

- [54] **UTENSIL OR TOOL FOR HANDLING
(BOIL-IN-BAG) POUCHES**
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[51] **Int. Cl.**..... **B25b 7/22**
[58] **Field of Search** 7/5.4, 1 A; 30/123,
30/124, 134, 135, 286, 292, 294, 289, 272,
282, DIG. 3

- [56] **References Cited**
UNITED STATES PATENTS
467,414 1/1892 Hughes 30/289

2,065,761 12/1936 Smith 30/289 X
3,137,070 6/1964 Geier et al. 30/289

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[57] **ABSTRACT**

A scissors-like instrument for opening bags and partially supporting them during emptying. Specifically a utensil or tool for handling "Boil-In-Bag" pouches after heating in boiling water to recondition the contents as by cooking in the case of food products. The tool is a device for grasping the bag at one end alongside of the bag sealing flange, and includes a knife for severing this flange thereby opening the pouch but leaving it supported by the tool.

7 Claims, 7 Drawing Figures

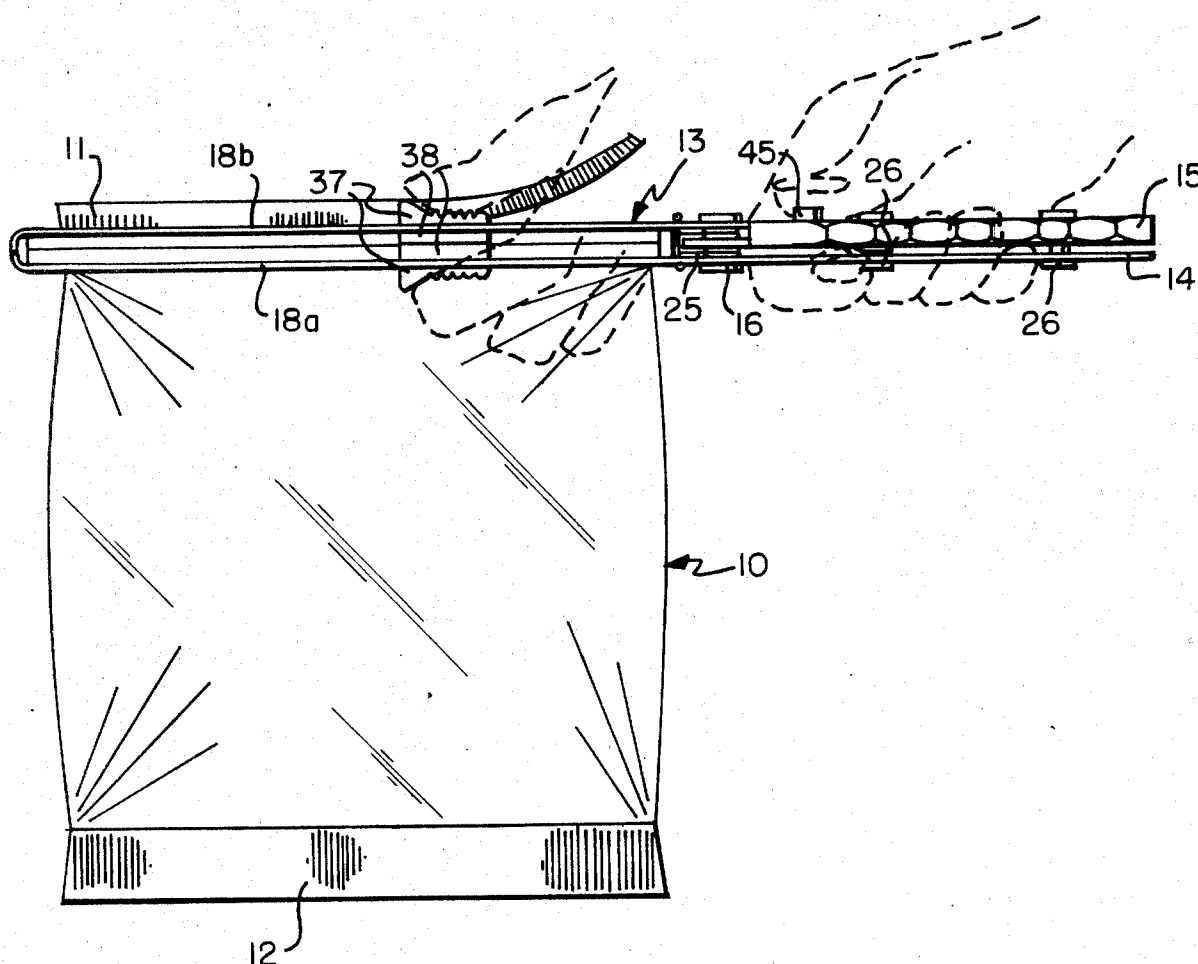


FIG. 1

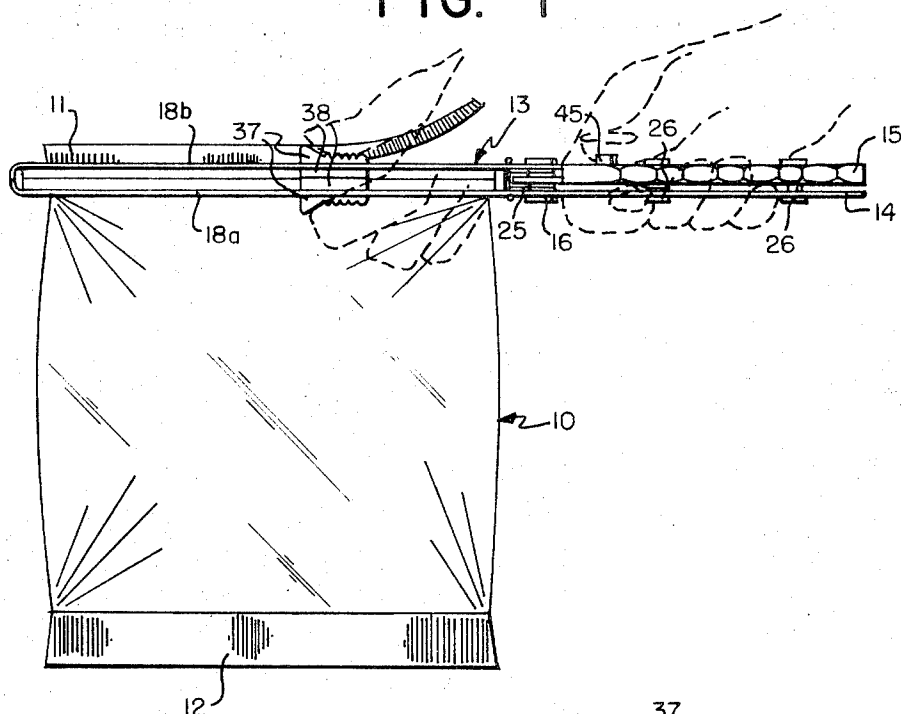


FIG. 4

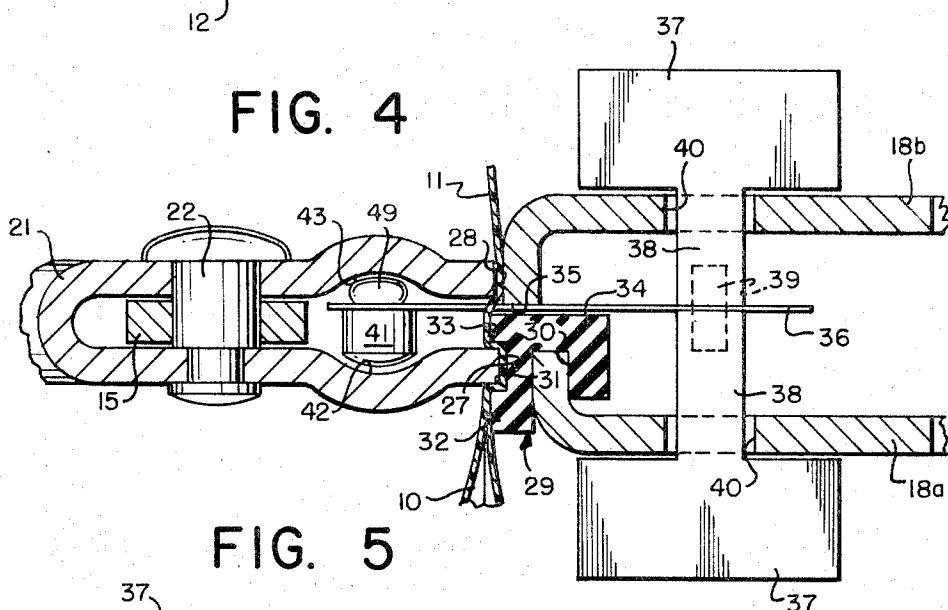
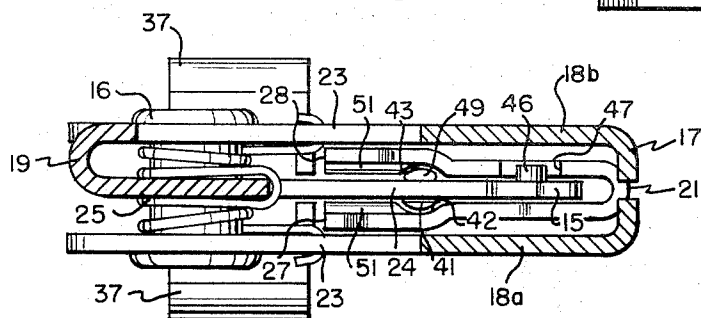
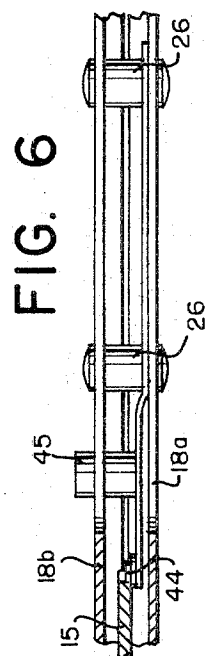
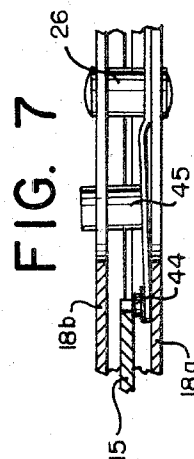
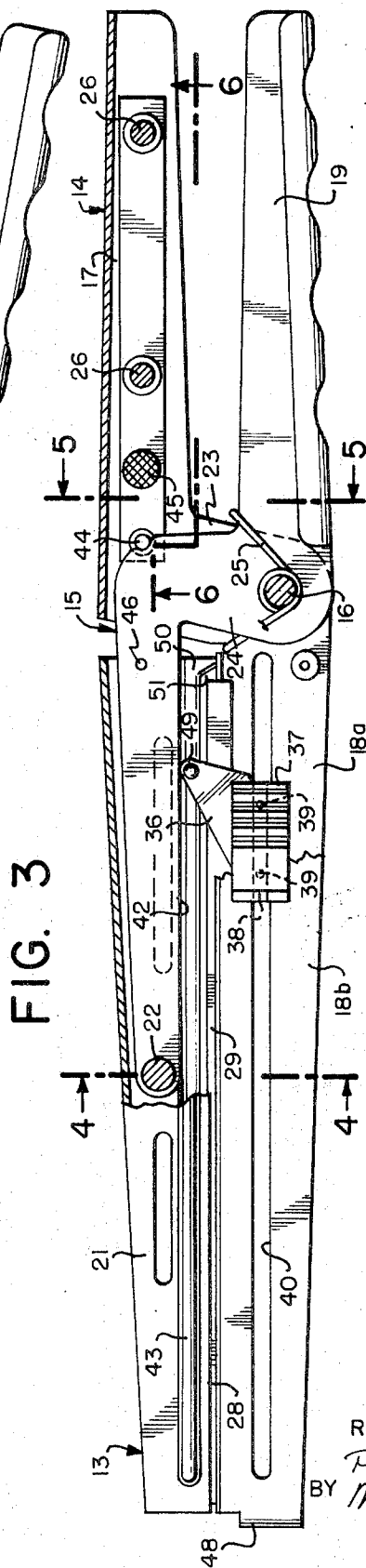
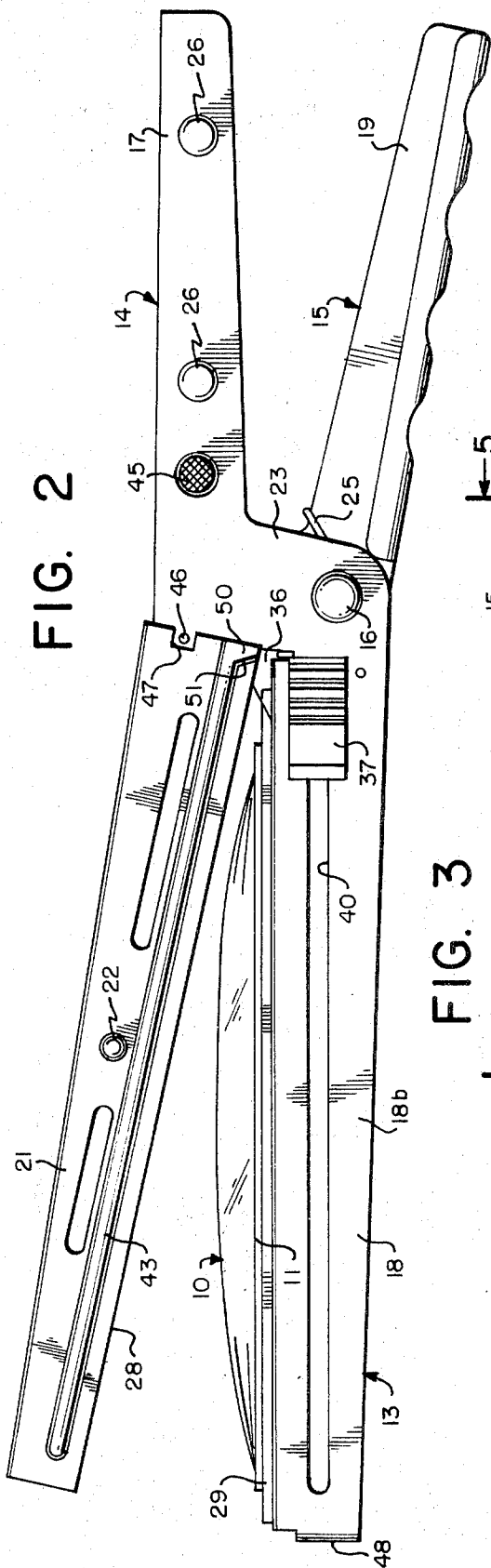


