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S. L. STOGSDILL ET AL

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INVALID'S PICKUP STICK

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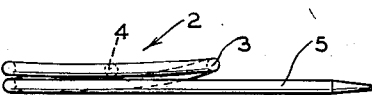
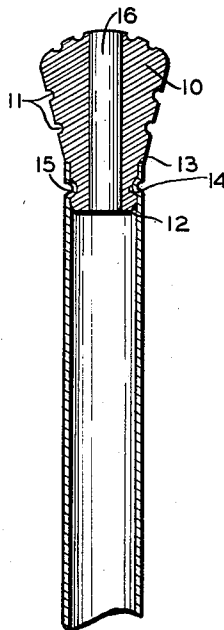
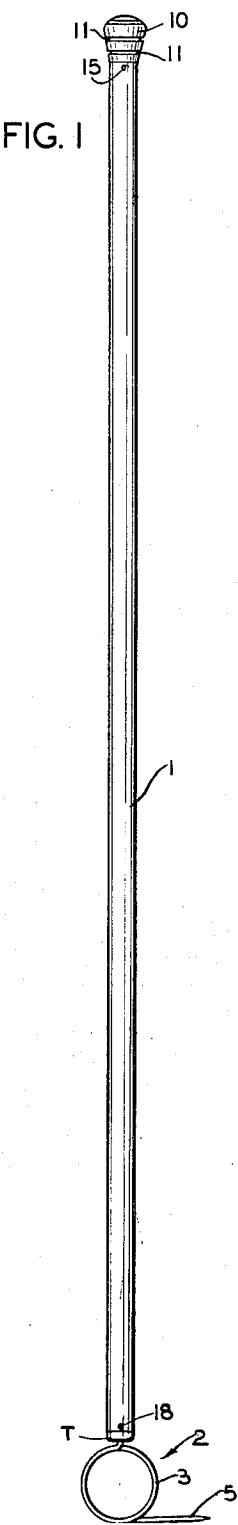


FIG. 3

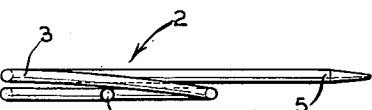
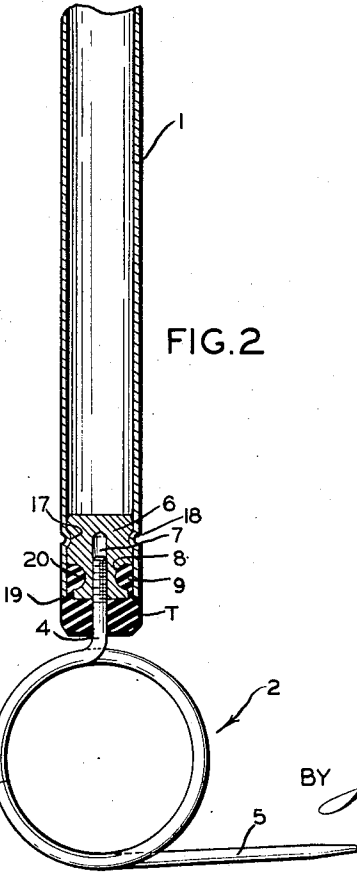


FIG. 4



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INVALID'S PICKUP STICK

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4 Claims. (Cl. 294—99)

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This invention relates to an invalid's pick-up stick. It is designed for the use of invalid, infirm or handicapped persons who need an aid in reaching and grasping articles. It may be embodied preferably in an apparatus which can be converted readily into a cane or walking stick.

The object of the invention is to provide such a stick having a crook which will be almost universal in application, or such that it is capable of grasping articles of maximum forms. Another object is to provide means on such a device to permit its being converted readily to a walking stick and reconverted to a pick-up stick.

Since a summary statement can best be made by reference to the accompanying drawings, that statement follows the short description of those drawings.

Fig. 1 is an illustration of a pick-up stick, which is a preferred embodiment of this invention;

Fig. 2 is a longitudinal sectional view;

Fig. 3 is a view of a crook, forming a part of the stick, looking toward its bottom; and

Fig. 4 is a view of the crook looking toward its attaching end.

While the invention is defined in the appended claims, a summary description of the invention, without intent to limit it beyond that required by the claims, will assist in a ready understanding of the invention as defined therein.

The pick-up stick includes a staff 1 having a crook 2 secured to one of its ends, the crook comprising preferably a helix 3 of resilient wire with one end 4 secured to the staff, and its other end 5 extending tangentially from the helix at a point farthest from the staff and, therefore, substantially perpendicular to a longitudinal line or axis of the staff.

The helix 3 need not be a true circle, as shown, but may be an equivalent loop of different form but having the wire bent in such a manner that edges of the wire forming the loop lie in close proximity so that a thin object can be resiliently grasped therebetween.

In order to provide means for readily converting the stick to a walking cane, and vice versa, a rubber tip T is fixed to the end of the staff 1 with a central hole therethrough to accommodate the attaching end 4 of the crook 2, so that the end 4 may be held by threaded engagement in the end of the staff.

Preferably, a fitting 6 is provided for use with a tubular staff, the fitting having a centrally threaded bore 7 to receive the threaded end 4 of the crook 2, and having a reduced end with a

peripheral groove 8, whereby a circular flange 9, on the tip T, may be secured between the fitting 6 and the interior wall of the tubular staff 1.

Having summarily described the invention's salient features, the following detailed description of the invention and the preferred embodiment, as illustrated in the drawings, will give a more complete understanding of the invention and will assist in its most efficient application.

