Nov. 8, 1927.

1,648,376

G. W. BLODGETT

CLAMP FOR FEATHERING ARROWS

Filed April 4, 1927

FIG. 2

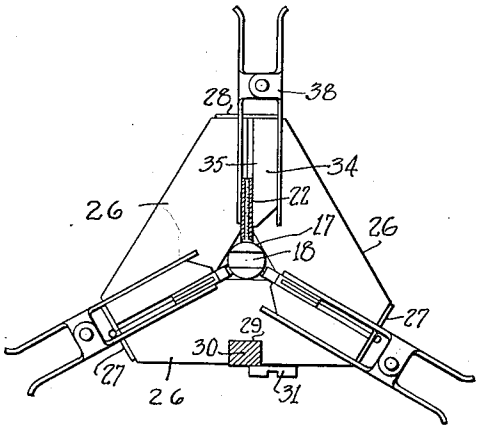


FIG. 7

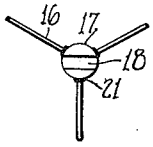


FIG. 8

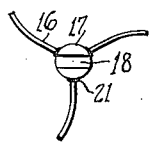


FIG. 9

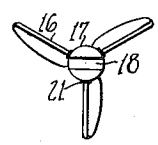


FIG. 13

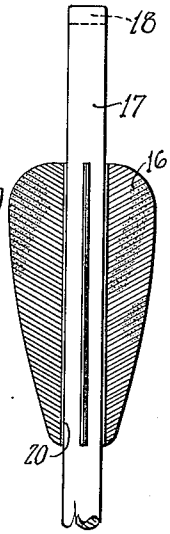


FIG. 14

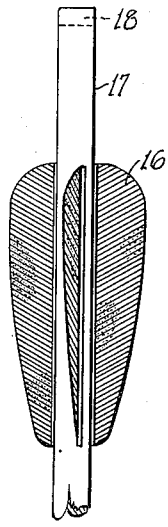


FIG. 15

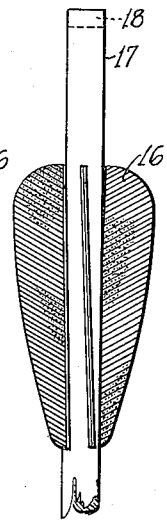


FIG. 12

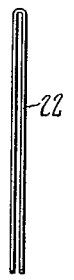


FIG. 11

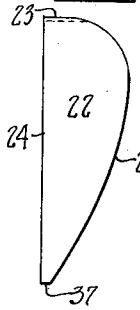


FIG. 10

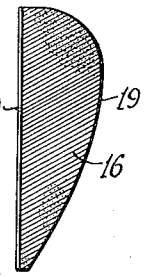


FIG. 1

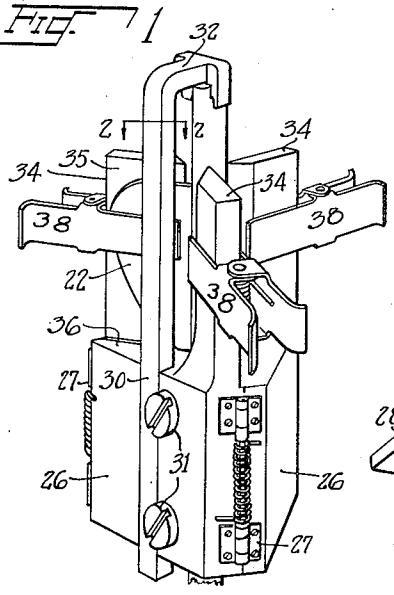


FIG. 3

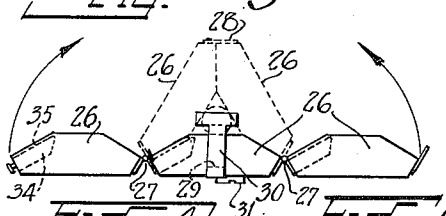


FIG. 4

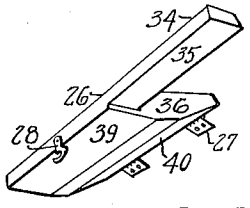
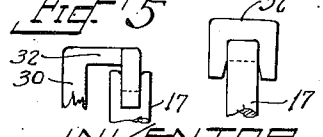


FIG. 6

FIG. 5



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Patented Nov. 8, 1927. 1,648,376

UNITED STATES PATENT OFFICE.

