Aug. 17, 1971 S. W. HINDS 3,600,255

PRESSURE SENSITIVE ADHESIVE TAPE APPLICATOR

Filed April 26, 1968

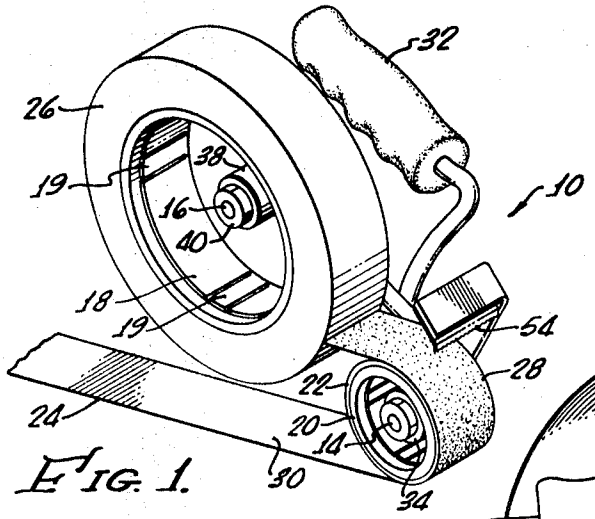


FIG. 1.

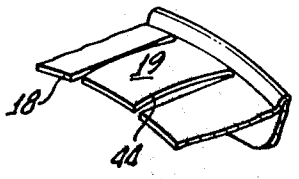


FIG. 4.

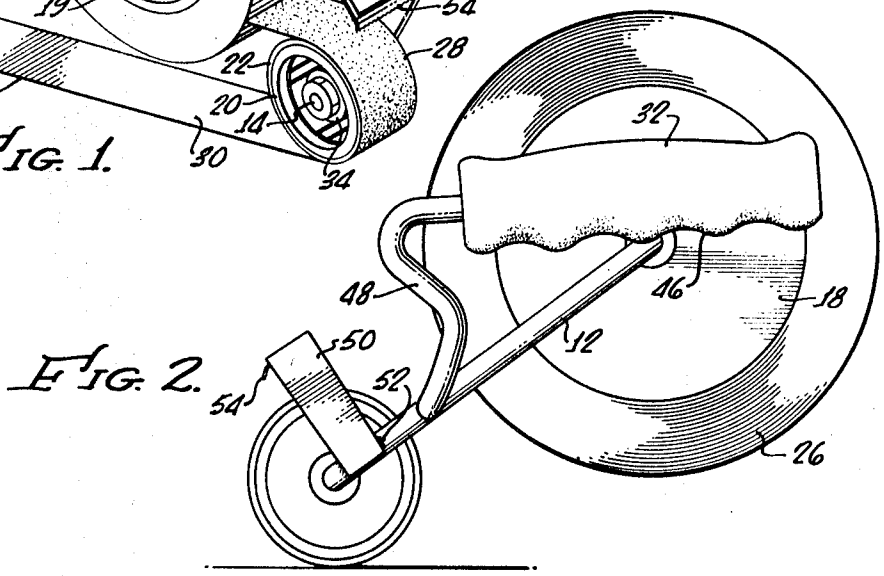


FIG. 2.

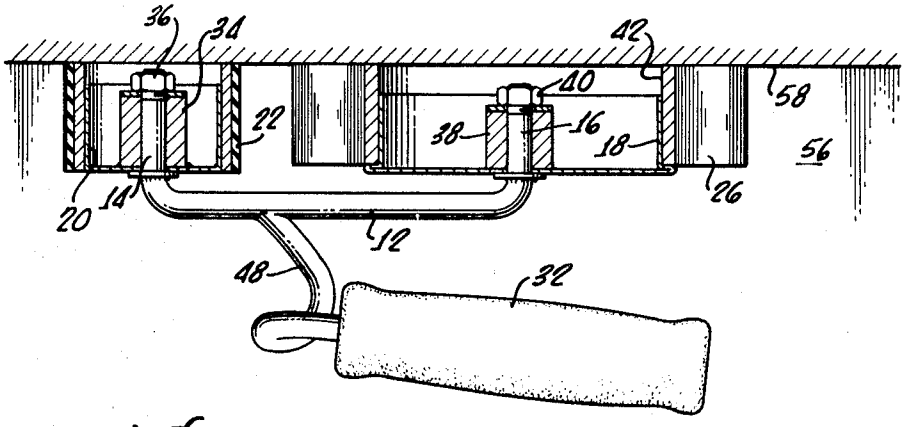


FIG. 3.

INVENTOR.
SCHUBERT W. HINDS

BY Donald W Canady

ATTORNEY.

