

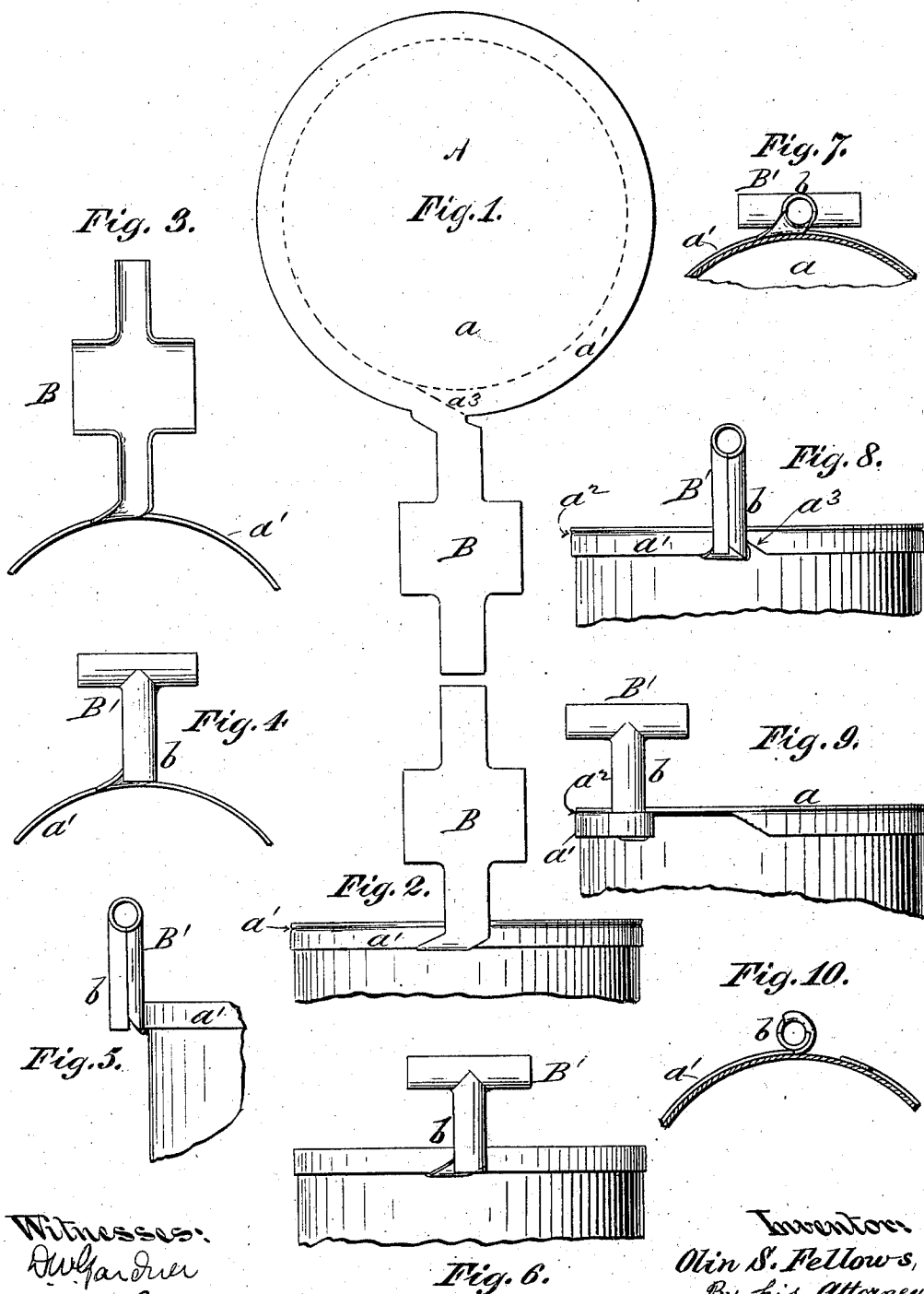
(No Model.)

2 Sheets—Sheet 1.

O. S. FELLOWS.
DEVICE FOR OPENING SEALED PACKAGES.

No. 555,939.

