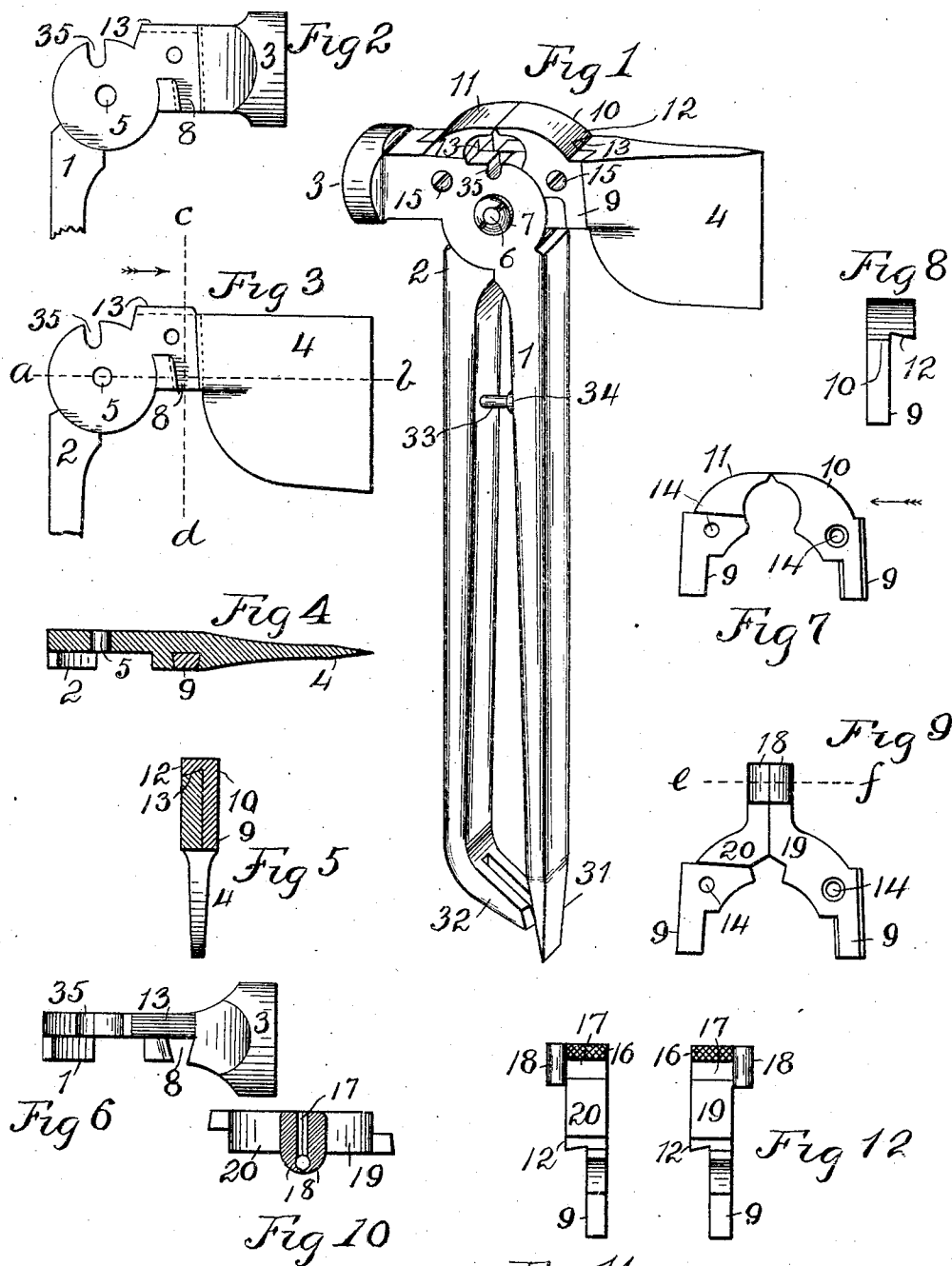


No. 784,959.

PATENTED MAR. 14, 1905.

J. R. MORRIS.
COMBINATION TOOL.
APPLICATION FILED NOV. 24, 1903.

2 SHEETS—SHEET 1



WITNESSES:

