Oct. 18, 1955 P. N. BRAUN 2,720,650

LAUNDRY TAG STAPLING MACHINE

Filed June 1, 1954 2 Sheets-Sheet 1

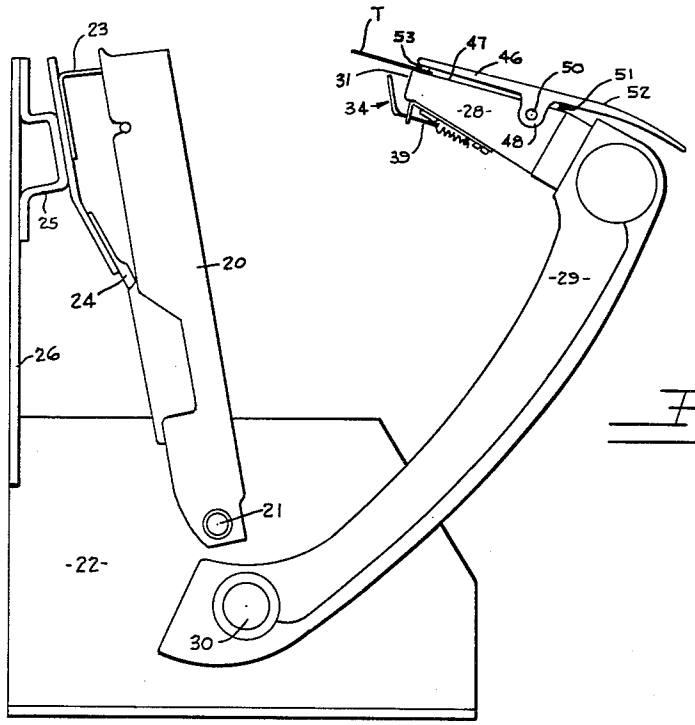


Fig. 1

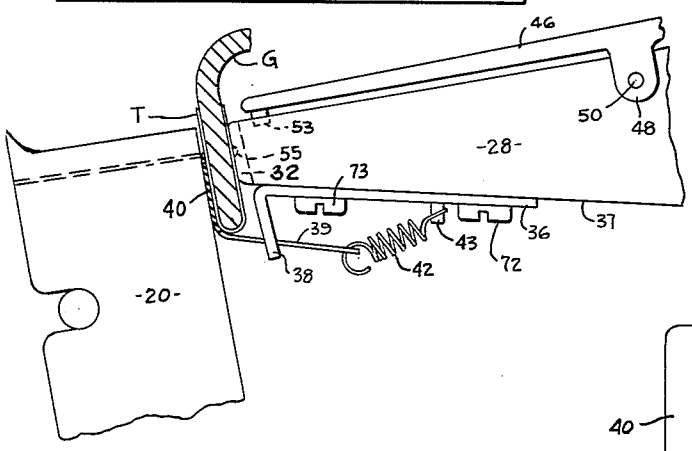


Fig. 2

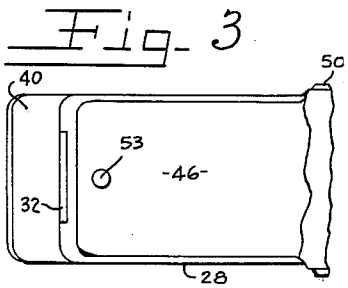


Fig. 3

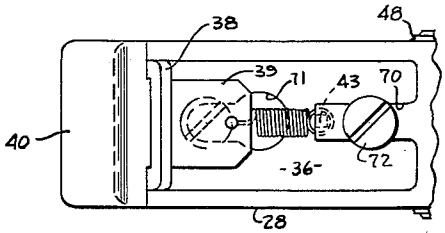


Fig. 4

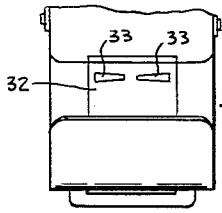


Fig. 5

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LAUNDRY TAG STAPLING MACHINE

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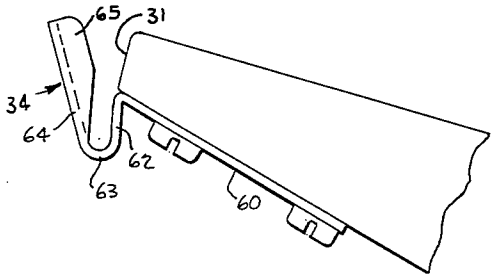


