May 16, 1939. G. W. VON HOFE 2,158,313

PICK-OFF GAUGE

Original Filed Dec. 15, 1936

Fig. 1.

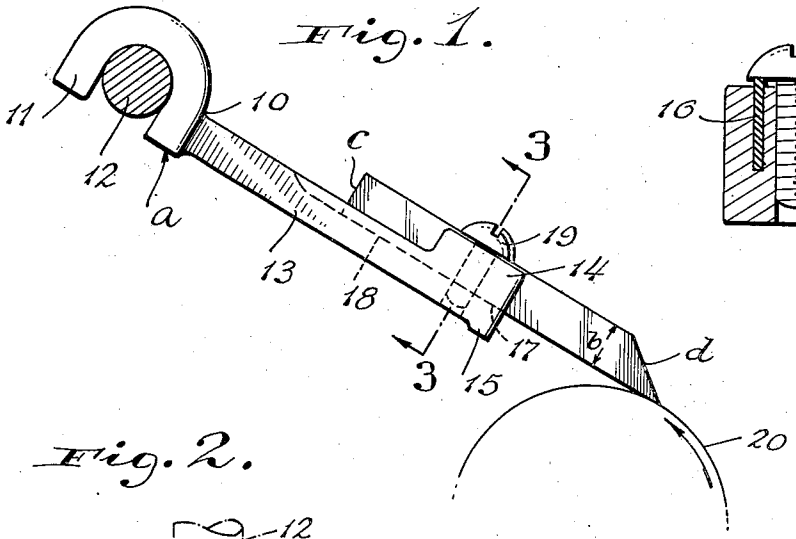


Fig. 3.

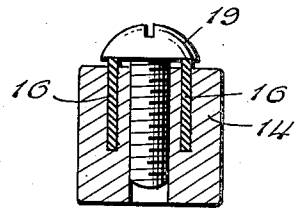


Fig. 2.

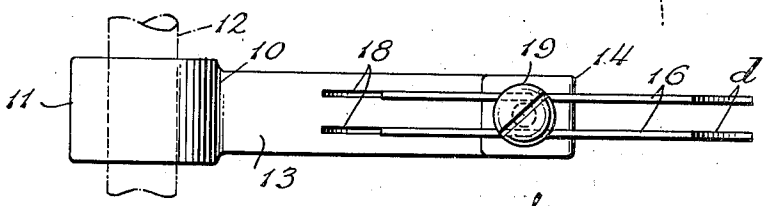


Fig. 4.

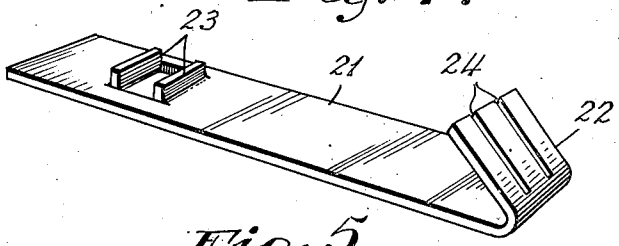


Fig. 5.

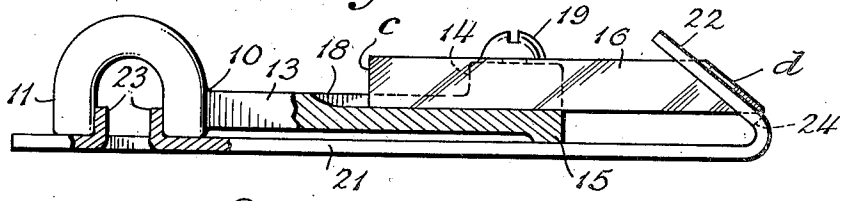
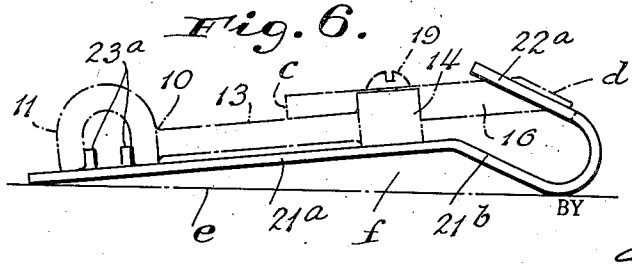


Fig. 6.