FIG. 5



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UTENSIL OR TOOL FOR HANDLING (BOIL-IN-BAG) POUCHES

BRIEF SUMMARY OF THE INVENTION

It has heretofore been proposed to modify these pouches to render them easier to handle and to open but the cost of the pouches has thereby been increased objectionably. The present invention has been developed for the purpose of handling "boil-in-bag" pouches of conventional economical design. The tool of the invention however is capable of handling either the conventional or the modified and more expensive pouch in a more convenient manner than is possible with the modified pouch and the existing hand tools.

The utensil or tool is of pliers-type construction with handles on one side of the pivot which can be readily grasped by the user with one hand, and on the opposite side of the pivot there are jaws which are long enough to enclose a pouch of conventional size. One of these jaws may be referred to as the gripping jaw and the other jaw as a clamping jaw. The gripping jaw is provided throughout its length with a working edge portion of rubber-like material such as neoprene. The rubber edge portion includes a lengthwise slot of reasonable width such as about one-sixteenth of an inch or about 1.6 millimeters.

The clamping jaw engages the opposite surface of the "boil-in-bag" pouch and when the handles of the devices are squeezed forces the two thicknesses of the plastic pouch together and into the recess just mentioned at a point adjacent to the sealing line of the bag sealing flange. The clamping jaw is of double construction and its opposite member simultaneously engages the surface of the sealing flange and frictionally holds it against the surface of the gripping jaw which is also of double construction.

A cutting knife is arranged to be slidable between the two sections of the gripping jaw and is provided with at least one actuating knob so that it may be manually slid throughout the length of the tool jaws. This knife is mounted to slide on the gripping jaw and carries a lug which slides between opposed grooves on the clamping jaw as the knife moves outwardly so as to hold the two jaws in engagement with the opposite surfaces of the pouch while the sealing flange of the pouch is being severed.