United States Patent Office 3,600,255 Patented Aug. 17, 1971

3,600,255

PRESSURE SENSITIVE ADHESIVE TAPE APPLICATOR

Schubert W. Hinds, 601 Lovell Place, Fullerton, Calif. 92632

Filed Apr. 26, 1968, Ser. No. 724,511
Int. Cl. B32b 31/18, 31/20
U.S. Cl. 156—527 2 Claims

ABSTRACT OF THE DISCLOSURE

A pressure-sensitive adhesive tape applicator which permits accurate tape application to a surface adjacent a surface to be painted or otherwise treated. The applicator includes a frame member and a pair of axles upon which are rotatably mounted a roll of tape and a guide roller for applying the tape to the surface to be taped. The frame member is attached to said axles on one side leaving the other side unobstructed so that the tape may be applied close to the incline of the surface. A frame handle is attached to said frame intermediate said axles to roll said tape onto said surface as it is played out from said tape roll.

This invention relates to a tape applicator, and more particularly relates to a device for applying pressure-sensitive adhesive tape or the like from a roll of said tape to a surface to be covered with said tape.

It has been the practice of painters to cover surfaces to remain unpainted with masking tape. Normally, such tape is obtained in rolls and lengths of tape are removed from the roll as needed to apply to a surface to be masked. Various attempts have been made to facilitate and mechanize the tape masking operation. Mechanization is particularly desirable to increase the speed of the masking operation and to permit greater accuracy and precision in covering that area to be masked without overlapping the adjacent area which is to be painted.

In the prior art, tape applicators have been proposed which comprise tape roll engaging mechanisms with a second roll for guiding and pressing the tacky side of the masking tape to the surface to be masked. In such prior art devices, however, the tape roll and the guide roller are mounted on axles which are supported on both ends of the axles, thus enclosing or confining the tape and the rollers. With such devices it is impossible to use interchangeably, wider rolls of tape and wider guide rollers. Some of the prior tape applicator devices are arranged so that the applicator is pulled with the tape roll forward. Such applicators cannot apply tape closely adjacent a vertical wall.

The use of a tape applicator employing a frame which holds the guide roll and the tape roll from both sides necessarily prevents application of the tape flush with either edge of the roll since the applicator frame on either side of the axle, prevents application or placement of the tape edge near the edge of a surface which is adjacent a second surface which is inclined or in a different plane. Thus, for example, prohibiting application of masking tape in against a corner.

It is, therefore, an object of my present invention to provide a pressure sensitive adhesive tape applicator arranged to apply tape from a roll of tape to a surface which is adjacent a second surface in a different plane.

It is also an object of my present invention to provide pressure-sensitive adhesive tape applicator which can be used interchangeably for application of tape of varying widths.

It is a further object of my present invention to provide a pressure-sensitive adhesive tape applicator which

accurately applies such tape played out from a tape roll to a surface quickly and accurately.

Other objects and a more complete understanding of my present invention will become apparent from the following specification and the appended claims when taken in conjunction with the drawings, wherein:

FIG. 1 is a perspective view of my tape applicator, shown in the process of applying tape to a surface;

FIG. 2 is a side view of the apparatus of my present invention shown in FIG. 1;

FIG. 3 is a plan view, partially in section, of the apparatus shown in FIGS. 1 and 2; and

FIG. 4 is a fragmentary perspective view of a section of an outer rim of the roller wheel or the tape roll carrying wheel of my present invention.

Although my present invention is described herein with reference to an embodiment used to apply masking tape, it is to be understood that my present invention is useful for application of other pressure sensitive adhesive tape such as sealing tape, etc. Referring now more particularly to the apparatus shown in FIGS. 1–3, the tape applicator **10** comprises a frame member **12** which carries parallel axles **14** and **16** upon which are rotatably mounted a wheel **18** for carrying a roll of masking tape and a wheel **20** which carries a roller guide **22**. A strip of tape **24** is played out from the roll **26** so that the tacky side **28** is laid adjacent the surface to which the tape is applied. The non-tacky side **30** contacts the follow-on roller **22** and is rolled around the guide roller **22** as shown in FIGS. 1 and 2 as the tape applicator **10** is pushed forward with handle **32**. As shown in FIG. 1, the roller wheel **20** rotates clockwise about its axle **14** and the tape wheel **18** rotates counterclockwise about its axle **16**.

