

Aug. 8, 1961

B. B. BEEBE

2,994,883

GUIDE ATTACHMENT FOR INDUSTRIAL STAPLING MACHINES

Filed Aug. 29, 1960

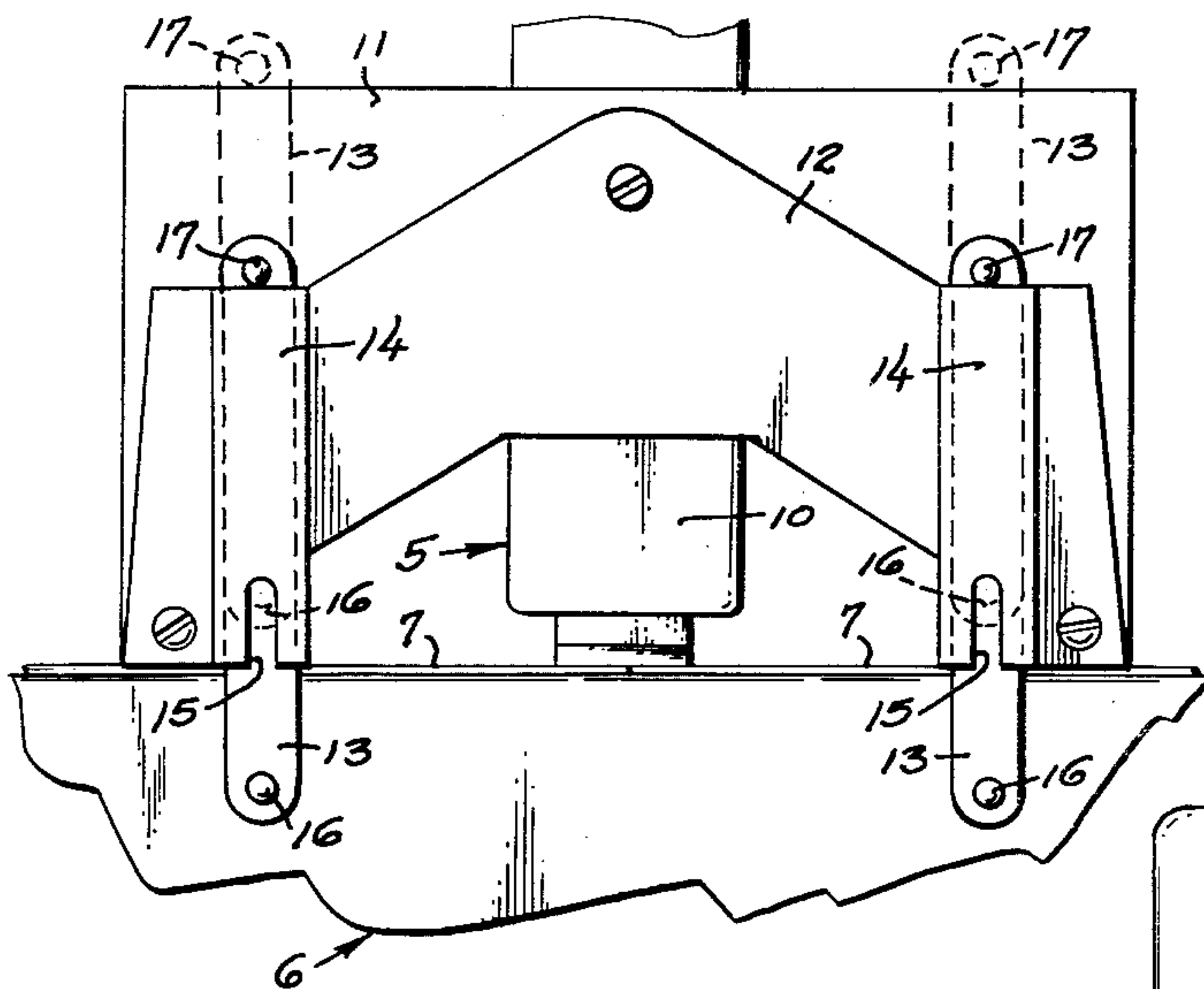


Fig. 1

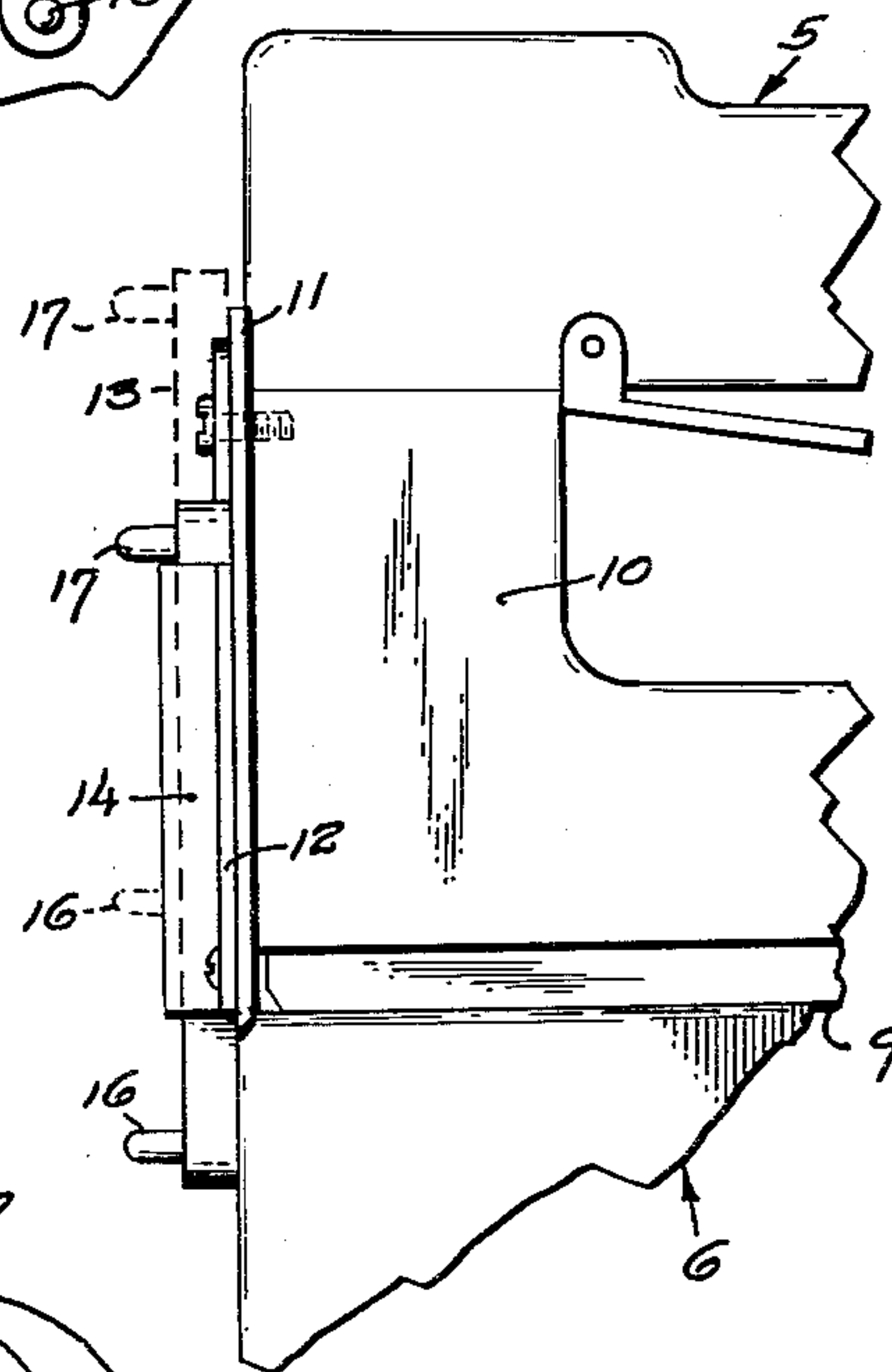


Fig. 2

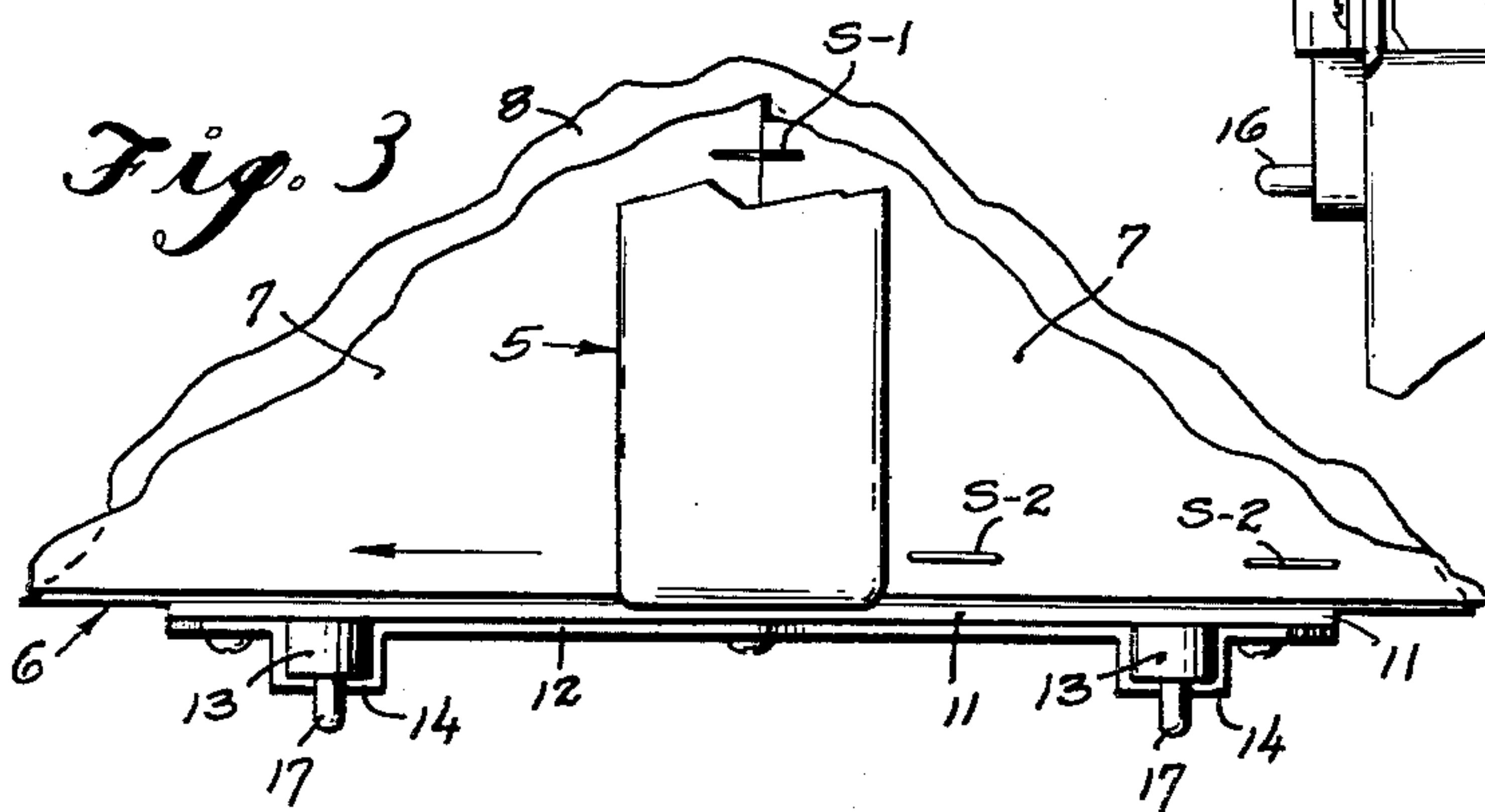


Fig. 3

INVENTOR.
BILLIE B. BEEBE

BY
James & Seed
ATTORNEYS

1

2,994,883 GUIDE ATTACHMENT FOR INDUSTRIAL STAPLING MACHINES

Billie B. Beebe, Seattle, Wash., assignor to
Beebe Bros., Seattle, Wash., a partnership
Filed Aug. 29, 1960, Ser. No. 52,470
7 Claims. (Cl. 1—331)

This invention relates to an attachment for portable stapling machines, particularly stapling machines for industrial usage in fastening cartons and analogous containers, and pertains especially to an attachment having as its function to guide the machine as the latter drives staples along side edges of the carton's flaps.

For its principal object the invention aims to provide a simple and inexpensive device which may be easily attached to substantially any portable stapling machine, one which performs its guide function by bearing against a face of the carton adjacent to