Further, the grooves on the clamping jaw are so shaped that it is impossible to advance the knife from its retracted position adjacent to the jaw pivot when the jaws are in the open position. Since, as previously described, this construction also prevents the jaws from separating when the knife is moved outwardly from its retracted position a valuable safety feature is provided in that the sharp knife edge can never be exposed to the user.

A pivot lock is provided which retains the jaws in the clamped position after they have been closed adjacent to the bag sealing flange as described above. This feature assures that the bag will not accidentally fall from the tool should the user momentarily release his squeezing force on the handles.

The user carries the pouch by the tool to the point where it is desired to discharge its contents. By this time the sealing flange at the opposite end of the bag will have cooled sufficiently so that it can be manipulated to lift the lower end of the bag and turn it upside-down over a receptacle to receive the contents of the

bag. Thereupon the user releases the pressure on the handles, depresses the pivot lock release button, and allows the bag to open gradually and discharge a portion or all of its contents.

Following the complete discharge of the bag's solid contents, should any viscous material such as gravy or sauce remain in the bag, the user can, by maintaining pressure on the pivot lock release button, clamp the tool loosely over the bag adjacent to the now upwards flange of the bag and push the tool towards the open end of the bag to squeeze out such viscous material which is otherwise difficult to remove.

BRIEF DESCRIPTION OF THE FIGURES OF THE DRAWINGS

FIG. 1 is a side view of a Boil-In-Bag Pouch with the utensil of the invention applied thereto;

FIG. 2 is a side view drawn to an enlarged scale of the utensil with its jaws or arms in open position;

FIG. 3 is a side view of the utensil drawn to the same scale as FIG. 2 but showing the arms or jaws in closed position and with parts broken away and shown in section for the sake of clarity;

FIG. 4 is a vertical section taken on line 4—4 of FIG. 3 but drawn to a still greater enlarged scale;

FIG. 5 is a detailed sectional view on line 5—5 of FIG. 3 drawn to about the same scale as FIGS. 2 and 3;

FIG. 6 is a detailed lengthwise section as indicated by the broken line 6—6 of FIG. 3, and

FIG. 7 is a partial view of FIG. 6 with parts shown in different positions.

DETAILED DESCRIPTION

Although the instrument of the invention has general utility in the opening and emptying of bags, the invention will be described specifically in connection with "boil-in-bag" pouches. In FIG. 1 there is shown a "boil-in-bag" pouch 10 conventionally made of clear polyester film and having an upper sealing flange 11 and a lower sealing flange 12, the bag filled with a food product which has been frozen and afterward heated by immersing in boiling water. Applied along the upper portion of the bag just below the sealing flange 11 is the utensil or tool 13 of the invention.

In FIGS. 2 and 3 it may be seen that the tool comprises a pair of pivoted arms indicated generally by numerals 14 and 15 respectively. Each of these arms is Z-shaped in its general formation and the two arms are connected together by means of a pivot pin 16.

Arm 14 has a handle portion 17 at its right-hand end and a gripping portion 18 its left end. Arm 15 has a handle portion 19 at its right end and its left end portion carries a clamping jaw 21 which is pivoted thereto at 22. With this arrangement the lower or working edge of clamping jaw 21 is pressed evenly throughout the length of gripping jaw 18 when the jaws are closed by handles 17 and 19.

The extent to which clamping jaw 21 is free to rotate about pivot 22 is limited by projection 46 on one side of arm 15 which moves between the sides of a slot 47 in the right end of clamping jaw 21 thereby limiting the movement permitted between these members. The movement permitted is sufficient to assure that clamping jaw 21 and gripping jaw 18 will be fully engaged along the entire contacting surfaces 27 and 28 of

clamping jaw 21 FIG. 3. the tool is in the closed position as shown in FIG. 3.

Because of the Z shape of the pivoted arms 14 and 15 handle portion 17 and gripping portion 18 of arm 14 are connected together by a knee or cross-connection 23, and handle portion 19 and its left end portion forming arm 15 are connected together by similar knee 24. Jaws 18 and 21 are held in the normally open position of FIG. 2 by means of a spring 25 (FIGS. 3 and 5), this spring being coiled around the pivot pin 16.

