

Aug. 26, 1969

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3,463,694

MASKING TOOL

Filed June 27, 1966

3 Sheets-Sheet 1

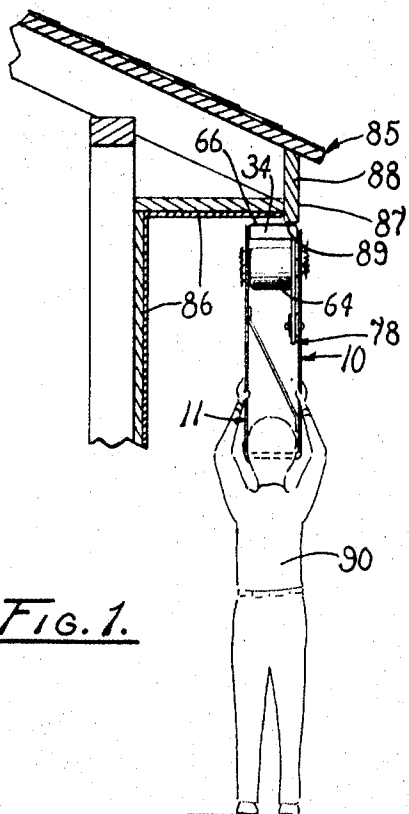


FIG. 1.

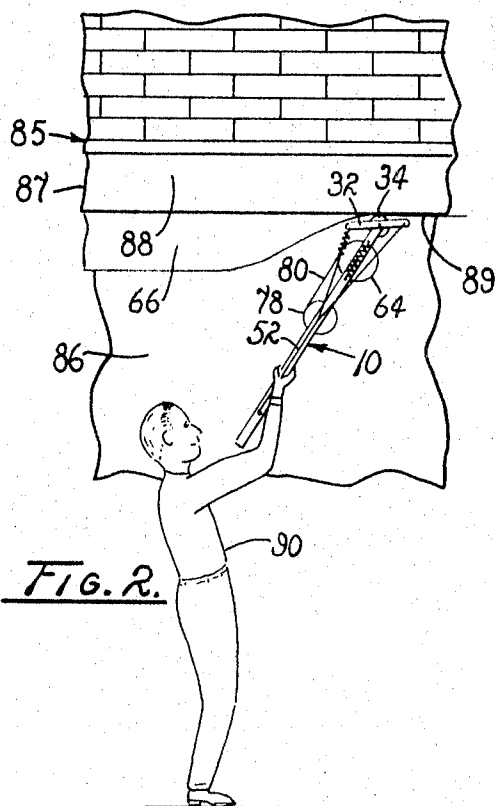


FIG. 2.

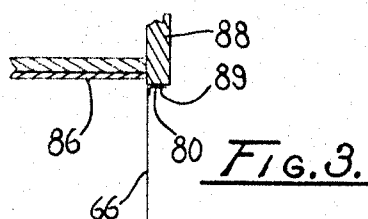


FIG. 3.

