

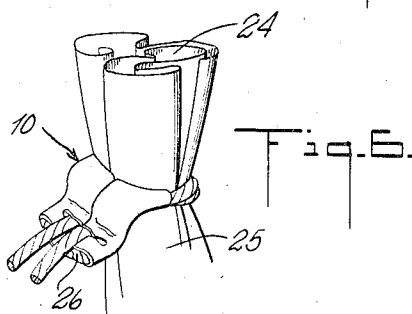
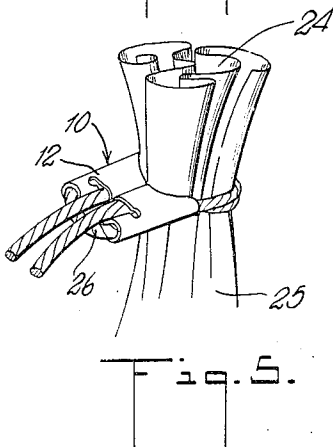
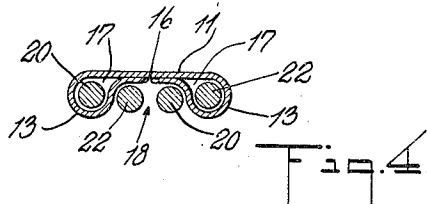
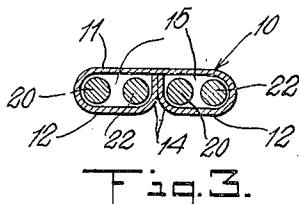
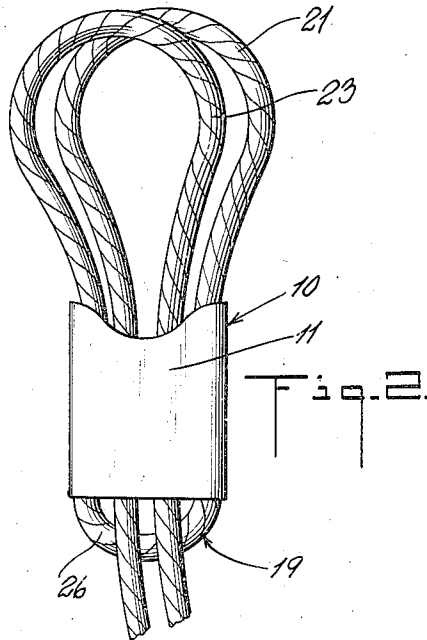
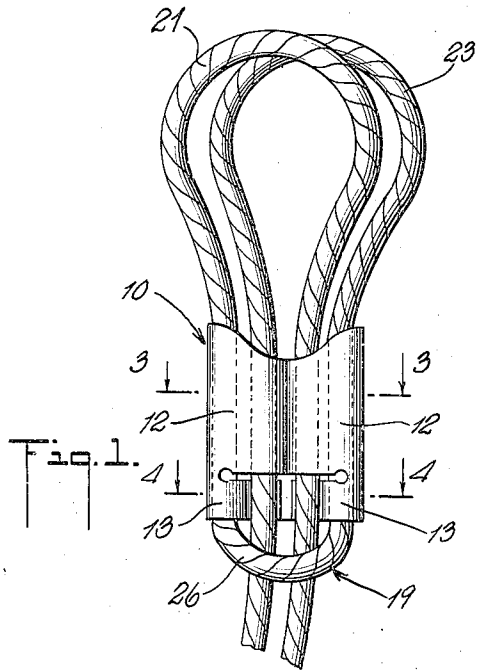
Aug. 30, 1949.

W. M. BROOKS

2,480,543

BAG SEAL

Filed Nov. 21, 1946



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# UNITED STATES PATENT OFFICE

2,480,543

## BAG SEAL

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Application November 21, 1946, Serial No. 711,387

2 Claims. (Cl. 292—310)

The present invention relates to the type of bag seals in which a double-end strand is threaded and rethreaded through a sealing element to form loops that are tightened around the constricted mouth of a bag.

Formerly, the sealing element consisted of a body of lead and sometimes, as shown in U. S. Letters Patent No. 2,163,660 of June 27, 1939, it was customary to employ, in addition to the body of lead, a gripping member of sheet material, through which the strand passes and repasses, to be interposed between the body of lead and the constricted mouth of the bag.

Owing to the shortage of lead, a bag seal was contrived in which the body of lead was omitted and a sealing element was made wholly from sheet material, as shown in my Patent No. 2,343,244 of February 22, 1944. The construction shown in Patent No. 2,342,244 necessitated a deep drawing operation which, because of the heat generated in carrying it out, necessitated the slowing down of production.

It is the main object and feature of this invention to make a bag seal entirely of sheet material without the necessity of employing a drawing operation.

