Oct. 23, 1928. 1,689,141

H. B. KELLER

BOW AND ARROW

Filed Aug. 4, 1927

Fig. 1.

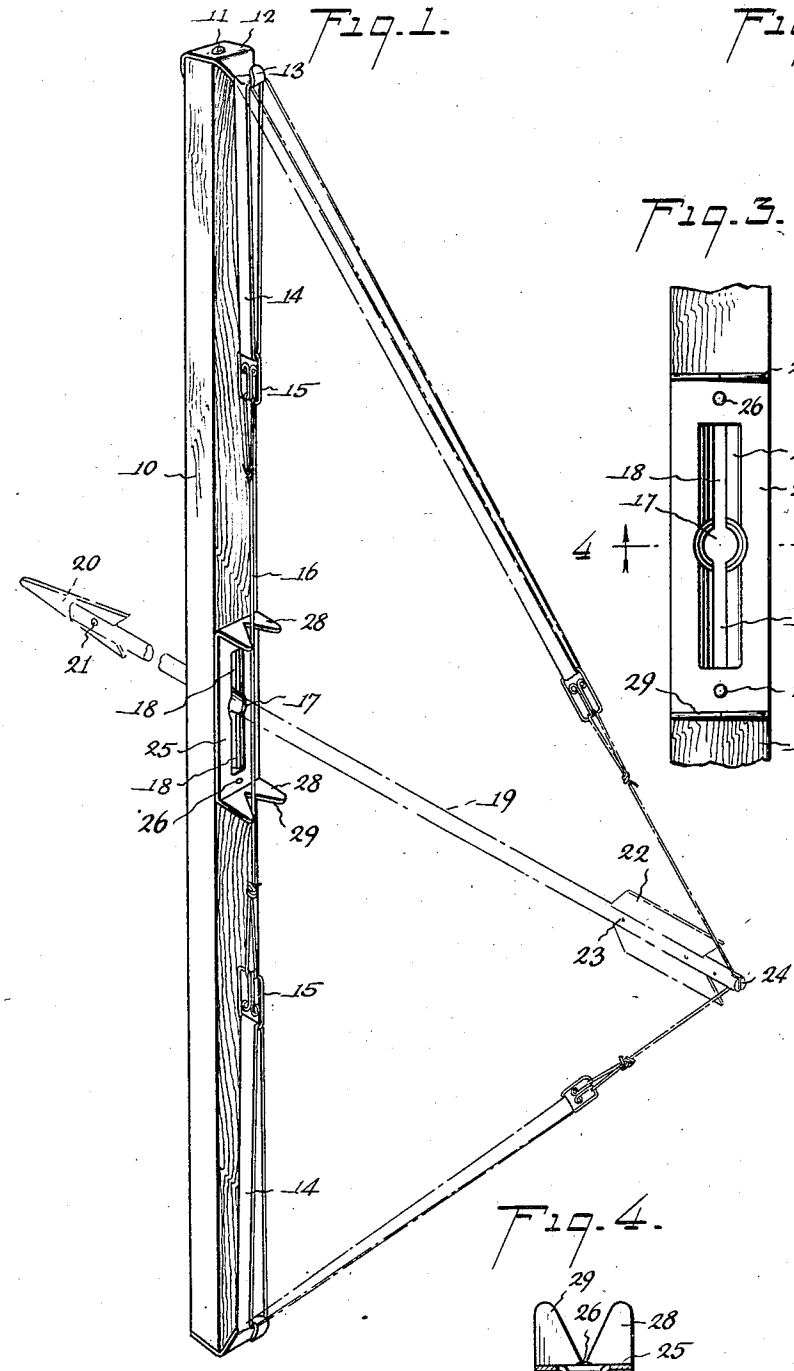


Fig. 2.

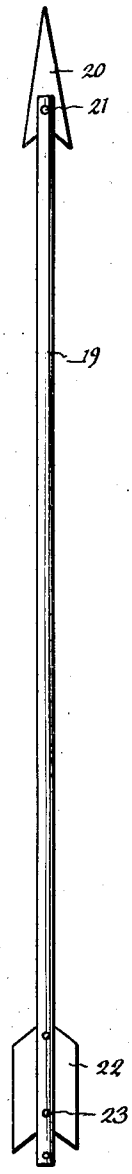
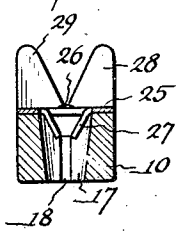


Fig. 3.

Fig. 4.



WITNESSES

J. Mann R.

Franklin J. Foster

INVENTOR

HENRY B. KELLER

BY Munn & Co.

ATTORNEY

Patented Oct. 23, 1928. 1,689,141

UNITED STATES PATENT OFFICE.

HENRY B. KELLER, OF PHILADELPHIA, PENNSYLVANIA.

BOW AND ARROW.

Application filed August 4, 1927. Serial No. 210,586.

An object of the present invention is to provide a bow and arrow of extremely simple, practical construction which will be rugged, durable and accurate in use, and well suited to the requirements of economical manufacture.

Another object of the invention is to provide a bow and arrow which will not only serve as an extremely amusing archery device, but which will prove a great value in archery instruction, and of great benefit as an exercising device.