R. Hamilton.

M. C. Long

Fig 11

INVENTOR

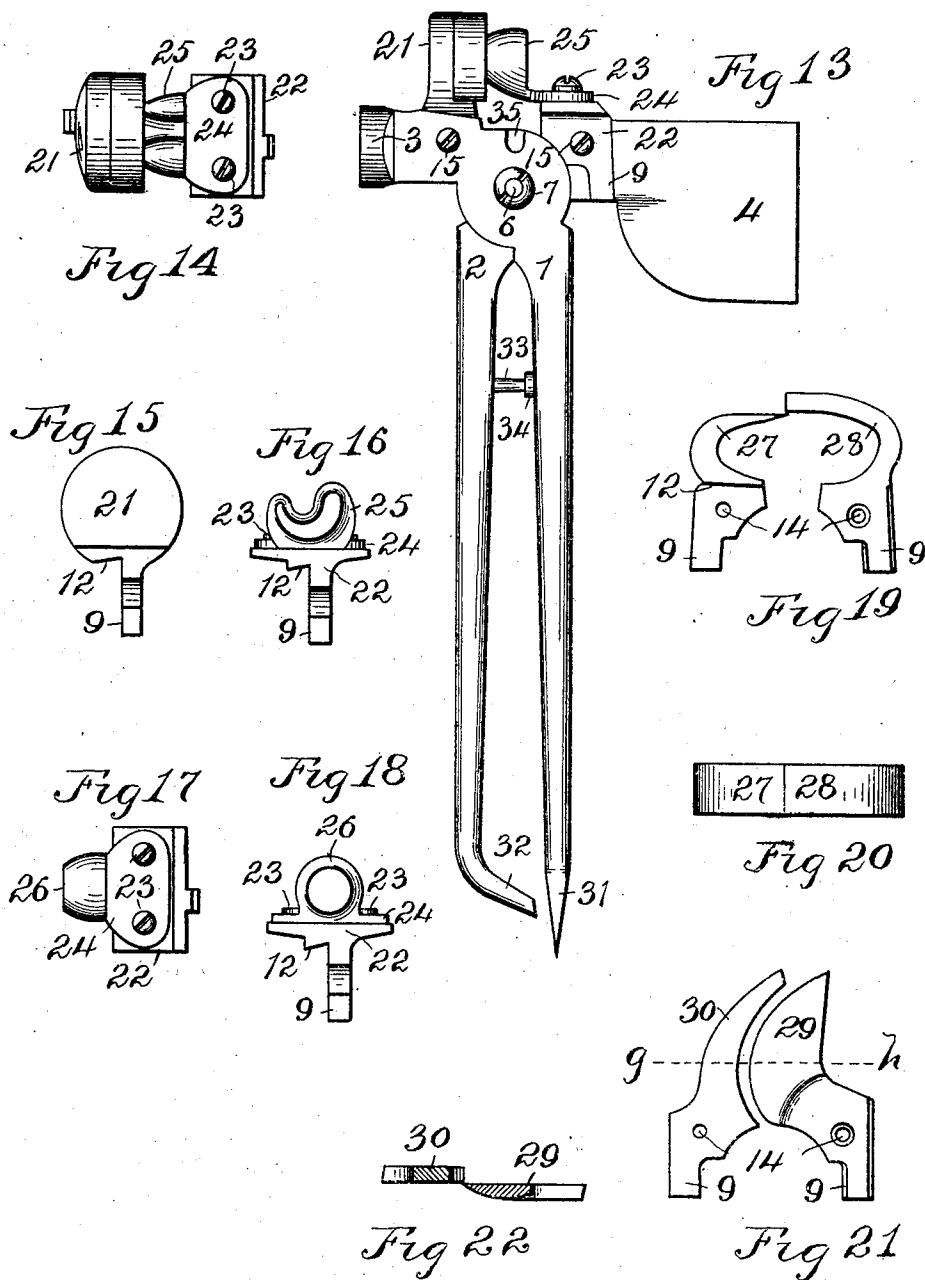
John R. Morris,
By Warren L. House,
His Attorney.

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UNITED STATES PATENT OFFICE.

JOHN R. MORRIS, OF JEWELL, KANSAS.

COMBINATION-TOOL.

SPECIFICATION forming part of Letters Patent No. 784,959, dated March 14, 1905.

Application filed November 24, 1903. Serial No. 182,439.

To all whom it may concern:

Be it known that I, JOHN R. MORRIS, a citizen of the United States, residing at Jewell, in the county of Jewell and State of Kansas, have
5 invented certain new and useful Improvements in Combination-Tools, of which the following is a specification.

My invention relates to improvements in combination-tools.

10 The object of my invention is to provide a combination - tool particularly adapted for farm use and combining in a single instrument a variety of tools.

My invention provides a pair of arms pivoted together and preferably provided one
15 with a hammer-head and the other with a hatchet-blade, combined with a plurality of pairs of members adapted to be interchangeably mounted one pair at a time upon the
20 arms, respectively, the members of each of said pairs coöperating with the arms to form a tool complete in itself and different from that formed with the arms by any other pair, means being provided by which the members
25 of each pair may be detachably secured one to each of said arms.

My invention provides, further, an instrument with which a farmer may mark his stock by perforating in the ear or some other portion of the animal's body a certain distinguishing character or characters, such as a letter
30 or letters of the alphabet, which letters may correspond to the owner's initials, if desired.

