

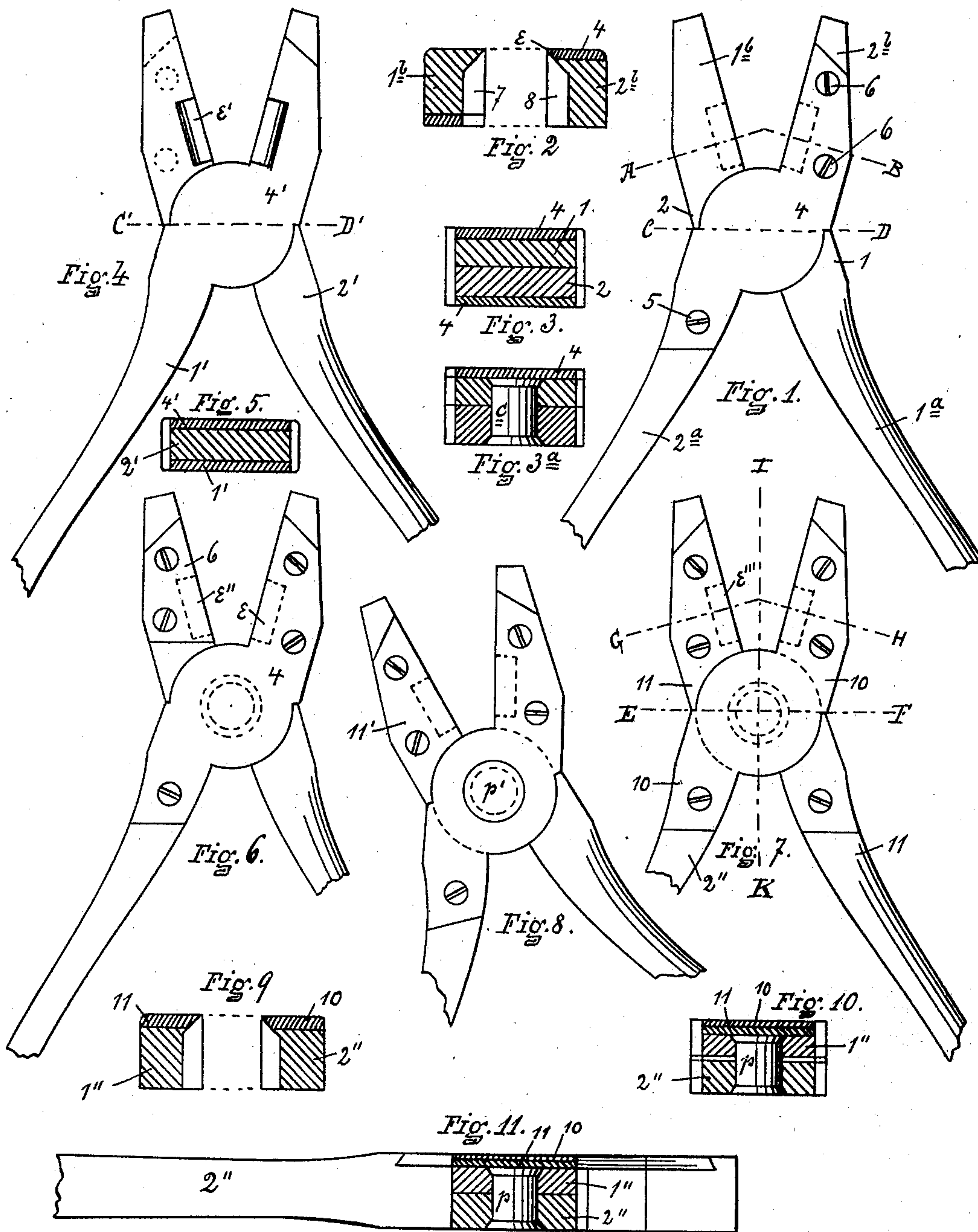
No. 756,505.

PATENTED APR. 5, 1904.

H. F. KELLEMAN.
PLIERS.

APPLICATION FILED AUG. 22, 1902.

NO MODEL.



WITNESSES
Rich. A. George.
S. A. Brown.

INVENTOR
HENRY F. KELLEMAN
By Milton C. Robinson
ATTORNEY.

UNITED STATES PATENT OFFICE.

HENRY F. KELLEMAN, OF UTICA, NEW YORK, ASSIGNOR TO UTICA DROP FORGE & TOOL COMPANY, OF UTICA, NEW YORK.

PLIERS.

SPECIFICATION forming part of Letters Patent No. 756,505, dated April 5, 1904.

Application filed August 22, 1902. Serial No. 120,624. (No model.)

To all whom it may concern:

Be it known that I, HENRY F. KELLEMAN, of Utica, in the county of Oneida and State of New York, have invented certain new and useful Improvements in Pliers; and I do hereby declare that the following is a full, clear, and exact description of the invention, which will enable others skilled in the art to which it appertains to make and use the same, reference being had to the accompanying drawings, and to the letters and figures of reference marked thereon, which form part of this specification.

The object of my invention is to provide a pliers that is strong in construction, cheaply made, and in which a tempered cutting edge may be readily provided without tempering or unnecessarily heating and tempering the whole tool.