The frame **12** is attached to axles **14** and **16** with the front axle **14** serving as the axle for the roller wheel **20** and the rear axle **16** adapted for rotatably mounting the tape roller wheel **18**. The inner hub **34** of the roller wheel **20** receives the axle **14** and is secured thereto with a nut **36** which is threaded to a threaded portion of the axle on its outer end. Similarly, the inner hub **38** of the tape roll wheel **18** is adapated to receive tape roll axle **16** and is secured thereto by nut **40**. The tape roll wheel **18** is adapted to frictionally engage the inner surface **42** of the tape roll so that the wheel **18** rolls with the tape roll **26** as the strip of tape **24** is played out around the guide roller **22** and onto the surface to which the masking tape is applied. The frictional engagement between the inner hub surface **42** of the tape roll and the outer surface **19** of wheel **18** may be accomplished in any conventional manner such as a spring press fit which may conveniently be affected by forming the wheel **18** slightly larger than the inner surface of the tape roll hub **42** but with transversely disposed slots **44** as best shown in FIG. 4, so that the hub **18** of the tape roll wheel may become pressed or forced inwardly to receive the tape roll hub **42**.

The handle **32** as shown in FIGS. 1 and 2 may have a pistol grip **46** for convenience and the handle arm **48** is attached to the frame **12** proximate the front roller **22** preferably, to aid in maneuverability of the tape applicator and permits application of pressure to the roller **22** for pressing the tacky side **28** of the tape against the surface to which the masking tape is applied.

Thus the tape applicator of my present invention may be operated by pressing a tape roll **26** onto the tape roll wheel **18** as shown in FIGS. 1 through 3, and the strip of tape **24** unrolled from the tape roll and wound with the tacky side out around the roller **22** and touched to the surface to be masked. The tape can be further applied to said surface by merely pushing the applicator forward by the handle **32** with a slight pressure down-

wardly against the front of the tape applicator to press the tape against the surface with roller **22** as shown in FIGS. 1 and 2. The tape applicator is held so that the tape roll **26** is slightly elevated above the surface to which the masking tape is applied, as the front roll **22** is lowered into position for applying the tape to the surface.

A cutter member **50** may be conveniently attached to the frame **12**, as at **52**, and has a serrated cutting edge **54** for severing the tape when desired, as when sufficient tape has been applied.

As may be seen from the drawings, tape roll **26** may be interchanged with a wider tape roll and roller **22** may be removed from the roller wheel **20** and replaced with a wider roller having the same internal diameter and the same width as the interchanged tape roll, to thus permit the outer edge of the roller **22** to be flushed with the outer edge of the tape roll. This design not only permits use of tape of differing widths, but also the flush edges facilitate application of masking tape to a surface, for example, surface **56** shown in FIG. 3, which is adjacent a wall **58** or a second surface which is in a different plane. Thus, the flush edges can permit application of the tape on surfaces **56** immediately adjacent the surface of **58**.

In a modification of my present invention, roller wheels of various shapes, e.g. rounded or V shaped, may be used interchangeably with roller wheel **20** to permit application of tape to surfaces corresponding to the shape of the particular roller.

Although my present invention has been described herein with respect to a preferred embodiment, with a certain degree of particularity, the scope of my invention should not be limited to the details herein set forth but should be afforded the full breadth of the appended claims.

I claim:

1. A tape applicator for applying from a roll pressure sensitive adhesive tape having a tacky adhesive side and a non-adhesive side, comprising in combination: a frame member having supported thereon front and rear spaced apart parallel axles;

a first wheel rotatable on said rear axle and adapted to carry said tape roll in frictional engagement therewith;

a second wheel rotatable on said front axle for guiding tape paid out from said roll onto a first surface and pressing against said non-adhesive side to stick said adhesive side to said first surface; said frame member being arranged and attached to only one end of said axles to support said wheels on one side only leaving the other side of said wheels unobstructed so that said tape can be applied to said first surface by said second wheel flush with a second surface which is in a different plane, and which extends upwardly from said first surface,

said frame member having a handle attached to said frame between said axles and disposed parallel to the direction of tape application to said surface for guiding said applicator on said first surface and pressing said second roller against said tape applied to said first surface which is arranged and constructed with respect to said axles and said wheels to apply said tape to said first surface by moving said applicator with said second wheel forward of said first wheel with said tape paid out from said roll on said first wheel extending around said second wheel and onto said first surface as said applicator is advanced and means attached to said frame for transversely severing said tape paid out from said tape roll at a point intermediate said tape roll and the point at which said tape contacts the surface to which it is applied.

2. The apparatus of claim **1** wherein said handle is attached to said frame proximate said front axle.

References Cited

UNITED STATES PATENTS

3,364,096	1/1968	Hetes	156—577
2,927,710	3/1960	Raber	156—577X
2,999,609	9/1961	Thompson	156—527
3,325,336	6/1967	Gibson	156—577

FOREIGN PATENTS

533,505	2/1941	Great Britain	156—527

BENJAMIN A. BORCHELT, Primary Examiner

J. M. HANLEY, Assistant Examiner

U.S. Cl. X.R.

156—577