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PICK-OFF GAUGE

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Original application December 15, 1936, Serial No. 115,920. Divided and this application May 4, 1938, Serial No. 205,993

7 Claims. (Cl. 33—185)

My invention relates to pick-off devices of the type used in gumming machines for stripping adhesive coated sheets or the like from the adhesive applying roll or equivalent element.

In practice the pick-off members or blades of such devices are provided with bevelled and pointed free ends which are subject to constant wear and accordingly require repeated filing or equivalent treatment to maintain the same in efficient condition; the filing or equivalent treatment of the bevelled and pointed ends also requires the pick-off members or blades to be readjusted on the associated holder to a properly set position. With this in mind the invention contemplates the provision of a novel pick-off gauge which enables the bevelled and pointed free ends of the pick-off members or blades to be renewed as required and the pick-off members or blades to be reset on the holder in an efficient manner with maximum accuracy without necessitating the removal of the members or blades from the holder or involving any particular skill on the part of the operator.

Other more specific objects will appear from the description hereinafter and the features of novelty will be pointed out in the claims.

The instant application is a division of another application filed by me in the United States Patent Office on December 15, 1936, Serial No. 115,920.

In the accompanying drawing which illustrates examples of the invention without defining its limits, Fig. 1 is a side elevation of the novel pick-off device supported in an operative position; Fig. 2 is a plan view of the pick-off device; Fig. 3 is a cross section on an enlarged scale on the line 3—3 of Fig. 1; Fig. 4 is a perspective view of the novel pick-off gauge; Fig. 5 is a side elevation of the gauge with the pick-off device in position thereon and Fig. 6 is a side view of another form of the pick-off gauge.

As shown in the drawing, the pick-off device illustrated in the form in which it is disclosed in the above-mentioned present application, comprises a holder 10 provided at one end with a supporting means adapted to support the pick-off device in operative position; in the illustrated example the supporting means comprises a recessed member 11 arranged and dimensioned to fit upon a rod or shaft 12 which for instance forms a part of the machine in which the pick-off device is embodied. In the specific form illustrated, the holder 10 includes an intermediate section 13 relatively narrow in a vertical direction and terminating in a head 14 which projects perpendicularly beyond the upper surface of the intermediate section 13 as shown in Fig. 1. The intermediate section 13 is located and dimensioned to provide a projection 15 which terminates in the same plane as the lower ends *a* of the supporting member 11. The holder 10 is constructed in a manner to accommodate a pick-off member or blade 16, or a plurality of pick-off members or blades 16 arranged in predetermined positions relatively to each other, as for instance in adjacent, spaced parallelism as shown in Fig. 2. In the illustrated example the pick-off device is accordingly recessed to slidably receive a pick-off member or blade 16, the depth of the recess being less than the transverse or equivalent width *b* of a member or blade 16 so that a longitudinal edge or equivalent portion of the latter is located outwardly beyond the recess when the member or blade 16 is in position on the holder. In the specific form shown in the drawing, the holder is provided with a plurality of spaced adjacent recesses for slidably accommodating a corresponding number of pick-off members or blades 16 in adjacent proximity to each other as exemplified for instance in Figs. 2 and 3 of the drawing. Specifically the recesses referred to comprise grooves 17 extending lengthwise through the head 14 in spaced parallel relation to each other as shown in Fig. 2. In the preferred arrangement the grooves 17 are continued beyond the head 14 and lengthwise of the upper surface of the intermediate section 13 to an intermediate point thereof; it will be understood that in some instances the extensions 18 of the grooves 17 may be omitted or replaced by equivalent devices. As shown in Figs. 1 and 2, the pick-off members or blades 16 are slidably mounted in the grooves 17 and in their extensions 18 so as to project lengthwise of the holder 10 and beyond the free edge thereof in adjacent spaced parallel relation to each other as illustrated. The depth of the grooves 17 being less than the traverse width *b* of the pick-off members or blades 16, the latter, when in position on the holder 10, will project outwardly beyond said grooves 17 so that the upper edges of said pick-off members or blades 16 are located beyond the outer surface of the head 14 as shown in Figs. 1 and 3. In addition the device is provided with means for rigidly fixing a member or blade 16 in an adjusted position on the holder 10; when the latter is constructed to accommodate a plurality of pick-off members or blades 16, the means referred to is arranged to concurrently fix all of the members or blades 16 in adjusted positions on