My invention provides, further, a novel means of securing the detachable members to the arms and supporting said members upon the arms in a manner such that lateral strain upon the detachable members will be safely provided for.

40 In addition to the above my combination-tool includes a screw-driver, claw or nail-puller, hoof-trimmer, pruning-knife, flat pliers, wire-cutter, staple-puller, and punch.

Other novel features are hereinafter fully
45 described and claimed.

Figure 1 is a perspective view of the combination-tool provided with a pair of cutting members mounted thereon which form wire-cutters or cutting-pliers. Fig. 2 is a side elevation view of the upper end of the arm hav-

ing the hammer-head looking toward the side provided with the dovetail groove. Fig. 3 is a view similar to Fig. 2, showing the upper end of the arm having the hatchet-blade. Fig. 4 is a horizontal sectional view taken on the
55 dotted line *a b* of Fig. 3, the shank being shown in the groove. Fig. 5 is a vertical sectional view taken on the dotted line *c d* of Fig. 3, looking in the direction indicated by the arrow. Fig. 6 is a top view of what is
60 shown in Fig. 2. Fig. 7 is a side elevation view of two members detached and shown in Fig. 1 mounted on the arms. Fig. 8 is an elevation view of the members shown in Fig. 7 looking in the direction indicated by the arrow
65 in said figure. Fig. 9 is a side elevation view of two detached members of a pair which form flat pliers and staple-pullers. Fig. 10 is a horizontal sectional view taken on the dotted line *e f* of Fig. 9. Fig. 11 is an inside elevation view
70 of one of the members shown in Fig. 9. Fig. 12 is a similar view of the other member shown in Fig. 9. Fig. 13 is a side elevation view of the combination-tool, having mounted thereon a pair of members which form character or letter
75 perforating members. Fig. 14 is a top view of the members detached and shown in Fig. 13. Fig. 15 is an inside elevation view of the member forming the abutment shown in Fig. 13. Fig. 16 is a similar view of the cutting member
80 shown in Fig. 13 and having the form required to cut a character representing the letter "c." Fig. 17 is a top view of a cutting member adapted to be used with the abutment shown in Fig. 15 and having the circular form for cutting a round hole to represent the letter "o." Fig. 18 is an inside elevation view of the member shown in Fig. 17. Fig. 19 is a side elevation view of two members adapted to form hoof-trimmers. Fig. 20 is a top view of the members shown in Fig. 19. Fig. 21 is a side elevation view of two detachable members adapted to be used for trimming the hoofs of sheep or to be used as a pruning-knife when properly mounted on the pivoted arms. Fig. 22 is a horizontal sectional view taken on the dotted line *g h* of Fig. 21.

Similar characters of reference indicate similar parts.

1 and 2 represent, respectively, the two pivoted arms, the member 1 at its upper end being provided with a horizontal portion having the form of a hammer-head and indicated by 3. The corresponding portion of the arm 2 is provided with a portion having the form of a hatchet-blade 4. The contiguous sides of the arms 1 and 2 are recessed in the ordinary manner, so that the two arms may be halved together, each arm having a partly-circular portion fitted to the correspondingly shaped recessed portion of the other. Through the center of the said recessed portion of each arm is a transverse hole 5, in which is mounted the bolt 6, which, with the nut 7 mounted thereon, retains the two arms together.

Referring particularly to Figs. 1, 2, 3, 4, 5, and 6, the numeral 8 denotes an upright groove dovetail shaped in cross-section on the recessed side of each member 1 and 2 and adapted to receive therein the shank of a detachable member, described hereinafter. In Figs. 1 and 7 are shown two detachable members, each provided at its lower end with a dovetail-shaped shank 9, fitted to enter either of the grooves 8 in the arms 1 or 2. These two detachable members are denoted, respectively, by 10 and 11 and have their upper horizontal cutting edges adapted to cooperate with each other when the members are mounted upon the arms 1 and 2. Each detachable member of this or of any of the other forms hereinafter described is provided with a horizontal shoulder 12, mounted upon the top of and fitted to a horizontal beveled portion 13, provided on the upper end of each member 1 and 2. The said beveled portion 13 is beveled downwardly and toward the side of the member opposite the side provided with the dovetail groove 8 and is disposed transversely with respect to the said groove. Each detachable member is provided with a transverse hole 14, adapted to receive a securing-screw 15, which engages the arm to which the member is secured. The screws 15 prevent lengthwise movement of the detachable members in the grooves 8, thus retaining the shouldered portions 12 against the beveled portions 13 of the arms 1 and 2. The dovetail grooves 8 and the beveled portions 13 firmly support the detachable members against lateral strain, and the screws 15 have not to bear any lateral strain, but serve merely to keep the members in the grooves 8.