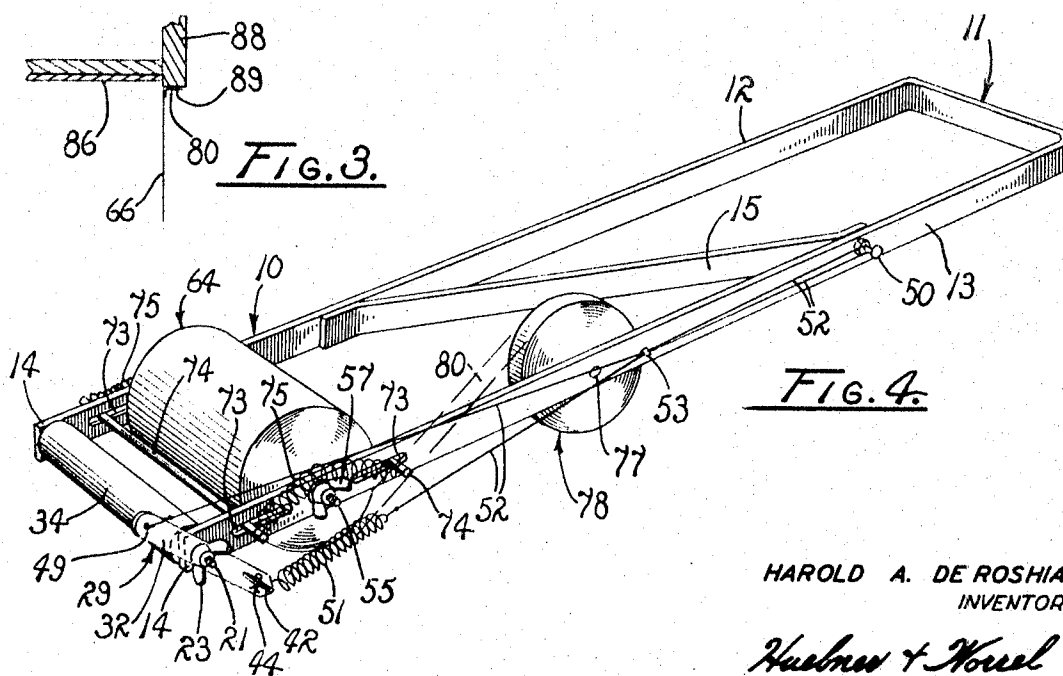


FIG. 4.

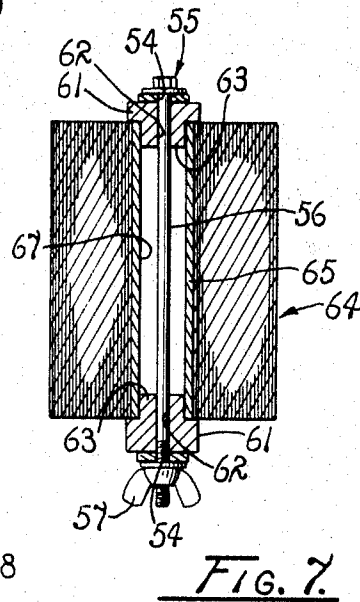
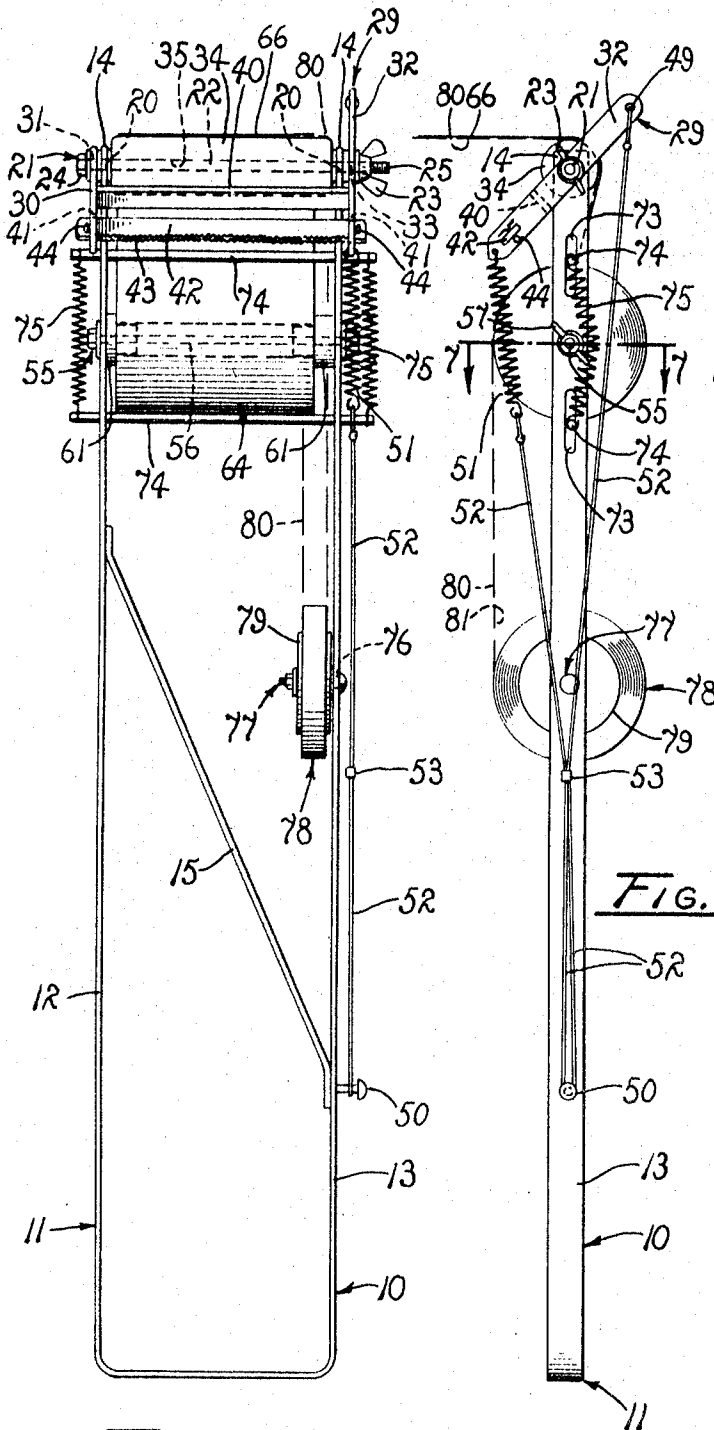
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3 Sheets-Sheet 3