Fig. 6

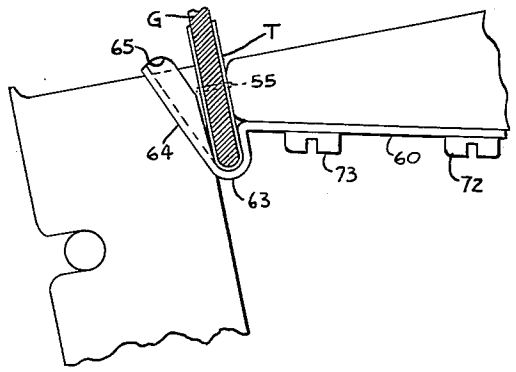


Fig. 7

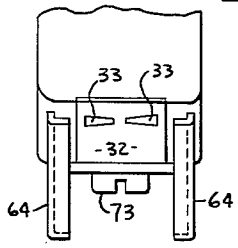


Fig. 10

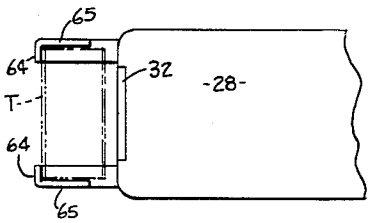


Fig. 8

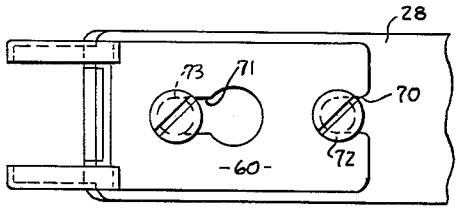


Fig. 9

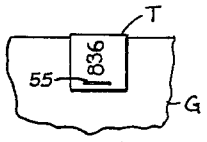


Fig. 11

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LAUNDRY TAG STAPLING MACHINE

Philip N. Braun, Syracuse, N. Y.

Application June 1, 1954, Serial No. 433,387

6 Claims. (Cl. 1—3)

This invention relates to machines for stapling identifying tags to garments and other articles to identify the same while they are being processed through a laundry or dry cleaning plant. Such machines include a stapling head and an anvil movable toward and in engagement with the stapling head. A tag formed of sheet material, such as treated paper, and bearing the proper identifying indicia, is positioned in front of the stapling head. The garment, or other article, is draped over the anvil, and the anvil moved toward the stapling head and, upon engagement therewith, a staple is ejected from the head through the tag and garment, and the prongs of the staple are clinched by the anvil.

This invention has as an object a tag stapling machine, the anvil of which is provided with a tag holder so formed and positioned as to hold a tag of V formation with a portion of the tag exposed and in registration with the staple ejector of the stapling head, whereby the edge of a garment or article may be inserted in the V shaped tag preparatory to the stapling operation. This arrangement accordingly staples the tag to the garment, with the tag extending about the edge of the garment and overlying both sides thereof, whereby the end portions of the tag are securely stapled to the garment, thereby avoiding the possibility of the tag being accidentally detached from the garment during its process through the laundry or dry cleaning plant.

Accidental detachment of the tags now occur because only the area of the tag receiving the staple is affixed to the garment. Usually, the staple is inserted through the central portion of the tag, leaving both ends of the tag free and loose or, if the tag is stapled at one of its ends, the major portion of the tag is free and loose from the garment, with the result that occasionally the tags become detached.

The invention has as a further object a structure carried by the anvil for yieldingly clamping or securing a tag to the upper surface of the anvil, the major portion of the tag extending outwardly perpendicular to the clinching surface of the anvil above the tag holder, whereby application of the edge of the garment to the extending portion of the tag, forces the tag downwardly into V formation into the tag holder carried by the anvil. This avoids the folding of the individual tag by the operator previous to its insertion into the tag holder.

The invention consists in the novel features and in the combinations and constructions hereinafter set forth and claimed.

In describing this invention, reference is had to the accompanying drawings in which like characters designate corresponding parts in all the views.

In the drawings—

Figure 1 depicts the stapling head and anvil structure and contiguous portion of the frame of a tag applying machine in side elevation.

Figure 2 is an enlarged side elevational view of the upper end of the stapling head and the confronting staple clinching end portion of the anvil, the anvil being shown

moved forwardly with a tag positioned in the tag holder and the edge portion of a garment positioned in the tag, the stapling operation having been completed.

Figure 3 is a top plan view of the anvil and tag holder.

