Feb. 26, 1929.

1,703,112

R. Y. KYSER ET AL

PICKING TOOL

Filed March 6, 1928

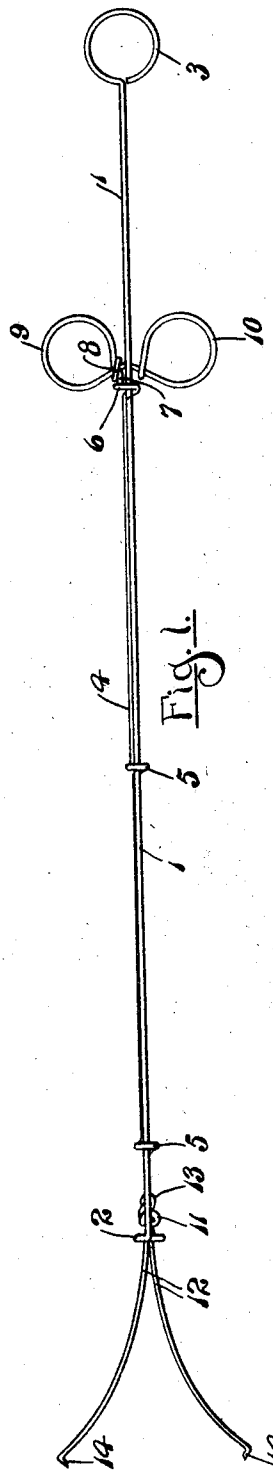
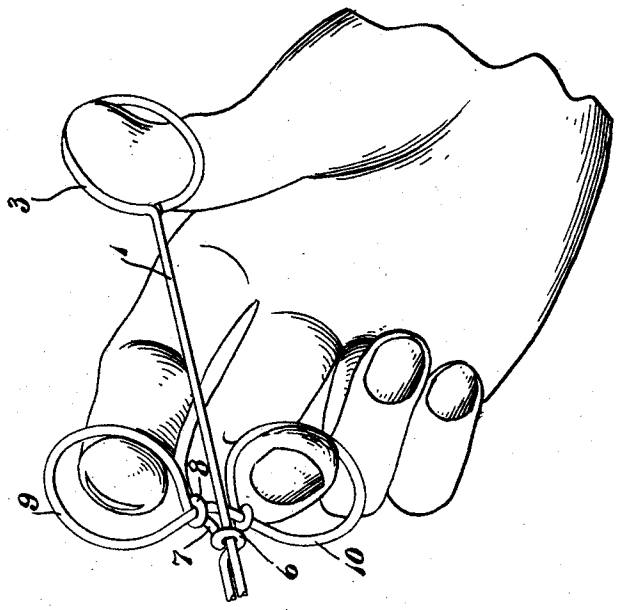


Fig. 1.



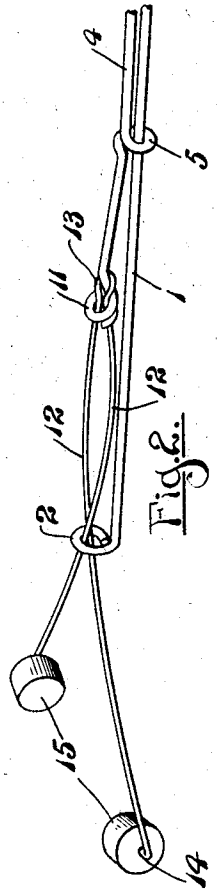


Fig. 2.

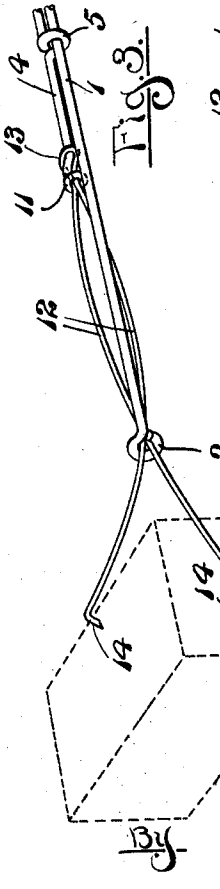


Fig. 3.

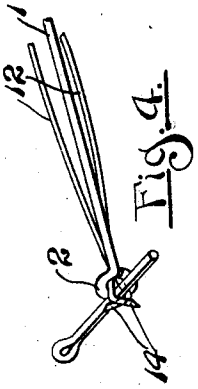


Fig. 4.

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UNITED STATES PATENT OFFICE.

RALPH Y. KYSER AND SMITH KYSER, OF LOWELL, MICHIGAN.

PICKING TOOL.

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This invention relates to a tool which is useful in picking up and removing small objects and particularly from places which are normally inaccessible. It is an object and purpose of the present invention to provide a very simple yet effective tool of this character which is capable of being inserted through relatively small openings and which may be made of any desired length, the tool being equipped with picking or grasping prongs or other engaging members to engage with an article which is to be grasped and moved. A further object of the invention is to provide a tool which while it normally is straight, can be bent into any desired curve and is as fully operative when curved as when it is straight. Many other objects and purposes than those stated will be apparent as an understanding of the invention is had from the following description taken in connection with the accompanying drawing, in which,

Fig. 1 is an elevation of the tool made in accordance with our invention.

Fig. 2 is a fragmentary enlarged perspective of one end of the tool, and in which the picking or grasping prongs are supplied with heads.

Fig. 3 is a perspective view of the tool illustrating the manner in which it is used, and

Fig. 4 is a fragmentary perspective view showing use of the tool in handling very small objects.

Like reference characters refer to like parts in the different figures of the drawing.