The staff 1, as shown, is tubular throughout and for lightness and economy may be cut from aluminum tubular stock of appropriate diameter. A head 10 may be provided and this may be of any convenient or ornamental form. As specifically shown, it may be turned from metal stock, such as aluminum, and have therein circular grooves 11 principally for ornamental purposes. It may be turned so as to have a lower reduced portion 12, thereby forming a shoulder 13, the reduced portion 12 being designed to fit within the tubular staff 1 with the end edge of the staff engaging the shoulder 13. A circular groove 14 may be cut in the periphery of the reduced portion 12 to receive indentations, as shown at 15, in the tubular staff to hold it firmly on the head 10.

The head 10 has a central bore in which is placed a bar magnet 16. Thus, the head will have utility in picking up iron or steel objects.

It will be obvious, however, that the particular head illustrated, is merely suggested since any convenient or ornamental head may be provided. Further, in case a staff other than a tubular member is employed, any convenient method may be used for attaching the head to the staff, or the head may be made integral with the staff.

The crook 2 has been substantially described. Nevertheless, by way of illustration, it may be further described so that the invention in this respect may be most efficiently used. The following dimensions given are by way of suggestion and example. The crook may be wound or formed of spring steel having a diameter, for example, of $\frac{1}{8}$ inch, and the helix may have a diameter, preferably, some place between $1\frac{1}{2}$ and 2 inches, this being the size which has been found to be most convenient.

The helix is preferably wound so that the edges of the stock are in contact at the upper end, or attaching end, of the crook, but spreading slightly as the helix is evolved so that there is a slight opening in the order of $\frac{1}{32}$ to $\frac{1}{16}$ of an inch at the point at which the extended end 5 leaves

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the circle. This permits the greatest convenience in picking up narrow objects.

While the crook has been designed as including a helix, this helix need not be a true circle since it may take one of many forms, it being important, only, that it be constructed of loops of wire so that at some point the edges of the loops lie in close proximity whereby they may resiliently engage an article therebetween.

The fitting 6, as specifically shown, has a diameter so that it fits snugly within an end of the tubular shaft 1 and may have a peripheral groove 17 so that the tube may be struck inwardly as shown at 18 for attaching the tube securely to the fitting 6.

The lower end of the fitting 6 is turned so that it is of substantially smaller diameter than the inside diameter of the tubular staff 1, and as described has the circumferential groove 8.

The tip T is preferably molded of rubber, the word "rubber" being used generically to include natural rubber as well as synthetic. The tip T may be so molded as to have a shoulder 19 for engagement with the end of the tubular staff 1, and, also, a circular flange 9 with an enlarged inner rib 20 to fit tightly in the groove 8 so that the tip will be secured on the end of the staff.

As previously described, the tip should have a circular bore to receive the threaded end 4 of the crook, which passes into and is threaded into the bore 7 of the fitting 6.

It will be obvious from the foregoing description that a skilled mechanic may make a similar connection with a solid staff by means of a cylindrical ferrule, or other convenient means may be employed. It is essential, however, that the rubber tip be tightly fixed to the end of the staff and that it has a centrally located hole so that the crook may be threaded into and removed from the staff, leaving the staff free to be used as a walking cane. Of course, if it is not desired to practice the invention completely, the crook 2 may be permanently connected to the end of the staff 1 in any convenient manner.

The crook, when attached to an end of the staff, has been found to be of such a form as to have the most uniform application in picking up articles for the convenience of the handicapped. For instance, the extended end 5 may serve as a hook, the helix may be employed to engage over the neck of a bottle, and a sheet of paper, or other thin objects, can be wedged between the turns of the helix. These are only examples of the uses to which the crook can be applied. At the same time, the device may be so constructed, and as illustrated in the drawings, that the crook can be easily disconnected, the crook can be carried in the pocket, if desired, and the device used as a walking cane.

It will also be obvious that the staff may be made of any ornamental material ordinarily used for canes, or the like, and that other ornamental handles may be provided. The device is such that it may be of pleasing design, as shown by the drawings. Thus, the ornamentation may serve to overshadow or soften the stark utility of the device.

Various changes may be made in the details

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of construction while retaining a combination which comes within the scope of the appended claims, without departing from the spirit of the invention. Parts of the invention may be used without the whole and improvements may be added while retaining the combination and advantages of the invention.

We claim:

1. An invalid's pick-up stick including a staff and a crook secured to one end of the staff, the crook comprising a helix of resilient wire with one end extending from the helix and secured to the staff, and the other end extending tangentially from the helix, the helix comprising one full turn and at least a fraction of a turn, with the fraction lying contiguous to the full turn, whereby an object can be engaged resiliently therebetween.

2. An invalid's pick-up stick including a staff and a crook secured to one end of the staff, the crook comprising a helix of resilient wire with one end extending from the helix and secured to the staff, and the other end extending tangentially from the helix at a point on the helix farthest from the staff, the helix comprising one full turn and at least a fraction of a turn, with the fraction lying contiguous to the full turn, whereby an object can be engaged resiliently therebetween.

3. An invalid's pick-up stick including a staff and a crook secured to one end of the staff, the crook comprising a helix of resilient wire with one end extending from the helix and secured to the staff, and the other end extending tangentially from the helix at a point on the helix farthest from the staff and substantially perpendicular to a longitudinal line of the staff, the helix comprising one full turn and at least a fraction of a turn, with the fraction lying contiguous to the full turn, whereby an object can be engaged resiliently therebetween.

4. An invalid's pick-up stick including a staff and a crook secured to one end of the staff, the crook comprising a resilient wire having one end secured to the staff, the wire being looped with more than one turn and in such a manner that edges of the wire lie in close proximity to resiliently engage an article therebetween, and having an extended free end.

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