape.

2. In a device for dispensing and applying adhesive

marking tape to an upwardly facing horizontal surface, the combination of:

- (a) a frame having a horizontal member and a vertical member upstanding therefrom;
  - (b) a pair of horizontally disposed, cylindrical pressure rollers mounted adjacent opposite ends of said frame horizontal member for movably supporting said frame on said horizontal surface and for engagement with the upper side of said tape to urge the tape against said surface;
  - (c) means on the frame horizontal member for supporting one foot of an operator;
  - (d) a bracket rotatably mounted intermediate its ends on the frame vertical member for movement in a vertical plane extending longitudinally of the frame;
  - (e) tape dispensing means on said bracket adjacent one end thereof;
  - (f) a blade member on said bracket adjacent the other end thereof including a cutting blade on one side and a foot pedal on the other side;
  - (g) said blade member being spaced on said bracket from said tape dispensing means a distance greater than the distance between the tape dispensing means and the forward pressure roller, when the bracket is in its dispensing position, so that, when the bracket is in its tape cutting position, the cutting blade can be urged by the foot of the operator against the tape to cut said tape and thereby leave a length of free tape remaining which is long enough to reach to one of said pressure rollers, when said bracket is returned to its tape dispensing position, for the next application of tape.
3. A device according to claim 2, and including handle means on the upper end of said frame vertical member.
4. A device according to claim 2, wherein said foot supporting means is disposed between said pressure rollers.
5. A device according to claim 2, wherein said frame vertical element extends upwardly from the forward end of said frame horizontal member.
6. A device according to claim 2, and including a bar extending transversely across said vertical member at a location above the mounting of said bracket and engageable with said bracket to limit the rotation of said bracket in one direction.
7. A device according to claim 2, wherein said frame members each include a pair of transversely spaced elongated elements.
8. A device according to claim 2, wherein said blade member is detachably mounted on said bracket.

#### References Cited

##### UNITED STATES PATENTS

55	2,546,308	3/1951	Kahler	-----	156-577
	3,097,986	7/1963	Kauer	-----	156-577

DOUGLAS J. DRUMMOND, *Primary Examiner.*