a given holder 10, or in other words, is common to all of said members or blades 16. In the form selected for purposes of illustration and description, the fastening means referred to is carried by the holder and projects over and in contact with the longitudinal edge or equivalent portion of a pick-off member or blade to force the latter against the bottom of the recess and thereby clamp said pick-off member or blade in an adjusted position on the holder. In the specific form of the device selected for illustration the fastening means is common to both of the adjacent pick-off members or blades 16 and comprises a set screw 19 in threaded engagement with the head 14 and located between the adjacent members or blades 16; the head of the screw 19 is sufficiently large to project over and in contact with the longitudinal edges or equivalent portions of the adjacent pick-off members or blades 16 so as to bear against said edges or equivalent portions and simultaneously force said adjacent members or blades 16 against the bottoms of the respective grooves 17 to thereby clamp the members or blades 16 in adjusted positions on the holder 10. In other words, the fastening means as exemplified by the set screw 19 is common to two adjacent pick-off members or blades 16. It will be obvious that the holder 10 may be constructed to accommodate a single pick-off member or blade 16 or any number of the latter in which case a group of contiguous members or blades 16 will be fixed in adjusted positions by a co-operating set screw 19 or equivalent device.

Because of the relatively less vertical width or equivalent dimension of the intermediate section 13, the pick-off members or blades 16 at their rear ends project outwardly beyond the intermediate section 13 so that the upright rear edge *c* or equivalent rear end surface of the member or blade 16 is freely accessible. If the holder carries a plurality of pick-off members or blades 16, the upright edges *c* or equivalent rear end surfaces of all of said members or blades 16 will be correspondingly accessible. With this arrangement it is possible to tap these rear edges *c* or their equivalent with a hammer or other implement to effect minute and accurate adjustments of the pick-off members or blades 16 on the holder 10 in one direction; similarly, the freely accessible rear portions of the members or blades 16 may be readily gripped with a suitable tool to effect corresponding adjustments of the pick-off members or blades 16 on the holder 10 in the opposite direction, or to release said members or blades 16 if for any reason they should develop a binding engagement with the holder 10.

In the illustrated example the bevelled pointed ends *d* of the pick-off members or blades 16 rest upon an adhesive distributing roll 20 which exemplifies the means whereby labels or other sheets of material are coated with adhesive, the pick-off members or blades 16 in such case serving to strip such adhesive coated labels or other sheets of material from the roller 20. In the machine of which the elements form a part, the adhesive roll 20 is located at a predetermined distance from the rod or shaft 12, and the pointed ends *d* of the pick-off members or blades 16 are required to engage said roll 20, or its equivalent, in predetermined relation in order to secure the most efficient results. With the novel form of pick-off device the pick-off members or blades 16 may be accurately adjusted to set positions on the holder without difficulty to bring the bevelled pointed ends *d* into the most efficient position upon the roll 20. The holder 10 with the members or blades 16 in place thereon may easily be removed from the machine by simply lifting the supporting member 11 from the rod or shaft 12 so that replacement of pick-off members or blades 16 on a given holder or holders may be readily accomplished; it is also a simple operation to remove the pick-off devices from a machine and to replace them therein as will be apparent.