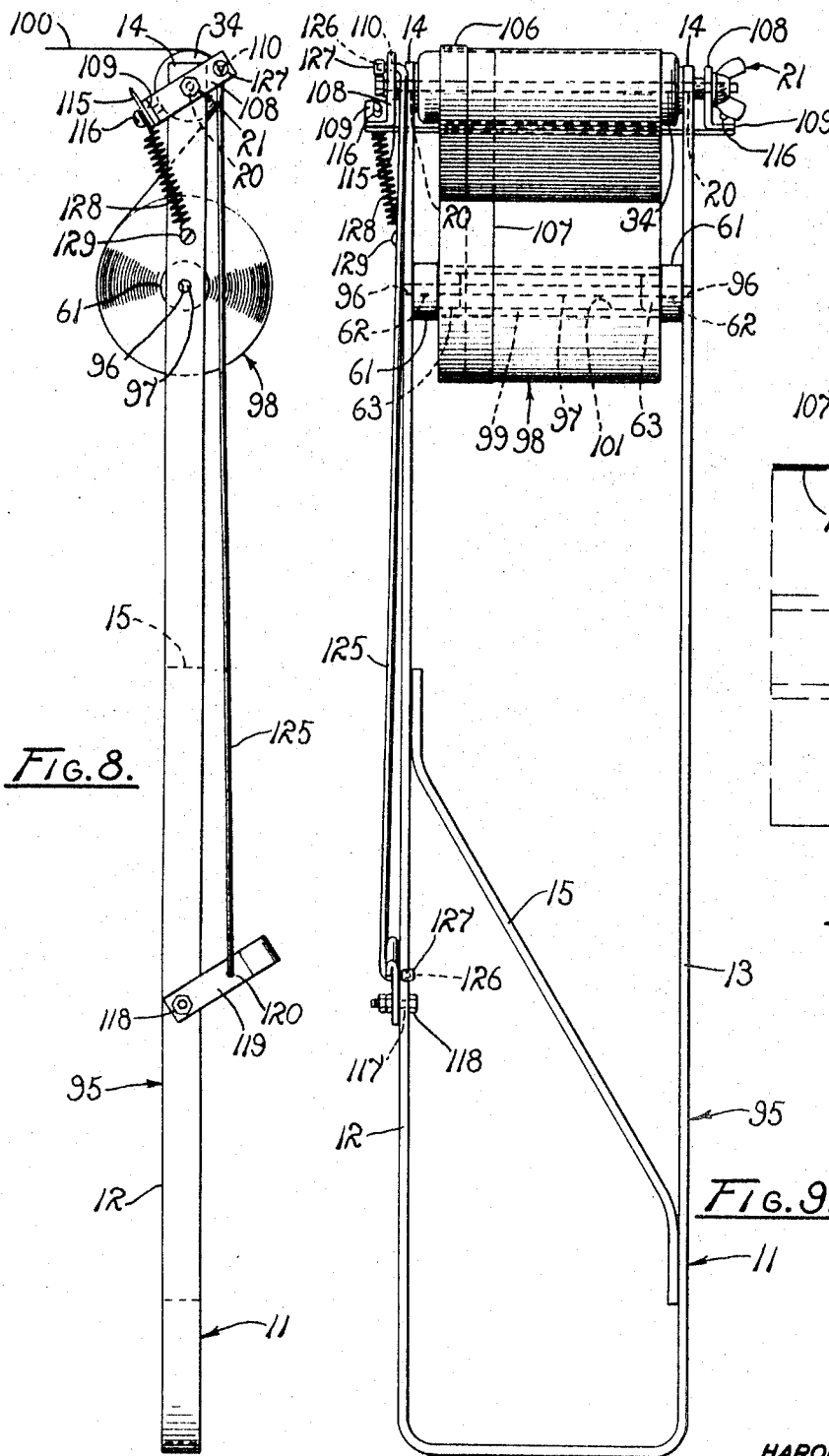


FIG. 8.