Patented Mar. 10, 1896.



Witnesses:
O. S. Gardner
August Hoffmann

Inventor:
Olin S. Fellows,
By his Attorney,
George William Malt

(No Model.)

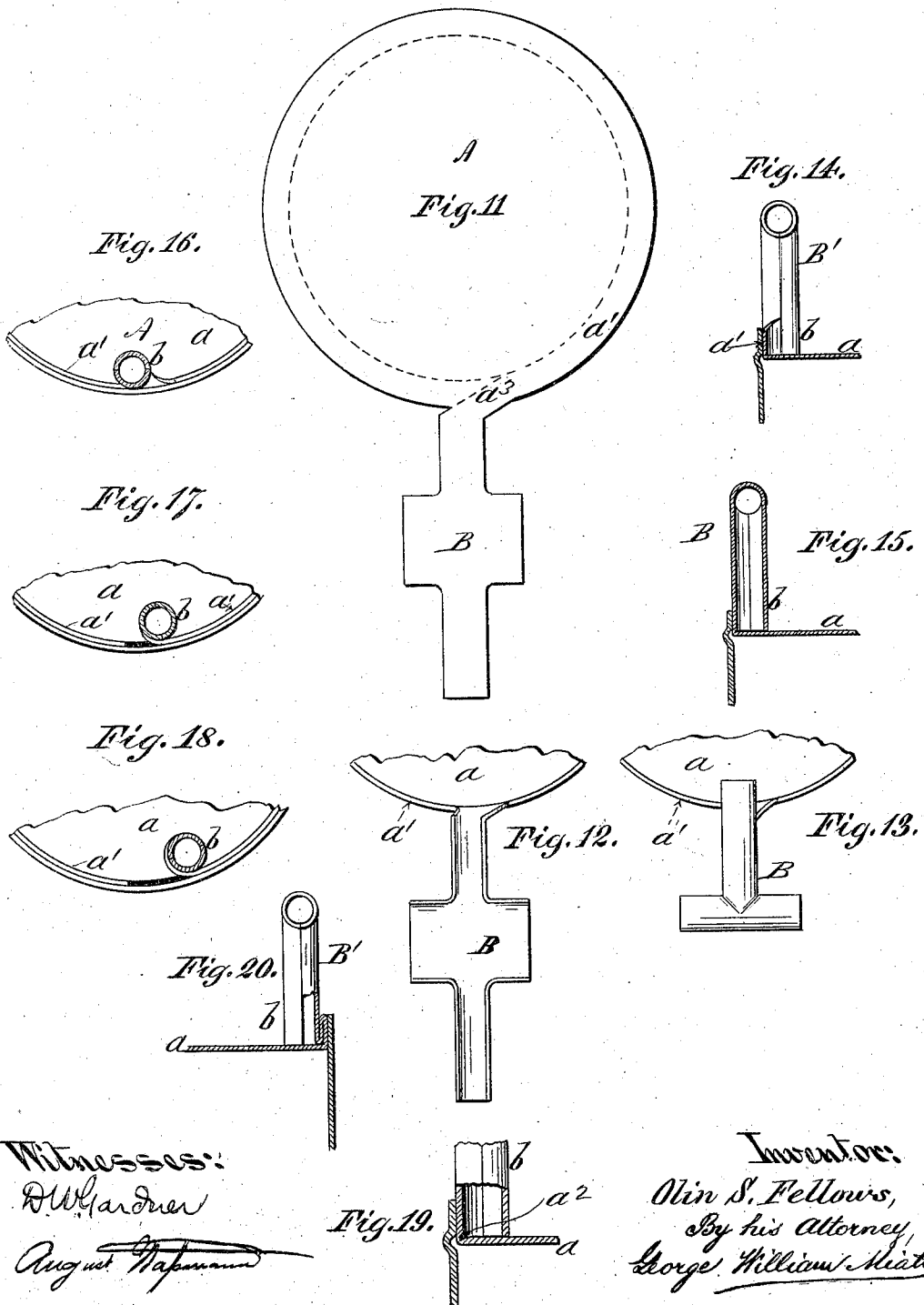
2 Sheets—Sheet 2.