More specifically, the invention contemplates the provision of a unique bow and arrow in which the bow shaft is rigid and the bow string elastic. The arrow is propelled through an opening in the bow shaft and provided with a rigid feather. The bow shaft is so constructed that the rigid feather will be guided therethrough, and the arrow straightened out as it leaves the bow shaft in the event that it has been slightly accidentally twisted by the archer.

Still other objects of the invention are to provide a bow which may be readily and cheaply repaired in the event that the bow string breaks.

With the above noted and other objects in view, the invention consists in certain novel features of construction and combinations and arrangements of parts, as will be more fully hereinafter set forth and pointed out in the claims. The invention may be more fully understood from the following description in connection with the accompanying drawings, wherein—

Fig. 1 is a perspective view showing a bow embodying the present invention, the dotted lines indicating the bow string drawn back and an arrow in place.

Fig. 2 is an elevational view of the arrow.

Fig. 3 is an enlarged elevational view of the inside elevational view of the inside of the bow shaft.

Fig. 4 is a transverse sectional detail on the line 4—4 of Fig. 3.

In the drawings I have used the reference numeral 10 to designate the rigid bow shaft which may be of ordinary wood, light metal or any other suitable material. Attached to each end of the shaft by securing devices 11 are metallic clips 12 formed with rearwardly projecting hook portions 13. The bow string which is stretchable and elastic may conveniently comprise a pair of endless elastic bands 14 each engaged at one end with one of the hooks 13 and at the other end with a coupling device such as an ordinary wire paper clip 15, the paper clips being connected by an inelastic central cord or string 16.

The bow is centrally provided with a transverse opening 17 to guide the shaft of the arrow, this opening communicating at each side with vertical slots 18 through which the rigid feather of the arrow passes.

The arrow seen in Fig. 2 includes an ordinary wooden or light metal shaft 19 slotted at one end for the reception of a suitable arrow-head 20 retained by a rivet 21. At its other end, a rigid feather 22 of paper, celluloid or other stiff material is mounted in a slot in the arrow shaft and retained by securing devices 23. At the extreme feathered end of the arrow shaft the latter is provided with the usual slot 24 for the reception of the bow string 16.

A metallic plate 25 secured as at 26 to the inner face of the bow shaft is provided with openings and slots registering with the opening 17 and slots 18 of the bow shaft. The slots in the plate 25 however, are preferably formed by bending the plate inwardly at 27 providing a bevelled guide for the rigid feather.

At each end of the plate, ears 28 project inwardly at right angles thereto, these ears being formed with relatively deep V-shaped notches 29 therein which serve as bow string guides. The ears 28 serve the additional function of hand guards.

In use, the arrow is inserted through the bow shaft opening, and its notched end 24 engaged with the string 16. The archer then grasps the bow shaft just below the lower ear 28 so that his hand is protected from contact with the arrow feather when the arrow is projected. The feathered end of the arrow is then drawn back, tensioning the elastic bow string as seen in Fig. 1. When the arrow is released, it will be smartly propelled by the tensioned bow string. In the event that the arrow 19 has been slightly twisted by an inexpert archer, the bevelled portions 27 of the slots 18 will serve to straighten out the rigid arrow and the arrow will always leave the bow shaft with the feather 22 in a vertical position. The converging walls of the V-shaped notches 29 perform a similar function for the string 16 in that they tend to guide the string into a central position relatively to the slots 18 and hole 17.

Obviously, any breakage of the bow string may be quickly repaired due to the use of ordinary rubber bands, paper clips and string in its construction.

Various changes and alterations might be made in the general form and arrangement of the parts described without departing from the invention. Hence I do not wish to limit myself to the details set forth, but shall consider myself at liberty to make such changes and alterations as fairly fall within the spirit and scope of the appended claims.

I claim:

1. A bow including a rigid bow shaft and an elastic string, the bow shaft having an opening and communicating slots therein through which an arrow shaft and feather are adapted to pass, the slots having tapered walls for the purpose described, and notched ears projecting inwardly from the bow shaft constituting hand guards and bow string guides.

2. A bow including a rigid bow shaft and an elastic string, the bow shaft having an opening and communicating slots therein through which an arrow shaft and feather are adapted to be passed, a metal plate secured upon the rear face of the bow shaft having an opening and slots therein registering with the opening and slots in the bow shaft, said opening and slots in the plate being defined by bending portions of the plate forwardly to define tapered walls for the bow shaft opening and slots.

3. A bow including a rigid bow shaft and an elastic string, the bow shaft having an opening and communicating slots therein through which an arrow shaft and feather are adapted to be passed, a metal plate secured upon the rear face of the bow shaft having an opening and slots therein registering with the opening and slots in the bow shaft, said opening and slots in the plate being defined by bending portions of the plate forwardly to define tapered walls for the bow shaft opening and slots, the ends of the plate being turned rearwardly and having V-shaped notches therein adapted to normally accommodate the elastic string and to serve as a hand guard when an arrow is loosed.

Signed at Philadelphia in the county of Philadelphia and State of Pennsylvania this first day of August, A. D. 1927.

HENRY B. KELLER.