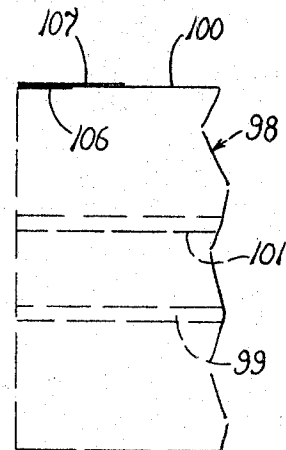


FIG. 10.

FIG. 9.

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MASKING TOOL

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5 Claims

ABSTRACT OF THE DISCLOSURE

A tool for applying masking paper to areas which are to be shielded including a portable frame, rolls of masking paper and adhesive tape rotatably mounted on the frame with the tape substantially aligned with one edge of the paper, a roller at one end of the frame for applying the paper and tape to the surface of an area, and feeding means securing the paper and tape in marginally overlapping relation prior to application.

The present invention relates to a device for applying masking paper to an area for protection during painting and more particularly to such a device which can be operated quickly and easily by an individual to reel off and attach sheets of masking paper or the like.

It is recognized that the device of the present invention may have application to other types of operations. However, for illustrative convenience, its utilization in the application of masking paper is described as typifying its utility.

In protective or decorative painting and in stucco application, it is usually necessary to protect areas which are not to be painted or stuccoed since it is difficult precisely to control the application of the sprayed material. Commercially and privately, when such materials are to be applied to a well defined area, it has been found advantageous to mask all adjacent areas. Masking usually is accomplished by attaching a strip of adhesive tape of appropriate length in overlapping relation to the edge of a sheet of masking paper of the appropriate dimensions to cover the area which is to be protected. Subsequently, the paper is positioned in covering relation to the area and is held in place by the adhesive tape. When this is done properly, the painting operation can be performed with substantial freedom with little danger of inadvertently painting or stuccoing the shielded area.

However, these masking procedures are cumbersome and, thus, consume a large amount of time. This is true particularly when painting large objects, such as houses, buildings or even aircraft and ships. For example, in stuccoing the trim along the eaves of a house, the time involved in actual stuccoing is relatively small. However, a relatively large amount of time is consumed in manually applying the adhesive tape to the paper and subsequently attaching it to the house in the desired location.

Such masking procedures for large areas are not only time consuming and therefore tedious, but frequently are lacking in total effectiveness. Since the conventional masking operation is cumbersome and since often it is necessary to finish the stuccoing or painting as quickly as possible, the areas to be protected are often not properly masked. The paper may not be precisely positioned, or there may be wrinkles in the tape under which paint can seep. The result often is that these areas are partially spattered or sprayed.

Therefore it is the object of the present invention to provide a masking tool which facilitates the masking of areas which are to be protected from the spray application of stucco, paint and the like.

Another object is to provide such a masking tool which can easily be operated automatically to attach a continu-

ous strip of adhesive tape in overlapping relation to the edge of a continuous sheet of masking paper.

Another object is to provide such a masking tool which can easily be operated automatically to attach a sheet of masking paper by means of adhesive tape to an area which is to be protected.

Another object is to provide such a masking tool which can be operated automatically to reel off relatively short or long lengths of masking paper and adhesive tape whether of associated or integral fabrication and subsequently cut off the amount of each desired.

Another object is to provide such a masking tool which can be operated precisely to mask and effectively to protect predetermined areas.

Another object is to provide such a masking tool which can easily be operated to achieve the above objects even when operated by a single person.

Another object is to provide such a masking tool which is of a light weight and simple construction.

A further object is to provide such a masking tool which is inexpensive to build and of sturdy construction.

Still further objects of the present invention are to provide improved elements and arrangements thereof in an apparatus for the purposes set forth which is fully effective in achieving its intended purposes.

These, together with other objects and advantages of the present invention, will become more fully apparent upon reference to the following description in the specification and accompanying drawings.

In the drawings:

FIG. 1 is a fragmentary rear view of a device of the present invention employed to attach masking paper to the eaves of a house.

FIG. 2 is a fragmentary side view of the device of the present invention being employed to attach masking paper to the eaves of a house.