Because considerable strength is required the instrument or tool of the invention is constructed of steel and in the interest of lightness of weight pivoted arm 14 which carries gripping jaw 18 is constructed of two similar members 18a and 18b spaced apart and held in this position by rivets 26 as shown in FIGS. 1, 4, 5, 6 and 7. The outer ends of elements 18a and 18b interlock at 48 to maintain a parallel spacing.

Handle portion 19 of arm 15 and its left end portion are constructed of only a single piece of steel. However jaw 21 which is pivoted at 22 to arm 15 is in the form of a channel member (FIGS. 4 and 5). The curved edge of this channel member is disposed outwardly or upwardly as indicated in FIGS. 2 and 4 and the two edge surfaces 27 and 28 are disposed inwardly as will be more fully referred to later on.

The upper end portions of members 18a and 18b of jaw 18 are bent at right angles and form two working portions for this jaw. On the bent-over portion of member 18a there is mounted the working edge portion 29 of rubber-like resilient material, advantageously neoprene (FIG. 4). Working edge portion 29 extends lengthwise of the gripping jaw 18 from a point close to pivot 16 to approximately the outer end of this jaw and has a lengthwise slot 30 which snugly fits over the bent-over portion of member 18a of jaw 18 (FIG. 4). Edge portion 29 is held in position in this way although adhesive may be applied to these contacting surfaces if desired.

On the outer surface of working edge portion 29 there is a rectangular groove 31 which extends throughout its length, and on either side of groove 31 are ridges 32 and 33 each of which has a flat outer surface. As shown in FIG. 4 when the tool is applied to pouch 10 the bag extends over the surface of ridge 32 into groove 31 under the edge surface 27 of clamping jaw 21, thence over ridge 33 and under the second edge surface 28 of clamping jaw 21. The two sides of pouch 10 are pressed into groove 31 by the edge surface 27. The pouch is thereby firmly retained since edge surface 27 of clamping jaw 21 compresses the resilient material in the vicinity of groove 31 when edge surface 28 clamps the sealing flange of the pouch to the bent-over portion of side 18b of jaw 18.

Between the side surface 34 of working edge portion 29 and the end surface 35 of the bent-over portion of side 18b of jaw 18 there is a small space which forms a slot extending lengthwise between the gripping jaw 18 and the clamping jaw 21 when these jaws are in clamping position. In this slot is a knife blade 36 (FIGS. 2, 3 and 4). Knife 36 is supported by and manually actuated by two rectangular handles 37, one on each side of gripping jaw 18. These two handles 37 are interconnected by narrow projections 38 (FIGS. 3 and 4) on their inner sides which extend into contact with the opposite sides of blade 36. Projections 38 are joined together by a suitable means such as a pair of pins one of

which is shown in dotted lines at 39 in FIG. 4. Handles 37 are serrated on their outer sides (FIGS. 1, 2 and 3) so as to be easily manipulated.

The narrow projections 38 on the insides of the two handles 37 slide in elongated slots 40 in the respective gripping jaw portions 18a and 18b, these slots extending substantially throughout the length of the gripping jaw. Knife 36 cuts the two sides of pouch 10 when handles 37 are moved from the inner end to the outer end of slots 40.

In order to maintain clamping jaw 21 and gripping jaw 18 in engagement with one another as shown in FIGS. 3 and 4 during this cutting movement a single knob 41 is mounted on the upper rear portion of blade 35 and within an elongated groove 42 which extends from end to end of the inner surface of one of the side portions of the channel-shaped clamping jaw 21.

A portion of knob 41 extends through blade 36 and is formed into a rounded projection 49 which retains knob 41 to the blade 36. Projection 49 travels in elongated groove 43 located symmetrically opposite to groove 42 on clamping jaw 21. Grooves 42 and 43 (FIG. 3) extend downwardly at the end of clamping jaw 21 closest to pivot 16. The downward extension 50 of grooves 42 and 43 allows knob 41 and projection 49 to disengage from the grooves thereby allowing the jaws to open, but only when blade 36 is retracted to a position adjacent to pivot 16. The wall 51 of downward extension 50 further prevents blade 36 from advancing outwardly unless the jaws are positioned in the closed or clamped condition thereby providing the previously described safety feature whereby the sharp blade edge is never exposed to the user.