In the construction, a length of wire rod 1 is used which at one end is formed with an eye 2 turned laterally at right angles to the length of the rod as best shown in Fig. 2. The opposite end of the rod 1 is formed with a ring 3 through which the thumb of the operator may pass.

A second member of the tool comprises a second wire rod 4 which at a number of places in its length is bent and twisted into the form of guiding eyes 5 and 6 through which the rod 1 slidably passes. From the eye 6 adjacent one end of the rod 4, the wire is continued for a short distance, as indicated at 7, and is then bent into a loop 8 and continued in the form of a ring 9, the wire extended through the eye 8 and terminating in a second finger engaging ring of member 10, the two finger engaging rings or members 9 and 10 being located at opposite sides of the rod 1 as shown. At the opposite end of the rod 4 it is formed with a closed eye 11.

The grasping or picking member of the device is formed from a single length of spring wire bent midway between its ends to form two legs 12 which are connected by a U-shaped loop 13. As best shown in Fig. 2 the loop 13 extends through the eye 11 and passes around the rod 4 immediately adjacent said eye 11. The two arms of the member then pass through the eye 2 crossing each other as they pass therethrough. Each of the legs 12 at its free end is formed with an inwardly turned pointed prong 14.

It is evident that by placing the thumb of the hand through the ring 3 and the first and second fingers through the rings 9 and 10 the two parts of the device may be moved longitudinally with respect to each other with a consequent movement of the legs 12 of the gripping portion of the device through the eye 2; and as the members are moved so as to bring the three rings 3, 9 and 10 toward each other the prongs 14 are brought toward each other and will engage against opposite sides of any article which may be located between them. The prongs grasp the article and hold it securely so that it may be removed readily from any position where it may be. In some instances it is desirable to cover the prongs with heads such as those designated at 15 in Fig. 2, and this may be done very quickly and easily as is evident.

It will be noted that on moving the members and bringing the prongs 14 toward each other, at the extreme of such movement the prongs extend across the eye 2 and serve as stops, preventing the eye from disengaging from the legs 12 of the spring gripping member. This is illustrated in Fig. 4 and said figure also shows the ability of the tool to grip very small objects such as a cotter pin, while at Fig. 3 the dotted lines indicate that larger objects may be gripped and handled by the tool.

A device of this kind is of utility in a great many places. It is of great utility for use around automobiles in getting access to places which cannot be reached by the hand for either removing or replacing different small parts which otherwise could not be reached. It is also very useful around the home in entering or removing various articles from places otherwise inaccessible or

for handling numerous articles which should not be directly handled by the hands. In fact, it is impossible to enumerate all of the various things which can be done with a tool of this kind. It is readily apparent that the device is very practical and useful. It is obvious that it may be passed through very small openings inasmuch as the diverging legs 12 of the immediate gripping member are brought closely together by moving the eye 2 toward the prongs 14. It is also apparent that the wire rods 1 and 4 can be bent into any arc shape and that they will move relatively to each other the same as when they are located straight as shown in the drawings. It is also evident that a tool of this kind can be sterilized and used in such condition.

The invention has proved very practical and useful. It is simple in construction, economical to make, and has proved its practical value. The invention is defined in the appended claims and is to be considered comprehensive of all forms of structure coming within their scope.

We claim:

1. In a device of the class described, an elongated member having a laterally turned eye at one end, a second elongated member slidably mounted on the first member, a gripping member of spring material having two spring legs passing through the eye of the first member and crossing each other adjacent said eye, said legs having permanent connection to one end of the second member and formed at their free ends with gripping means, and means for moving said two elongated members longitudinally with respect to each other, for the purposes described.

2. In a device of the class described, an elongated wire rod formed at one end with an eye located in a plane substantially at right angles to the length of said rod, a second elongated wire rod slidably mounted on the first rod and formed at the same end, with an eye a short distance from the eye on the first rod, a gripping member comprising a length of spring wire bent substantially at its middle, the bend thereof extending through the eye on the second member and around said second member adjacent said eye, and the legs of said gripping member passing through the first mentioned eye and crossing each other adjacent said eye, the free end of said legs being formed with inwardly turned prongs, and means for manually moving said first and second members longitudinally with respect to each other.

3. In a device of the class described, two elongated members slidably mounted for longitudinal movement with respect to each other, means for moving said members relative to each other, a guiding eye extending laterally from one end of one of said elongated members, a third member of spring wire bent at its middle attached to the end of the other of said elongated members at the bend therein, the legs of said third member passing through said guiding eye and at their free ends normally springing apart, and engaging prongs turned inwardly at their free ends of the legs of said third member.

4. In a device of the class described, an elongated wire rod formed at one end with a laterally positioned guide eye and at the opposite end with a finger engaging ring, a second elongated wire rod slidably mounted on the first rod and formed with two finger engaging rings at the end thereof adjacent the ring end of the first rod, a third member of spring wire bent at its middle and permanently secured to the opposite end of said second rod with the legs of the third member passing through said guide eye and crossing each other adjacent said eye and normally springing apart at their free end portions, and prongs turned inwardly at the free ends of the legs of the third member.

5. A device of the class described comprising, an elongated wire rod formed at one end with a laterally positioned guide eye, a second wire rod slidably mounted on the first rod and formed at one end with an eye, a member of spring wire bent midway between its ends to form a loop with legs extending from said loop, said loop passing around the second rod adjacent the eye therein and said legs passing through said eye on the first rod, said legs crossing each other adjacent said guide eye and normally springing away from each other at their free end portions, prongs turned inwardly at the free ends of the legs of said member, and means formed at the opposite ends of said wire rods for manually moving the same longitudinally with respect to each other.

In testimony whereof we affix our signatures.

RALPH Y. KYSER.
SMITH KYSER.