FIG. 3 is a somewhat enlarged fragmentary end view of the masking paper after it has been attached by the masking tool to the eaves.

FIG. 4 is a somewhat enlarged perspective view of the device of the present invention.

FIG. 5 is a face view of the device of the present invention.

FIG. 6 is a side elevation of the device of the present invention.

FIG. 7 is a somewhat enlarged vertical section taken on line 6—6 of FIG. 6.

FIG. 8 is a side elevation of a second form of the device of the present invention.

FIG. 9 is a face view of the second form of the device of the present invention.

FIG. 10 is a somewhat enlarged fragmentary transverse section of a roll of masking paper of the type utilized in the second form of the device of the present invention showing a sheet of masking paper with adhesive and anti-adhesive sides.

First form

Referring in greater particularity to the drawings, the first form of masking tool embodying the principles of the present invention is generally indicated by the numeral 10. The masking tool provides a U-shaped rigid frame 11. The frame has a pair of parallel arms 12 and 13 each of which have operational or distal ends 14. A brace 15 is diagonally mounted, as by welding, between the arms.

A pair of aligned bores 20 are provided in the distal ends 14 of arms 12 and 13 and define an axis normal to the arms. A mounting assembly 21, having an axle bolt 22 of a diameter slightly smaller than that of the bores and a wing nut 23, is mounted with the axle bolt extending through the mounting holes of the arms. The axle

bolt has a nut end 24 and an externally threaded end 25, as best shown in FIG. 4. A cutting assembly 29 is rotatably mounted on the axle bolt. The cutting assembly provides a blade arm 30, having an axle hole 31 at one end thereof of a diameter equal to that of the mounting bores, is rotatably mounted between the nut end of the axle bolt and the distal end 14 of arm 12 with the axle bolt extending through the axle hole. A lever arm 32, having a centrally positioned axle hole 33 of a diameter equal to the bores, is rotatably mounted between the wing nut and the distal end of arm 13 with the axle bolt extending through the axle hole.

A cylindrical roller 34, having an axially positioned bearing 35 of a diameter equal to that of the mounting bores 20, is rotatably mounted between the distal ends 14 of the arms 12 and 13 with the axle bolt extending through the bearing. A separator bar 40 is affixed, as by welding, between and normal to the blade arm 30 and the lever arm 32 a relatively short distance from and parallel to the roller. Relatively narrow blade holes 41 are provided in corresponding positions adjacent to the ends of the blade arm and lever arm which are farthest from the roller. A conventional cutting blade 42, having a cutting edge 43, is mounted in the blade holes parallel to and with its cutting edge extending away from the separator bar. The cutting blade is releasably maintained in position by cotter pins 44, as shown best in FIGS. 5 and 6.

A pair of relatively small connection holes 49 are individually provided in the ends of the lever arm 32. A loop pin 50 is mounted a relatively long distance from the lever arm, as by welding, normal to the arm 13 and extends laterally therefrom a short distance. A tension spring 51 is attached at one of its ends through the connection hole of the lever arm adjacent to the cutting blade 42. A small tether 52 is tied at one of its ends to the free end of the tension spring, extends around the loop pin and is tied at the other of its ends through the connection hole at the end of the lever arm farthest from the cutting blade. A tether clamp 53 is attached about the tether between the loop pin and the lever arm, as shown in FIGS. 5 and 6.

Another pair of aligned mounting holes 54 are provided in arms 12 and 13 defining an axis normal thereto and a relatively short predetermined distance from the mounting holes 20. An axle assembly 55, having axle bolt 56 and wing nut 57, is mounted with the axle bolt extending through the mounting holes 54 of the arms. A pair of roll mounts 61, each having an axially positioned rotation hole 62 therethrough and a small cylindrical plug end 63, of predetermined diameter, whose axis corresponds to that of the rotation hole, are individually mounted between and adjacent to the arms with the plug ends facing each other and the axle bolt extending through their rotation holes. A supply roll of masking paper 64 consisting of a cylindrical cardboard or wood core 65 having a continuous sheet of masking paper 66 tightly rolled thereabout and having an interior 67, is rotatably mounted with axle bolt 56 extending through the interior. The diameter of the interior of the core is equal to or slightly larger than the diameter of the plug ends of the roll mounts. The roll of masking paper is rotatably mounted on the axle bolt with the plug ends of the roll mounts received in the interior of the core at opposite ends thereof, as best shown in FIG. 7.