In the drawings, Figure 1 shows in side elevation the tool with portions of the handle broken off to reduce the size of the figure. Fig. 2 shows a section of same, taken on line A B of Fig. 1. Fig. 3 shows a section taken on line C D of Fig. 1. Fig. 3^a shows a section corresponding with C D of a modified form of construction. Fig. 4 shows the reverse side from Fig. 1 and also the same side of a modified form of construction. Fig. 5 shows a section taken on line with C' D' of Fig. 4 of the modified form of construction mentioned. Figs. 6, 7, and 8 show various other modified forms of construction. Fig. 9 shows a section on line G H of Fig. 7. Fig. 10 shows a section on line E F of Fig. 7. Fig. 11 shows a section on line I K of Fig. 7.

Referring to the reference letters and figures in a more particular description, 1 and 2 indicate the two main parts of the pliers, which consist of the handle portions 1^a and 2^a, respectively, and the jaw portions 1^b and 2^b, respectively. These two parts are halved or recessed together, as shown in Fig. 1, at the joint or crossing-point, which may be without a pivot, as shown in Fig. 3, or with a pivot *c*, as shown in Fig. 3^a. When not provided with a pivot, each part is made rounded at the joint and provided with a correspondingly-rounded recess, which when the two

parts are placed together forms the joint. As shown in Fig. 1, each part is provided with a removable and retaining strengthening-piece 4, which spans the cut-out or recess of its part at the joint and is attached at its ends by screws 5 6 or other means to the handle and jaw parts, respectively. The parts 4 are preferably recessed or inlet into the sides of the pliers, so as to lie flush with the general surface, or they may be applied outside of the general lines of the plier jaws or parts. The jaws are preferably provided with recesses 7 8, which make provision for a wire-cutter, and the wire-cutter is formed in the construction as shown in Fig. 1 as to one side at least, with a cutting edge *e* formed on the piece 4. The piece 4 may be hardened and tempered throughout its length or locally to provide said suitable cutting edge. The piece 4 when applied either singly on one side only of the pliers, as indicated at Fig. 3^a, or on both sides, as indicated in Figs. 2 and 3, serves to retain the parts of the pliers together at the joint against lateral or side-wise displacement and, in fact, forms, essentially, what is known as a "box-joint" pliers. In Fig. 3 the construction is shown with the strengthening-piece 4 applied to one side on one part of the pliers only and a rivet *c* employed in the joint. The rivet *c* may be employed in the other construction described or dispensed with in the one shown in Fig. 3^a.

In the construction shown in Figs. 4 and 5 one of the plier parts, as 2', is recessed or cut down at the joint thinner than the other part, 1', and when the piece 4', similar to 4, before described, is applied and secured a box-joint pliers is formed which has the advantage of being capable of being taken apart and has the cutting edge *e'* formed on the part 4'.

The construction shown in Fig. 6 differs from that shown in Figs. 4 and 5 in that an inlet-piece 6 is provided, which provides the cutting edge *e''*, so that with the supplied pieces 4 and 6 the cutting edges for each jaw are provided in separately-tempered pieces from the main parts of the pliers. The parts 6, as well as the parts 4 and 4', are preferably beveled

in opposite directions at each end, so that they wedge in the recesses in the plier parts and will better withstand pressure on the cutting-jaws.

5 In the construction shown in Figs. 7, 9, 10, and 11 a pair of plates 10 and 11 are provided upon the same side of the pliers. The plate 10 is similar to plate 4, heretofore described, secured at its respective ends to the jaw and
10 handle portions, respectively, and spanning the cut-out in the plier part to which it is attached and providing the cutting edge, as heretofore described. The piece 11 is similar to 10 on the other plier part and serves more
15 particularly to provide the cutting-jaw e''' for its particular jaw. In this construction the plier parts 1'' and 2'', respectively, are halved or recessed together, as heretofore described, and, as shown in Fig. 10, are provided with a
20 pivot p . This pivot, however, may be dispensed with.

Fig. 8 shows a construction similar to Fig. 7, except that the jaw-piece 11' is not attached to the handle portion of this plier part, and the
25 rivet p' of this construction is allowed to pass entirely through the main parts and cutting parts of this construction.

What I claim as new, and desire to secure by Letters Patent, is—

30 1. The combination in a pliers of the parts each constituting a jaw and handle cut out or halved together at the joint and a strengthening joint-piece spanning the cut-out in the part and secured at each side of said cut-out

to the jaw and handle respectively, substantially as set forth. 35

2. The combination in a pliers of the two parts each consisting of a jaw and handle cut out or halved together at the joint, and a joint-piece spanning the cut-out in the part and secured at each side thereof to the jaw and handle parts, respectively, and providing a cutting edge formed on the jaw end of the joint-piece, substantially as set forth. 40

3. The combination in a pliers of the two crossing parts each consisting of a jaw and handle cut out or halved together at the joint and a removable joint-piece spanning the cut-out and secured at each side thereof to the jaw and handle, respectively, and serving to secure the parts together against sidewise displacement, substantially as set forth. 45 50

4. The combination in a pliers of the two parts crossing and halved together at the joint, one of said parts being recessed or cut out to a greater extent than the other, and a supplemental strengthening-piece spanning the recess or cut-out of the part which is more cut out or recessed and secured at each end and enclosing the other part at the joint, substantially as set forth. 55 60

In witness whereof I have affixed my signature, in presence of two witnesses, this 20th day of August, 1902.

HENRY F. KELLEMAN.

Witnesses:

F. A. BAKER,
H. L. WHITE.