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UNITED STATES PATENT OFFICE.

OLIN STEPHEN FELLOWS, OF MIDDLETOWN, NEW YORK.

DEVICE FOR OPENING SEALED PACKAGES.

SPECIFICATION forming part of Letters Patent No. 555,939, dated March 10, 1896.

Application filed November 12, 1894. Serial No. 528,566. (No model.)

To all whom it may concern:

Be it known that I, OLIN STEPHEN FELLOWS, a citizen of the United States, residing at Middletown, in the county of Orange and State of New York, have invented certain new and useful Improvements in Devices for Opening Sealed Packages, of which the following is a specification sufficient to enable others skilled in the art to which the invention appertains to make and use the same.

My improvements relate to sheet-metal cans which are designed to be opened by the removal in whole or in part of a stripping portion, which is severed from the can by winding it upon and around the shank of a strip-winding key. Heretofore these strip-winding keys have consisted of separate undetached or detachable pieces, not always available for use when wanted, even when shipped with the cans and suspended on the stripping-tongue or otherwise placed or held upon the cans. In practice, during the transportation and sale of the cans many of these undetached or semidetached keys become lost or misplaced or are otherwise rendered unavailable when wanted, and the difficulty of insuring the presence of the individual strip-winding key has been a serious objection to this method of opening sheet-metal cans. Furthermore strip-winding keys stamped from sheet metal and packed as individual keys with cans have heretofore been made with flat shanks, so that the variations in leverage exerted thereby during the stripping operation resulted in a jerky uneven motion which rendered the operation difficult and uncertain and sometimes caused the tearing or rupture of the strip transversely before the contents of the cans became accessible.

My invention consists primarily in forming a sheet-metal can with a stripping portion having a strip-winding key positively attached thereto or forming an integral part thereof, said strip-winding key constituting an extension of said stripping-section of the can and being preferably though not necessarily made in one piece therewith consisting of a handled shank, around which latter the stripping portion may be wound to open the can, and I have herein shown and described it as made in one piece with the strip and as doubled upon itself to strengthen it and to

form a hollow convex or cylindrical shank, around which the strip may be conveniently and safely wound to open the can.

A secondary feature of my invention consists in a special construction of the can in which the stripping portion consists of the flange of an end plate, the strip-winding key being formed integral with or positively secured to said stripping-flange.

In the accompanying drawings, Figure 1 shows an end-cap blank and key-blank cut from the same sheet of metal and designed for an exterior flange fitting over the end of the can-body. Fig. 2 shows the cap in place with the blank turned up; Fig. 3, the blank after it has been stamped; Fig. 4, the same after it has been folded. Figs. 5 and 6 are respectively elevations of the key, taken at right angles to each other. Fig. 7 is an end view of the shank of the key; Fig. 8, an elevation showing the parts at the beginning of the stripping operation; Fig. 9, a similar view showing the exterior flange partially stripped away; Fig. 10, a sectional view of the can-body, showing the completion of the first rotation of the key. Fig. 11 is a view similar to Fig. 1, excepting that the blank is designed for an end cap with a flange fitting inside the can-body. Fig. 12 shows the key-blank struck up or embossed. Fig. 13 shows the blank folded. Fig. 14 is an elevation of the key in place, showing the adjoining parts in section. Fig. 15 is a section of the key and adjoining parts. Figs. 16, 17, and 18 show cross-sections of the key-shank prior to and during the stripping operation. Fig. 19 is an enlarged view showing the incision between the flange and end plate; Fig. 20, a sectional elevation illustrating a modification.

The strip to be removed from the can to open it may consist of either a portion of an end plate or of a portion of the can-body, the stripping portion in either case having the strip-winding key B' formed integral therewith or otherwise positively secured thereto.