Each of the arms 12 and 13 provides a pair of slots 73 which are in longitudinal alignment spaced predetermined distance on each side of the mounting hole 20. Each of the slots is also aligned with the corresponding slot of the other arm. A pair of control bars 74 are individually received in the corresponding slots of the opposite arms. The control bars are of sufficient length so that they extend a relatively short distance through the slots. A pair of control springs 75 are individually affixed at each of their ends to the ends of the control bars

extending through the slots of each arm. The control springs hold the control bars in parallel relation lightly against opposite sides of the roll of masking paper 64, as best shown in FIG. 5.

A mounting hole 76 is provided in arm 13 about midway between the lever arm 32 and the loop pin 50. A conventional bolt and nut assembly 77 is mounted on the arm 13 through the mounting hole and extends toward arm 12. The bolt and nut assembly has a roll of adhesive tape 78 rotatably mounted thereon. The roll of adhesive tape consists of a cardboard or plastic core 79 having a continuous strip of adhesive tape 80 tightly wound thereabout. The adhesive tape has an adhesive side 81.

Second form

The second form of the invention provides a masking tool 95 which is quite similar to the masking tool 10 of the first form of the invention and is shown in FIGS. 8, 9, and 10. The frame of the masking tool 95 is precisely the same as that of the first form of the invention and is generally indicated by the same numeral 11. Similarly, the frame has a pair of parallel respectively left and right arms 12 and 13, as shown in FIG. 9, each of which has an operational or distal end 14. A brace 15 is diagonally mounted, as by welding, between the arms. Also, as in the first form of the invention, a pair of aligned bores 20 are provided in the distal ends 14 of the arms and have a mounting assembly 21 mounted therein. A cylindrical roller 34, as in the first form of the invention, is rotatably mounted on the mounting assembly between the distal ends of the arms.

A pair of mounting bores 96 are provided in the arms 12 and 13 which define an axis normal to the arms a predetermined relatively short distance from the roller 34. An axle 97 is mounted in the bores, as by welding, extending between the arms. Again, as in the first form of the invention, a pair of roll mounts 61, each having an axially positioned rotation hole 62 therethrough and a small cylindrical plug end 63, are individually mounted between and adjacent to the arms with the plug ends facing each other and the axle 97 extending through their rotation holes.

A supply or roll of masking paper 98 consisting of a cylindrical core 99 having a continuous sheet of masking paper 100 tightly rolled thereabout and having an interior 101, is rotatably mounted on the axle 97 with the plug ends 63 of the roll mounts received in the interior of the core at opposite ends thereof, as best shown in FIG. 9. The sheet of masking paper provides a continuous relatively narrow strip of adhesive 106 applied marginally along the edge of the masking paper adjacent to arm 12 and on the side thereof closest to the core in its rolled arrangement, as best shown in FIG. 10. The opposite side of the sheet of masking paper has a somewhat wider continuous strip of anti-adhesive substance 107 such as paraffin positioned marginally along the edge of the masking paper adjacent to arm 12.

A pair of relatively short blade arms 108 are individually pivotally mounted centrally thereof on the mounting assembly 21 laterally adjacent to the arms 12 and 13 in an arrangement similar to that of the first form of the invention. Each of the blade arms has a laterally extending flange 109 at one end thereof. The blade arm adjacent to arm 12 has a mounting hole 110 of predetermined size at the end thereof opposite to that having the flange. A conventional cutting blade 115 of predetermined length is mounted by means of bolts 116 on the flanges of the blade arms so that it extends parallel to the roller 34. The cutting blade extends a short distance above the flanges, as best shown in FIG. 8.

A bolt orifice 117 is provided in arm 12 a relatively long distance from its distal end 14. A lever mounting assembly 118 is received through the bolt orifice and attached thereto. A lever arm 119 is rotatably mounted at one of its ends on the lever mounting assembly laterally

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of arm 12, as shown in FIGS. 9 and 10. The lever arm has a link bore 120 therein adjacent to the end thereof opposite to that which is mounted on the lever mounting assembly. A metal linkage 125, having distal ends 126 which are normally bent in opposite directions to the linkage, is mounted in connecting relation with its distal ends individually received in the link bore of the lever arm and in the mounting hole 110 of the blade arm 108 adjacent to arm 12. A cap 127 is affixed to each of the distal ends of the linkage and extends through its respective link bore and mounting hole in order to maintain the linkage in position. A tension spring 128 is connected at one of its ends to the bolt 116 of the blade arm in connection with the linkage. A screw 129 connects the other of its ends to arm 12 a predetermined distance from its distal end 14.