Figure 4 is a bottom plan view of the anvil and tag holder.

Figure 5 is an end view of the structure shown in Figures 3 and 4 looking to the right therein.

Figure 6 is a side elevational view of the anvil shown in modified form of tag holder.

Figure 7 is a view similar to Figure 2 illustrating the position of the stapling head and tag holder shown in Figure 6 during the stapling operation.

Figure 8 is a top plan view of the structure shown in Figure 6.

Figure 9 is a bottom plan view of the structure shown in Figure 6.

Figure 10 is an end elevational view looking to the right, Figure 6.

Figure 11 is a fragmentary view of the edge portion of an article with a tag affixed thereto.

The stapling head **20**, in the form shown in Figure 1, is supported on a pin **21** fixed in the side wall of the frame **22**. The stapling head is provided with a staple driver **23** carried by a leaf spring **24** and being normally positioned against a bracket **25** carried by an upright **26** of the frame, see Figure 1.

The anvil **28** is movable toward and from the stapling head **20**. As shown, the anvil is fixed to the outer end of an arm **29** pivotally mounted at its lower end on a pin **30** carried by the side member **22** of the frame. It will be understood that the garment is normally draped over the anvil overhanging the end **31** of the anvil confronting the stapling head, and which is usually provided with a hardened insert clinching block **32** formed with clinching recesses **33**, see Figures 2 and 5. With this arrangement, when the anvil **28** is pressed into engagement with the stapling head, the head swings in a counter-clockwise direction Figure 1, causing the staple driver **23** to move into the head to eject a staple through the tag and material and be clinched by the clinching surface **32**.

In accordance with my invention, the anvil **28** is provided with a tag holder having a tag supporting portion **34** confronting and extending in spaced relation to the clinching surface **32**. In Figures 1 to 5, the tag holder consists of a plate **36** affixed to the under or lower side side **37** of the anvil **28**, the forward end of the plate being bent downwardly, as at **38**, and formed with a slot to receive a narrowed tongue portion **39** of a blade **40**. The inner end of the tongue portion **39** is connected to a tension spring **42**, the opposite end of which is connected to a lug **43** depending from the plate **36** whereby the tag supporting portion, in this case the blade **40**, is positioned in confronting relation to the clinching end of the anvil and extends upwardly and diverges therefrom, as shown in Figure 1, for the reception of a tag folded at its center to provide a V formation. The edge of a garment can then be inserted in the V-shaped tag, the anvil moved into stapling relation to the head and the tag stapled to the garment.

Preferably, means is provided to yieldingly secure the tag in flat form to the upper surface of the anvil. As shown in Figures 1 to 6, this may consist of a clamp member **46** overlying the upper surface **47** of the anvil and being formed with ears **48** overlying opposite sides of the anvil and being mounted on a pivot pin **50**. A compression spring **51** is inserted between the anvil and the handle or actuating portion **52** of the clamp member, the spring **51** being located forwardly of the pivot pin **50**. A pin **53** is fixed to the forward end of the clamp member **46** and is normally positioned in a recess formed in the top surface **47** of the anvil. One end portion of

a tag T may be inserted between the anvil and the pin **53** by depressing the handle portion **52** of the clamp member, the spring **51** serving to urge the pin **53** against the tag and fix it to the upper surface of the anvil. The major portion of the tag extends forwardly in substantially perpendicular relation to the forward end face **31** of the anvil and overlies the tag holder **34**.

With this arrangement, the edge portion of a garment, or other article, can be positioned on the tag and moved downwardly, drawing the tag into the holder **34**, whereby the tag overlies both sides of the garment or article, and extends around the edge thereof. When the anvil is moved forwardly into stapling relation to the head, the tag is affixed, as shown in Figure 2 of the drawings, G designating the edge portion of the garment. It will be observed that the staple **55** extends through both end portions of the tag T, whereby the tag is firmly stapled to the garment, avoiding or minimizing the possibility of the tag being accidentally removed from the garment, or article. The advantage of the tag clip **46** is that the operator does not have to first fold the tag to V form and insert it into the tag holder before the stapling operation.

In Figures 6 to 10, the tag holder is provided with a base or plate portion **60** corresponding to the plate portion **36** of the holder above described. The forward portion of the plate **60** is bifurcated to provide a pair of arms, these arms being bent downwardly, as at **62**, merging with a curved portion **63** and then extending upwardly and diverging outwardly from the end face **31** of the anvil, as at **64**. The upwardly extending arm portions **64** are formed with side flanges **65**, the holder, as in the structure previously described, providing a V-shaped arrangement for holding the tag T, as shown in dotted outline in the plan view, Figure 8.