GEORGE W. BLODGETT, OF PORTLAND, OREGON.

CLAMP FOR FEATHERING ARROWS.

Application filed April 4, 1927. Serial No. 180,797.

This invention relates generally to archery, and particularly to a device for attaching the feathers to an arrow.

The first object of this invention is to provide an exceedingly simple and efficient clamp for feathering arrows which will greatly reduce the length of time required therefor, and at the same time increase the security of the fastening and the accuracy with which the feather is attached to the arrow.

The second object is to eliminate the necessity of using binding threads of any sort and to hold the feather along its entire length instead of merely at the ends.

The third object is to provide a special form of trimming gage by means of which the shaft of the feather can be trimmed to form a good contact with the shaft of the arrow for gluing purposes, and also that the outer edge of the feather can be trimmed to an exact shape.

The fourth object is to so hold the feather with relation to the arrow shaft as to definitely position same from its notched end and to hold same radially longitudinal with the shaft of the arrow, or radially and spirally with relation thereto or in curved form spiral to the shaft.

The fifth object is to so hold the arrow shaft during the gluing operation that its extreme tip or notched end will be held coaxial with the main body of the arrow shaft with relation to the feathers.

These, and other objects, will become more apparent from the specification following as illustrated in the accompanying drawing, in which:

Figure 1 is a perspective view of the entire device showing an arrow being feathered. Figure 2 is a plan of the device with the end gage broken away in section along the line 2—2 in Figure 1 and with one of the pattern clamps broken away to better show its position. Figure 3 is an end elevation showing the device open to receive an arrow shaft and showing it closed in dotted lines. Figure 4 is a perspective view of one of the clamp members. Figure 5 is a fragmentary elevation showing the relation between the end stop for the arrow shaft and the arrow shaft itself. Figure 6 is a side elevation of Figure 5. Figure 7 is an end elevation showing the radial form of feather attached longitudinally to the arrow shaft. Figure 8 shows a curved form of feather attached longitudinally to the arrow shaft. Figure 9 shows a straight form of the feather attached spirally to an arrow shaft. Figure 10 is a side elevation of a trimmed feather. Figure 11 is a side elevation of a feather pattern clamp. Figure 12 is an end elevation of the clamp shown in Figure 11. Figure 13 is a side elevation of a type of feathering shown in Figure 7. Figure 14 is a side elevation corresponding with Figure 8. Figure 15 is a side elevation of a type illustrated in Figure 9.

Similar numbers of reference refer to similar parts throughout the several views.

Referring in detail to the drawing, it is to be borne in mind that the object is to properly trim and attach an arrow feather 16 to a shaft 17 such as is commonly used in archery, and which is provided with the usual notch 18. The feather 16 is to be trimmed to an edge 19 of the desired shape, and its shaft 20 is to be trimmed to a straight line so that it can be attached by means of an adhesive 21 to the shaft 17.

In order that the arrow may have a true flight it is extremely desirable that the feathers 16 be accurately mounted thereon and be extremely uniform in size and shape. In order to secure this uniformity in size and shape there is provided a feather pattern clamp 22 whose edge 23 is closed to hold the halves of a clamp together. The edge 24 is straight and serves as a stop for the feather shaft which can easily be trimmed to the desired flat surface while the feather itself is held between the halves of the clamp 22. The outer edge 25 of the feather pattern clamp 22 makes it possible to easily trim the edge of the feather 16.