Operation

The operation of the described embodiments of the subject invention are believed to be readily apparent and are briefly summarized at this point. Attention is first invited to the operation of the first form of the invention.

First form

The masking tool 10 has a variety of uses for the masking of areas to be shielded from paint spray, stucco and other air-borne materials. However, this first form of the masking tool was specifically designed for and described for use in the stuccoing of a house 85, as shown in FIGS. 1, 2, and 3. The house is shown to have surfaces 86 to be stuccoed and eaves 87. A facer board 88 is mounted horizontally on the eaves and has a bottom edge 89. As is usually the case, it is necessary to avoid splashing stucco on the facer board as the stucco is applied to the surfaces 86. Consequently, it is necessary to mask the facer board in order to prevent it from being inadvertently sprayed or splashed with stucco.

In order to make the masking tool 10 operable, the beginning of the strip of adhesive tape 80 is adhesively attached with its adhesive side 81 in overlapping facing relation at the beginning of the sheet of masking paper 65 on the side thereof adjacent to the arm 13, as best shown in FIGS. 5 and 6. The sheet of masking paper with the attached adhesive tape is then fed between the roll of masking paper 64 and the control bar 74 closest to the lever arm 32 and subsequently over the roller 34, as best shown in FIGS. 5 and 6. In this arrangement, the adhesive side of the adhesive tape faces away from the roller.

The masking tool 10 is, thus, ready for use. The operator 90 of the masking tool grasps the arms 12 and 13 holding the adhesive side 81 of the adhesive tape 80 on the roller 34 against the bottom edge 89 of the facer board 88, as shown in FIGS. 1 and 2. Subsequently, the operator walks along under the facer board in a direction so that the adhesive tape to which the masking paper 66 is attached is adhesively applied continuously along the bottom edge of the facer board. The masking paper, applied in this manner, hangs directly below the facer board, as best shown in FIG. 3. When the operator 90 reaches the end of the facer board 88 or otherwise desires to cut off the masking paper and adhesive tape, he pulls the tether 52 toward the loop pin 50 below the tether guide 53. The ends of the tether which are individually attached to the tension spring and the other end of the lever arm 32 tend to pull both ends of the lever arm toward the loop pin. However, the tension spring merely expands and, thus, the cutting assembly 29 is rotated in a clockwise direction as viewed in FIG. 6 so that the cutting edge 43 of the cutting blade 42 is forced against the masking paper 66 and adhesive tape 80 thus severing them. When the tether is released by the operator, the tension spring pulls the cutting assembly back to the position shown in FIG. 6.

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With the masking paper 66 attached to the facer board 88, as described, the operator 90 can freely spray paint or stucco on the surfaces 86 of the house 85 with little or no danger of inadvertently painting the facer board. This is true since the hanging masking paper catches all spray particles which might otherwise land on the facer board.

Thus, the first form of the present invention provides a versatile masking tool which is easy to operate and which may be used to attach masking paper precisely where desired. Furthermore, it is often unnecessary to use ladders or scaffolding to apply the masking paper, as would otherwise be necessary, due to the length of the masking tool.

Second form

The second form of the invention operates in substantially the same manner as the first form of the invention and will be described here merely by enumerating the relevant differences of operation. The masking tool 95 is capable of being used to attach masking paper in a wider variety of situations than the masking tool 10 of the first form of the invention. Since the cutting blade 115 extends above the flanges 109 of the blade arms 108 as previously described, the cutting blade can be used to attach masking paper to flat surfaces such as walls without the ends of the blade arm contacting the surface and thus preventing the cutting blade from severing the sheet of masking paper 100 after it has been attached by means of the roller 34. As is believed readily apparent, the assembly by which the cutting blade is manipulated is of a completely metal construction including the lever arm 119 which is easily pivotable to operate the cutting blade through the linkage 125.

A further significant difference between the masking tool 95 of the second form of the invention and masking tool 10 of the first form of the invention involves the sheet of masking paper 100. Since the adhesive 106 is already applied to the sheet of masking paper, it is unnecessary with this form of the invention to attach adhesive tape to the masking paper. Thus, obviously, it is unnecessary to have a roll of adhesive tape mounted on the frame 11 as in the first form of the invention. Also, as previously discussed, the side of the sheet of masking paper opposite to that having the adhesive has an anti-adhesive substance 107 applied thereto. Consequently, the sheet of masking paper can be rolled about the core 99, as shown without the adhesive adhering to the masking paper directly below it on the roll.