In my concurrent application, Serial No. 528,567, bearing even date herewith, I describe and claim a special construction of a can in which the stripping portion and strip-winding key are formed integral with the body of the can. In my present application, while I claim broadly the formation of the stripping

portion and the strip-winding key integral with a metal can, I show and describe the strip and strip-winding key as formed integral with an end plate or cap to the can-body.

5 The cap A is cut or stamped out of sheet-
tin in the usual manner, except that the blank
B for the stripping-key is preferably formed
in one piece therewith. The further shaping
of the key B' may be accomplished either be-
fore or after the attachment of the end plates
to the can-body, as may be preferred. In cer-
tain cases it may be deferred until after the
can has been filled, sealed, and labeled, the
blank during the latter operation being bent
flat over the end plate. In either case the
blank is embossed, stamped or drawn up, so
that when bent over upon itself a shank *b* of
convex exterior will be formed, the concavity
imparted to the opposed inner surfaces being
preferably such as to render the shank *b* cylin-
drical in cross-section, as shown in the draw-
ings, although this is not absolutely essential.
In this connection reference may be had to
my concurrent application, Serial No. 528,565,
filed herewith, which describes special fea-
tures in the construction of the key which it
is unnecessary to duplicate here, but which
are equally applicable to the present use, the
only distinction herein consisting in forming
the key therein set forth integral with the
flange of the end cap.

The usual circuitous incision or other re-
duction in thickness a^2 is formed in the cap,
either on the flange a' or on the end plate a
adjoining it, and an incision or reduction in
thickness a^3 may also be formed transversely
across the flange a' , adjoining the shank *b* of
the key, to insure an easy clean start in the
stripping operation. Where the metal of
which the end cap is composed is sufficiently
thin the circuitous incision a^2 may be omitted,
since the flange a' will then be severable from
the end plate a with the exertion of compara-
tively slight force.

As will be seen by the drawings, my inven-
tion is equally adapted to both the interior
and exterior form of flange, the construction
and operation being essentially the same in
both cases.

Reference may be had to my concurrent
application, Serial No. 528,565, for an under-
standing of special features and variations
in the form of my sheet-metal strip-winding
key, which is here shown in its simplest form,
the essential feature in the present case be-
ing the formation of the strip-winding key
integral with the portion of the can to be
stripped off by winding it around the shank
of said key whether the key and strip be

formed in one piece or otherwise positively
united to form an integral part of the can.

It will be seen that by my invention I am
enabled to make a can with an end cap that
is practically self-opening in the sense that no
separate device is needed to effect the strip-
ping of the flange from the end plate. The
can is thus ready for instant use at all times
and the delay and inconvenience caused by
lost keys, can-openers, &c., are thus avoided.

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

1. A sheet-metal can in which the portion
to be stripped off to open the can has a strip-
winding key forming an integral part thereof,
said key consisting of a handled shank around
which the stripping portion may be wound to
open the can, substantially in the manner and
for the purpose described.

2. A sheet-metal can in which the portion
to be stripped off to open the can has a strip-
winding key forming an integral part thereof,
said key consisting of sheet metal doubled
upon itself to strengthen it and to form a
shank around which the stripping portion of
the can may be wound to open the can, sub-
stantially in the manner and for the purpose
described.

3. A sheet-metal can in which the portion
to be stripped off to open the can has a strip-
winding key formed in one piece therewith,
consisting of a portion of the sheet metal
doubled upon itself to strengthen it and to
form a convex shank around which the said
stripping portion of the can may be wound
to open the can, substantially in the manner
and for the purpose described.

4. A sheet-metal can in which the portion
to be stripped off to open the can has a strip-
winding key formed in one piece therewith,
consisting of a portion of the sheet metal
doubled upon itself to strengthen it and to
form a transverse handle with a hollow cylin-
drical shank around which latter the said
stripping portion may be wound to open the
can, substantially in the manner and for the
purpose described.

5. A sheet-metal can in which the portion
to be stripped off to open the can consists of
the flange of an end plate having a strip-
winding key formed integral therewith, said
key consisting of a handled shank around
which the stripping portion may be wound to
open the can, substantially in the manner and
for the purpose described.

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Witnesses:

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D. W. GARDNER.