In practice the bevelled and pointed free ends *d* of the pick-off members or blades 16 are subject to constant wear and consequently become inefficient in action after a while and require periodic sharpening or equivalent treatment to avoid tearing or crumpling of the labels or sheets in the operation of stripping the same from the roll 20. As it is necessary for the pick-off members or blades 16 to occupy a predetermined position on the roll 20 or its equivalent in order to secure the desired efficient results, the necessary repeated filing or equivalent treatment and the resetting of the pick-off blades ordinarily requires great care in its performance. As it is the customary practice to provide a plurality of pick-off members or blades 16 in a given machine, which members or blades 16 are required to be accurately adjusted with respect to each other, the filing operation and the subsequent setting of the members or blades 16 presents additional difficulties. To reduce the difficulties incidental to the efficient performance of the filing or equivalent treatment and the adjustment of the members or blades 16 to a minimum, I have provided a novel gauge illustrated by way of examples in Figs. 4, 5 and 6 of the drawing. This novel gauge comprises a support 21 provided in the specific form illustrated with a slotted guide 22, and having positioning means 23 located at a predetermined distance from the slotted guide 22; this distance is predicated upon the distance between the rod 12 or equivalent support and the point or points of engagement of the blade or blades 16 or their equivalent with the surface of the roll 20 or the like to insure the most efficient operative results. As shown in Figs. 4 and 5, the slotted guide 22 is located at one end of the support 21 and is inclined at an angle relatively to said support 21; the angle of inclination of the slotted guide 22 corresponds accurately to the angle which the bevelled pointed end *d* of the pick-off members or blades 16 should have in order to be most efficient. The specific form of the gauge shown in Fig. 4 is designed to accommodate the pick-off device shown in Figs. 1, 2 and 3, and accordingly the slotted guide 22 is provided with two slots 24 located in parallel relation to each other and spaced apart to an extent corresponding accurately to the spacing of the members or blades 16. The positioning means 23 in its illustrated form consists of integral portions of the support 21 struck up therefrom to provide upright projections as shown in Figs. 4 and 5; the distance between the outer faces of the two projections 23 corresponds to the diameter of the rod or shaft 12 or in other words, to the width of the recess of the supporting member 11. The positioning means as exemplified by the projections 23 is located at a distance from the slotted guide 22 which corresponds accurately with the distance between the rod or shaft 12 and the point on the roll 20 at which the pick-off members or blades 16 are most efficient in operation. With this arrangement when

the pick-off device is in place on the gauge with the supporting member 11 set upon the projections 23 and the pick-off members or blades 16 extending into the slots 24, the outer surface of the slotted guide 22 constitutes a guide for accurately determining the filing operation or other treatment of the ends *d*, and also in the case of a plurality of members or blades 16 for accurately setting the latter relatively to each other on the holder 10; in addition the outer surface of said slotted guide 22 constitutes a gauge for accurately determining the filing of the ends *d* to automatically position said ends the correct distance from the rod 12 or other support when the holder and its blades 16 are in operative position in the machine of which the device forms a part. It will be noted that the surfaces *a* of the supporting member 11 and the projection 15 of the holder serve to support the holder upon the gauge in a manner to locate the ends *d* of the members or blades 16 in proper position relatively to the guide 22 to be readily and properly filed or otherwise treated, it being understood that during these operations the gauge with the pick-off device thereon is held in the hand of the operator and supported upon a surface in any convenient manner.

In the form shown in Fig. 6, the gauge includes a support consisting of two sections 21^a and 21^b inclined in opposite directions relatively to each other, the section 21^b being curved upwardly and terminating in a slotted guide 22^a corresponding in arrangement and function to the guide 22 of Figs. 4 and 5. This form of the gauge also includes positioning means shown in the form of projections 23^a corresponding in location and purpose to the projections 23 of Figs. 4 and 5. The arrangement of the gauge now being described is such that it may be rested upon a table or other surface as illustrated in Fig. 6 and firmly held in position thereon during the filing or other treatment of the ends *d* of the pick-off members or blades 16. In other words, the opposite inclinations of the sections 21^a and 21^b relatively to the surface *e* on which the gauge is resting provide a space *f* in which the fingers of the operator may be accommodated to hold the gauge with the pick-off device thereon, in position for filing or other treatment of the ends *d*. Otherwise this form of the gauge may be the same as the one previously described.