Therefore, the masking tool 95 of the second form of the invention is more readily adaptable to applying masking paper in a wider variety of situations than is the masking tool 10 of the first form of the invention.

Although the invention has been herein shown and described in what are conceived to be the most practical and preferred embodiments, it is recognized that departures may be made therefrom within the scope of the invention which is not to be limited to the details disclosed herein but is to be accorded the full scope of the claims so as to embrace any and all equivalent devices and apparatus.

Having described my invention, what I claim as new and desire to secure by Letters Patent is:

1. A masking tool for attaching masking paper to an area to be shielded comprising a portable frame, a supply of masking paper mounted in the frame, a supply of adhesive tape affixed to the frame having adhesive on only one side thereof, feeding means borne by the frame having the paper and tape fed therethrough adhesively secured in marginally overlapping relation and the adhesive side of the taped paper facing away from said feeding means and being untouched thereby, said means being adapted to attach the taped paper to an area to be shielded during movement thereover, and a cutting blade swingably mounted on the frame and normally disposed out of contact with the taped paper, said blade being

adapted to be swung to engage the taped paper intermediate the tool and the area to be shielded.

2. A masking tool for use in attaching masking paper in covering relations to areas which are to be protected comprising, a portable frame; feeding means including a roller rotatably mounted in the frame transversely at one end thereof; a roll of masking paper having a planar side, said paper roll being rotatably mounted transversely in the frame in spaced relation to the roller; a roll of adhesive tape rotatably mounted in the frame adjacent to the supply of masking paper and disposed generally in a plane in alignment with the planar side of the paper roll so that the adhesive tape and masking paper can be unrolled and threaded through said feeding means and over the roller with the adhesive tape adhesively attached in overlapping relation to the side edge of the masking paper and disposed generally in said plane to provide a width of taped paper for attachment to an area to be shielded by rolling the roller thereof, said roller being coextensive with the width of the taped paper; and cutting means including a lever arm pivoted intermediate its ends on the frame and carrying a cutting blade, and a flexible line connected to both ends of the lever arm operable to swing the arm for engaging the blade with the taped paper for severing the same after it has passed over the roller and has been attached to an area to be shielded.

3. The masking tool of claim 2 in which said flexible line is connected at an intermediate point to the frame and includes a tension spring connected to one end of the lever arm whereby a pull on the line results in moving the blade into severing position and tensioning the spring, and release of the line results in the spring automatically moving the blade away from severing position.

4. A masking tool comprising an elongated frame having a handle at one end and an applying roller at the other end, said roller being mounted in the frame for rotation about a first axis extending transversely thereof for rolling traversal of the area to be masked, a roll of

masking paper mounted transversely in the frame for rotation about a second axis parallel to the first axis, and a roll of adhesive tape mounted in the frame for rotation about a third axis extending transversely of the frame and parallel to the second axis, and a control bar slidably mounted on the frame and urged into engagement with the paper roll, the masking paper and the adhesive tape being of predetermined widths with the respective rolls disposed in the frame so that tape unwrapped from its roll marginally overlaps and is adhesively secured to paper unwrapped from its roll, the taped paper being threaded over the control bar and applying roller for application to an area to be masked by rolling traversal of the roller thereover, the taped paper being pressed against the control bar and roller for tighter engagement of the tape with the paper.

5. The masking tool of claim 4 further including a cutting blade fixed to a lever arm pivotally mounted intermediate its ends on the frame for rotation about said first axis, a blade at one end of the arm for severing the taped paper, a spring connected to said one end of the arm, and a flexible line having ends connected to the other end of the arm and to the spring.

References Cited

UNITED STATES PATENTS

402,612	5/1889	Polk	156—577
3,120,461	2/1964	Harbour	156—554
1,044,190	11/1912	Kohart	156—579
1,278,272	9/1918	Wilson	156—577
1,318,945	10/1919	Wyborski	156—523
2,405,742	8/1946	Fulfer	156—577
2,916,078	12/1959	Hebert	156—554
3,152,032	10/1964	Waltz	156—554

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U.S. Cl. X.R.

156—554, 577