In the accompanying drawing

Fig. 1 is a plan view of one face of the sealing element with a double-end strand threaded and re-threaded therethrough;

Fig. 2 is a view like Fig. 1, but showing the other face of the sealing element;

Fig. 3 is a transverse sectional view substantially on the plane of line 3—3 of Fig. 1;

Fig. 4 is a transverse sectional view substantially on the plane of line 4—4 of Fig. 1;

Fig. 5 is a view in perspective of the bag seal showing the loops tightened around the flexible mouth of a bag but before compressing or deforming the sealing element;

Fig. 6 is a view similar to Fig. 5 but with the sealing element compressed or deformed.

10 indicates a sheet-material member having a main backing portion 11 provided with integrally formed, complementary side-wings folded toward each other over, and in spaced relation with respect to, the backing portion and curled toward said backing portion to provide a plurality of parallel passages for the reception of strand material. There are two pairs of integral side-wings 12 and 13. One pair 12 constitute complementary main wings folded toward each other over backing portion 11 and curled, at their free ends 14, to lie substantially perpendicular to backing portion 11 to thereby pro-

vide two parallel passages 15, each to receive a double strand. The other pair of wings 13 are shorter than the main wings and constitute auxiliary wings folded toward each other over, and then toward, backing portion 11 and curled to lie substantially parallel to said backing portion at their free ends 16 to thereby provide two parallel auxiliary passages 17, each to receive a single strand, and spaced apart to form an intermediate passage 18 therebetween.

19 indicates a double-end strand of flexible material such as fibre, one end 20 of said strand being threaded through one of said auxiliary passages 17 and one of said main passages 15 and, after forming loop 21, is rethreaded back through the other main passage 15 and through intermediate passage 18. The other end 22 of said strand 19 is threaded through the other auxiliary passage 17 and the other of said main passages 15 and, after forming loop 23, is rethreaded back through the first-mentioned main passage 15 and then through intermediate passage 18.

Loops 21 and 23 are passed around the mouth 24 of bag 25 and said loops are tightened around the mouth of said bag, as shown in Fig. 5. It will be noted that there is a small loop 26 that extends between auxiliary wings 13, which auxiliary wings act as an abutment against which said small loop is drawn.

The sheet-material member is now compressed or deformed, as shown in Fig. 6, thereby completing the sealing operation.

It will be noted that curled free ends 14 of the main wings and curled free ends 16 of auxiliary wings render it extremely difficult to insert an instrument for the purpose of prying the seal open.

I claim:

1. In a bag seal in which a double-end flexible strand is threaded and rethreaded through a sealing element to form loops that are to be tightened around the constricted mouth of a bag; a sealing element consisting of a sheet-material member having a main backing portion provided with two pairs of integral side-wings, one pair constituting complementary main wings folded toward each other over, and in spaced relation with respect to, the backing portion and curled at their free ends to lie substantially perpendicular to said backing portion to thereby provide two parallel passages, each to receive a double strand, the other pair being shorter than the main wings and constituting auxiliary wings folded toward each other over, and then toward, the backing portion and curled to lie substan-

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tially parallel to said backing portion at their free ends to thereby provide two parallel auxiliary passages, each to receive a single strand, and spaced apart to form an intermediate passage for two strands therebetween.

2. In a bag seal in which a double-end flexible strand is threaded and rethreaded through a sealing element to form loops that are to be tightened around the constricted mouth of a bag; a sealing element consisting of a sheet-material member having a main backing portion provided with two pairs of integral side-wings, one pair constituting complementary main wings folded toward each other over, and in spaced relation with respect to, the backing portion and curled at their free ends to lie substantially perpendicular to said backing portion to thereby provide two parallel passages, each to receive a double strand, the other pair being shorter than the main wings and constituting auxiliary wings folded toward each other over, and then toward, the backing portion and curled to lie substantially parallel to said backing portion at their free ends to thereby provide two parallel auxiliary passages, each to receive a single strand, and spaced apart to form an intermediate passage for two strands

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therebetween; and a double-end strand, one end threaded through one of said auxiliary passages and main passages and rethreaded back through the other main passage and through the intermediate passage, and the other end of said strand threaded through the other of said auxiliary passages and the other of said main passages and rethreaded back through the first-mentioned main passage and through the intermediate passage.

WINFRED M. BROOKS.

## REFERENCES CITED

The following references are of record in the file of this patent:

## UNITED STATES PATENTS

Number	Name	Date
745,036	Brooks	Nov. 24, 1903
1,631,464	Brooks	Nov. 11, 1925
2,342,244	Brooks	Feb. 22, 1944

## FOREIGN PATENTS

Number	Country	Date
462,192	France	Jan. 21, 1914

**Certificate of Correction**

Patent No. 2,480,543

August 30, 1949

WINFRED M. BROOKS

It is hereby certified that error appears in the printed specification of the above numbered patent requiring correction as follows:

Column 1, line 18, for the patent number "2,343,244" read *2,342,244*;  
and that the said Letters Patent should be read with this correction therein that the same may conform to the record of the case in the Patent Office.

Signed and sealed this 10th day of January, A. D. 1950.

[SEAL]

THOMAS F. MURPHY,  
*Assistant Commissioner of Patents.*