It will be understood that in Figs. 5 and 6 the ends *d* of the members 16 are shown in position prior to the filing of said ends *d* and that the latter are filed down until flush with the outer surface of the guide 22 or 22^a. When this condition is reached, the ends *d* not only have the correct angle but also are accurately positioned relatively to each other and to the recessed member 11 or equivalent supporting means.

The novel gauge which is particularly designed for use in connection with the novel pick-off device shown in Figs. 1, 2 and 3, enables the latter to be easily and efficiently supported for filing or otherwise treating the pointed ends of said members or blades as required, and at the same time constitutes an accurate indicating means for determining the degree or extent of such filing or other treatment as well as the setting of a blade or blades in the most efficient operative position and the setting or positioning of a plurality of blades relatively to each other.

Various changes in the specific forms shown and described may be made within the scope of the claims without departing from the spirit of the invention.

I claim:

1. A pick-off gauge comprising a support, a slotted guide located on said support in predetermined relation thereto to define the angle of the active ends relatively to the bodies of the pick-off members for which said gauge is designed, and positioning means on said support at a predetermined distance from said slotted guide, the positioning means cooperating with pick-off holders to position the latter on said support and the slotted guide accommodating in its slot the pick-off blades carried by said holders and indicating the adjustment of the blades thereon and gauging the active ends of said blades.

2. A pick-off gauge comprising a support, a guide located on said support and projecting therefrom at an inclination designating the slope of the active ends of pick-off blades, said guide being provided with a plurality of slots, and positioning means on said support at a predetermined distance from said slotted guide, the positioning means cooperating with a pick-off holder to position the latter on said support, and the slotted guide accommodating in its slots a plurality of blades carried by said holder and indicating the adjustment of said blades thereon and relatively to each other and gauging the slope of the active ends of said blades.

3. A pick-off gauge comprising a support consisting of two sections inclined in opposite directions relatively to each other, a slotted guide connected with one of said sections and positioned at an inclination thereon designating the slope of the active ends of pick-off blades, and positioning means on the other section at a predetermined distance from said slotted guide, the positioning means cooperating with pick-off holders to position the latter on said support and the slotted guide accommodating in its slot the pick-off blades carried by said holders and indicating the adjustment of said blades thereon and gauging the slope of the active ends of said blades.

4. A pick-off gauge comprising a support, positioning means on said support cooperating with pick-off holders to position the latter on said support, and a guide on said support located at a predetermined distance from said positioning means for accommodating pick-off members adjustably carried by said holders and having a surface constituting a gauge for predetermining the angle of the active ends of said pick-off members relatively to the bodies thereof and the setting of said pick-off members on said holders.

5. A pick-off gauge comprising a support, positioning means on said support cooperating with pick-off holders to position the latter on said support, and an inclined guide on said support located at a predetermined distance from said positioning means for accommodating pick-off members adjustably carried by said holders and having a surface constituting a gauge for predetermining the angle of the active ends of said pick-off members and the setting thereof on said holders.

6. A pick-off gauge comprising a support consisting of a relatively straight section, a slotted guide at one end of said section and inclined relatively thereto to designate the slope of the active ends of pick-off blades, and positioning projections on said section at a predetermined distance from said slotted guide, the positioning projections cooperating with pick-off holders to position the latter on said support and the slotted

guide accommodating in its slot the pick-off blades carried by said holders and indicating the adjustment of the blades thereon and gauging the slope of the active ends of said blades.

7. A pick-off gauge comprising a support consisting of two connected sections inclined in opposite directions relatively to each other, a slotted guide connected with one of said sections and extending in a return direction in spaced relation to said one of said sections to designate the slope of the active ends of pick-off blades, and positioning projections on the other section at a predetermined distance from said slotted guide, the positioning projections cooperating with pick-off holders to position the latter on said support and the slotted guide accommodating in its slot the pick-off blades carried by said holders and indicating the adjustment of the blades thereon and gauging the slope of the active ends of said blades.

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