The screws 15 may be removed and the detachable members 10 and 11 removed from the arms and other kinds of detachable members inserted in their places. All forms of the detachable members, however, are provided with the dovetail-shaped shank 9, fitted to the grooves 8.

In Figs. 9, 10, 11, and 12 are illustrated two members adapted to be used as flat pliers or staple-pullers. The upper inner sides of these members are provided with flat vertical parallel surfaces, preferably milled, as shown at

16, and provided each on its inner side with a transverse groove 17, adapted therein to receive wire to be cut by the vertical cutting-blades 18, provided one each on the outer side of and disposed at the end of the groove 17 in each member, the said cutting-blades being disposed opposite to each other. The members just described are designated in the drawings by 19 and 20, respectively.

Referring to Figs. 13, 14, 15, 16, 17, and 18, the detachable members shown therein comprise a member 21, provided at its upper end with a vertical projection having on its inner side a vertical face, preferably flat and adapted to serve as an abutment to receive pressure of the cutting device which cooperates with it. The opposite member 22 is provided at its upper end with a flat surface having therein two vertical screw-threaded holes adapted to receive therein the screws 23, which extend through a horizontal portion 24 of the cutting blade or device denoted in Figs. 13, 14, and 16 by 25. The device 25 is a hollow punch having the form, as shown, required to cut a character representing the letter "c." The cutting edge of the device 25 when the arms 1 and 2 are as shown in Fig. 13 bears against the vertical flat side of the member 21.

In the form shown in Figs. 17 and 18 the cutting device denoted by 26 is in the form of a circle and is designed to cut a perforation having the form of the letter "o."

The members just described are intended to be used to perforate the ear of an animal with a certain distinguishing character or characters representing, if desired, the initial or initials of the owner's name. Any desired number and form of cutting device may be used instead of the ones denoted by 25 or 26, to use which it is but necessary to remove the screws 23 and substitute for the cutting device on the member 22 the one having the form desired. Each member 21 and 22 is provided with the dovetail shank 9 and the shoulder 12 grooved to fit the beveled part 13 of the arm on which it is mounted.

In Figs. 19 and 20 are shown two members 27 and 28, respectively, to be used when mounted on the arms 1 and 2 as hoof-trimmers. The member 27 is shaped similarly to the members 10 and 11, (shown in Fig. 1,) the inner upper horizontal edge being a cutting edge cooperating with a similarly-formed member 28, the edge of which corresponding to the cutting edge of the member 27 being preferably blunt, as shown in Fig. 19.

The members shown in Figs. 21 and 22 represent devices to be used for pruning or for cutting sheep-hoofs. These members are provided each, as are the members 27 and 28, with the shanks 9, adapted to be fitted to the grooves 8 of the arms 1 and 2, respectively. The member 29 at its upper end is convex on its inner side, which convex edge is sharpened to a cutting edge adapted to cooperate with the con-

cave blunt inner side of the upper end of the member 30. These members are shown with the shoulder 12 omitted.

It will be evident that to mount any of the pairs of members shown on the arms 1 and 2 in lieu of the members 10 and 11 shown in Fig. 1 it will only be necessary to remove the screws 15, remove the members 10 and 11, substitute therefor the desired pair of members, and replace the screws 15.

The lower end of the arm 1 is provided with a screw-driver-formed blade 31, which preferably projects below the lower end of the claw 32 on the lower end of the arm 2. By so projecting below the claw 32, which is designed as a nail-puller, the screw-driver may be operated without having to spread the arms 1 and 2 apart, thus facilitating the ease of manipulation of the tool for this use. On the inner side of the arm 1 is provided a horizontal punch 33, having its end next the arm 2 adapted to bear against the seat 34 on the inner side of the arm 2. In the circular portion of the recessed portion of each arm 1 and 2 is provided a peripheral recess or transverse groove 35, which cooperates with the corresponding groove in the opposite arm as a wire-cutter in the manner usual with devices of this kind in similar tools having pivoted arms.

Various forms of members other than those shown may be employed without departing from the spirit of my invention and other modifications may be made while still keeping within the limits of the invention.

Having thus described my invention, what I claim, and desire to secure by Letters Patent, is—

A combination-tool comprising two arms pivoted together, one side of each arm being provided with a dovetail groove, and the upper end of each arm having a portion beveled downwardly toward the side opposite the one having the groove and disposed transversely to the groove, and two detachable members adapted to cooperate with each other, one member having a cutting edge, the other member serving as abutment therefor, and each member being provided with a shank fitted to one of said dovetail grooves and having also a projecting portion fitted to the beveled portion of the arm to which it is to be secured.

In testimony whereof I affix my signature in presence of two witnesses.

JOHN R. MORRIS.

Witnesses:

R. L. McDANIEL,
W. F. MORRIS.