The width of the stapling head **20** is comparable to the width of the clinching surface **32**, and the arms **64** are spaced apart a sufficient distance to clear the sides of the stapling head, whereby a portion of the tag is exposed for the reception of the staple. It will be understood the tag clamp **46** is also employed in connection with the tag holder shown in Figures 6 to 10.

In the structure shown in Figures 1 to 5, the upper edge of the blade **40** is positioned to also expose a portion of the tag—that is, the upper edge of the blade **40** terminates below the staple **55** ejected by the head.

In both instances, the end of the plates **36**, **60**, are formed with slots **70**, and the intermediate portion of both plates is provided with a keyhole aperture **71**. Shouldered screws **72**, **73**, are threaded into the under surface of the anvil **28**. The tag holder is detachably mounted on the anvil by positioning the same with the circular portion of the keyhole aperture **71** in registration with the head of screw **73**, pressing the blade against the under side of the anvil and moving it rearwardly, the slot **70** receiving the screw **72**. The tag clamp or gripper **46** is not shown in connection with Figures 6 to 9. However, it will be understood that the tag clamp is used preferably with both forms of tag holders. Figure 11 illustrates a tag stapled to the edge portion of an article.

What I claim is:

1. A machine for stapling identifying tags to garments and the like, a frame, a stapling head mounted on the frame and having a staple driver, an anvil mounted on the frame for movement toward and from said stapling head, said anvil having an end surface cooperable with the stapling head to clinch the staple, a tag holder mounted on the anvil, said holder having a tag supporting portion confronting and extending in spaced relation to the staple clinching surface of the anvil to receive and support a tag of V formation with an exposed portion of the tag in registration with the driver of the stapling head, whereby the edge of a garment may be inserted in the tag positioned in the holder preparatory to the stapling of the tag to the garment.

2. A machine as defined in claim 1 wherein said tag supporting portion of the holder consists of a blade member engaging the stapling head and being moved thereby toward the clinching surface of the anvil, and means yieldingly resisting such movement.

3. A machine as defined in claim 1 wherein said tag supporting portion of the holder consists of a pair of arm members extending from the anvil in spaced relation to receive the stapling head therebetween.

4. A machine for stapling identifying tags to garments and the like comprising a frame, a stapling head mounted on the frame and having a staple driver, an anvil mounted on the frame in confronting relation to said stapling head for movement toward and from said head, said anvil having an end staple clinching surface cooperable with said stapling head to clinch an ejected staple, a tag holder detachably mounted on the anvil and having a tag supporting portion confronting and extending angularly and in spaced relation to the clinching surface of the anvil to receive and support a tag of V formation, means carried by the anvil and operable to yieldingly secure an end portion of a tag to the anvil with the body portion of the tag extending perpendicular to the clinching surface of the anvil and above said tag holder, whereby the intermediate portion of the secured tag may be drawn into the holder by the edge portion of a garment.

5. A machine for stapling identifying tags to garments, a frame, a stapling head mounted in the frame, an anvil mounted in the frame for movement forwardly into engagement with the stapling head, said anvil having an end clinching surface confronting and movable into engagement with the stapling head, said anvil also having spaced apart upper and lower surfaces extending rearwardly from said clinching surface, a tag holder carried by the anvil, said holder comprising a plate mounted on said lower surface of the anvil and having a tag supporting portion confronting said clinching surface and diverging upwardly therefrom to receive and support a tag of V formation with an exposed portion of the tag in registration with the ejector of the stapling head, and means for detachably securing said plate to the lower surface of the anvil.

6. A machine for stapling identifying tags to garments, a frame, a stapling head mounted in the frame, an anvil mounted in the frame for movement forwardly into engagement with the stapling head, said anvil having an end clinching surface confronting and movable into engagement with the stapling head, said anvil also having spaced apart upper and lower surfaces extending rearwardly from said clinching surface, a tag holder carried by the anvil, said holder comprising a plate mounted on said lower surface of the anvil and having a pair of arms spaced laterally to receive the stapling head, said arm extending upwardly from said plate and diverging outwardly from the clinching surface of the anvil to receive and support a tag of V formation, and means for detachably securing the plate to the anvil.

No references cited.