Clamping jaw 21 and gripping jaw 18 can also be held in engagement by a latch member 44 or pivot lock (FIG. 6) which can be moved into and out of action with the side of knee 24 (FIG. 3) by means of a manually operated button 45. FIG. 7 shows the parts in released position.

In using the tool of the present invention it is first employed to retrieve a hot filled pouch 10 from the boiling water. For this operation the end of the pouch may first be manipulated to a position above the surface of the boiling water and held there for a moment or two until flange 11 has cooled sufficiently for the user to touch it and align the pouch in the tool jaws. The tool 13 is used like a pair of pliers and is applied to the bag closely adjacent to one of the flange portions thereof, for example flange 11 of FIG. 1, with sufficient gripping pressure to cause the pivot lock to engage and the jaws 18 and 21 to firmly grip the opposite surfaces of the pouch closely adjacent to the inner edge of flange 11.

With the pouch thus firmly gripped by the tool the tool is held parallel to the surface of the boiling water with the filled portion of the pouch suspended below it and the portion which is to be cut off protruding beyond the jaw pieces, or upwardly as shown in FIG. 1. The user while maintaining the grip of handles 17 and 19 with one hand then with the opposite hand takes hold of the knife handles 37 and slides knife 36 to the left causing it to sever the sealing flange 11 from pouch 10.

The pivot lock prevents the jaws from releasing their gripping force even if the user momentarily relaxes his gripping pressure on the handles thus preventing the bag from accidentally dropping from the tool's grip.

The knife is returned to its right hand position of FIG. 2, and the user maintaining gripping pressure grasps the now cooled bottom flange 12 of the pouch and tips the pouch and utensil 13 to an angle where the cut side of the pouch is in a downward position, whereupon the gripping pressure, on the handles may be gradually released and the pivot lock release button 45 depressed allowing spring 25 to open the jaws of the tool, thereby dispensing the contents of the pouch in a controlled manner. By modulating the gripping pressure the user can dispense as much of the contents as desired.

When all of the solid contents are dispensed from the bag the user can employ the tool to squeeze out any remaining viscous juices by maintaining pressure on the pivot lock release button and, clamping the tool on the bag adjacent to the upwards located bottom flange, modulate the gripping pressure while pushing the tool downwards toward the open end of the bag.

I claim:

1. A scissors-like instrument for assisting the opening and emptying of a sealed bag including
 - a pair of levers, said levers being connected by a pivot intermediate their ends and providing a gripping arm cooperating clamping jaw on one side of said pivot,
 - said gripping jaw having a working edge portion of resilient rubber-like material and
 - said clamping jaw including a member having a metallic edge cooperating with said resilient rubber-like material on said gripping jaw when said jaws are in closed position to secure said bag to said instrument, and
 - a knife slidable on one of said jaws while said bag is

thus secured to said instrument to sever the material of said bag and open the same.

2. A scissors-like instrument according to claim 1 in which releasable means is provided for locking said jaws in closed position.

3. A scissors-like instrument according to claim 1 in which said rubber-like material of the gripping jaw has a lengthwise groove therein into which the material of said bag is forced and held by said metallic edge of the clamping jaw.

4. A scissors-like instrument according to claim 3 in which said clamping jaw has a narrow flat edge which co-acts with the narrow rectangular groove in the rubber-like material of the gripping jaw to force the bag material into the corners of said rectangular groove.

5. A scissors-like instrument according to claim 1 in which in addition said clamping jaw has a groove extending throughout its length, said knife member being slidable on said gripping jaw and having a knob mounted upon it which is arranged to co-act with said groove on said clamping jaw to hold the two jaws closed during the severing operation.

6. A scissors-like instrument according to claim 5 in which said groove on said clamping jaw has a downward extension in which said knob moves when the two jaws are opened.

7. A scissors-like instrument according to claim 6 in which, when said jaws are open a downwardly extending wall of said groove on said clamping jaw is engaged by said knob and prevents said knife member from sliding forward into exposed position.

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