The device itself consists of three units 26 joined by means of the spring hinges 27 to form a triangular clamp having an opening between same when closed just large enough to receive the arrow shaft 17 and having a hook 28, or other fastening, by means of which the clamp may be securely held in a closed position. The central member 26 is provided with a groove 29 in which is slidably placed an end stop bar 30 whose position can be regulated by the screws 31. One end of the bar 30 is provided with an inturned portion 32 having a backwardly turned fork adapted to receive the notch 18 of the shaft 17 thereby holding same definitely in two planes.

The members 26 have longitudinally pro-

jecting ends 34 against whose sides 35 is placed the feather pattern clamp 22 when positioning the arrow feather 16. The face 36 of each member 26 serves as a stop for the end 37 of the feather pattern clamp 22. A spring clamp 38 is used to hold each feather pattern clamp 22 against its respective side 35.

Obviously various forms of spring clamps 38 can be used, or the shape and size of the feather pattern clamp can be changed to suit the desire of the user. Also the distance between the end of the feathers 16 and the notched end of the arrow can also be quickly and accurately controlled by the screws 31.

Those desiring the spiral form of feather fastening can secure same either by attaching a tapering shim between each clamp 22 and its respective side 35, or by forming the side 35 accordingly.

It will be observed in the illustration that the side 35 is slightly offset from the side 39 a distance which equals one half of the total thickness of the clamp 22, although it is obvious that the same result can be accomplished by making the side 39 flush with the side 35 and adding the same amount of material to the face 40.

In operation the user first trims three feathers 16 to size and shape by means of the clamp 22. He then opens the members 26 and places the arrow shaft in position with its notch 18 engaging the forked end 33. The three clamps 22 are then put into position, as shown in Figure 1, and held there by the spring clamps 38. The shafts 20 of the feathers 16 having been coated with adhesive it can now be seen that the cock feather is held perpendicular to the notch 18 and that the remaining feathers are positioned equi-angularly about the feather shaft.

By the use of this device only a fraction of the time ordinarily required to feather an arrow need be expended and when completed each feather is firmly and accurately attached to the arrow shaft.

I claim:

1. A clamp for feathering arrows having, in combination, a clamping frame having an arrow shaft stop thereon and provided with a plurality of radial faces lying approximately in planes passing through the shaft of an arrow held in said clamp; and feather-holding clamps adapted to be placed against said faces whereby the shaft side of a feather can be held against the arrow shaft.

2. The combination of a clamp for holding an arrow shaft in a manner that its notched end can project therefrom, said clamp having a plurality of longitudinal projections thereon disposed around said projecting arrow shaft; end stop means on said clamp for engaging the notched end of the arrow in a manner to prevent its rotation; and a plurality of feather clamps associated with said projecting ends whereby one feather will be held perpendicular to the notch in the arrow and the other feathers will be disposed around said arrow shaft.

3. In a clamp for feathering arrows, the combination of a feather-holding clamp with means for positioning shaped feathers around an arrow shaft; and means for adjustably positioning the feathers from the notched end of said arrow shaft.

4. In a clamp for feathering arrows, the combination of a feather-holding clamp with means for positioning shaped feathers around an arrow shaft; means for adjustably positioning the feathers from the notched end of said arrow shaft; and means for holding said shaft against rotation in said clamp.

5. In a clamp for feathering arrows, the combination of a feather-holding clamp with means for positioning shaped feathers around an arrow shaft; means for adjustably positioning the feathers from the notched end of said arrow shaft; means for holding said shaft against rotation in said clamp; and means for holding the notched tip of an arrow coaxial with the clamp at a distance therefrom.

6. In an arrow feathering device, the combination of a plurality of hinged clamp members having spring means for urging same to a closed position in a manner to engage an arrow shaft; a stop for holding the notched end of said arrow concentric with said clamp member and spaced therefrom, including means for preventing the rotation of said arrow within the clamp when closed, said clamp having a plurality of flat sided radial faces thereon between its arrow holding members and its notched end centering means radially with the axis of said clamping members; a feather-holding clamp for each feather; and means for holding each clamp against the flat face and with the shaft of said feather against the body of said arrow shaft.

GEORGE W. BLODGETT.