the side edge of the flap which is being stapled, and which automatically occupies an elevated out-of-the-way position when the stapler is being moved along the top of a carton on the latter's median line in the operation of stapling end edges of two meeting flaps.

With these and more particular objects and advantages in view which will appear and be understood in the course of the following description and claims, the invention consists in the novel construction, adaptation and combination of parts hereinafter described and claimed.

In the accompanying drawing:

FIGURE 1 is a fragmentary front elevational view portraying an industrial stapling machine equipped with a guide attachment constructed to embody the preferred teachings of the present invention, the view incorporating a fragmentary showing of a carton.

FIG. 2 is a fragmentary side elevational view thereof; and

FIG. 3 is a fragmentary top plan view.

Details of construction of the stapling machine to which the present invention is applied are of no moment. Suffice it to say that such machine is portable and designed for various industrial and trade uses. Machines of this type usually carry a magazine of heavy gauge staples and forcefully propel the prongs of such staples through the material which is to be stapled, such propulsion being obtained by action of a spring loaded and released by pressure exerted upon a hand lever. A machine of the described nature is designated generally by the numeral 5. 6 represents a carton having at each of its two ends the usual flaps 7 which extend inwardly from each of two opposite edges of the carton's top or bottom face, as the case may be, and overlie two other flaps 8 which extend inwardly from the two other opposite edges of said top or bottom face. One line of staples S-1 is customarily applied on the median line of the carton's upper face so as to connect free end edges of the two flaps 7, one to the other free edge and to the underlying flaps 8. Other lines of staples S-2 are customarily applied normal thereto in paralleling close proximity to each of two opposite side edges of such upper face so as to connect side edges of the two flaps 7 to the root end portions of said underlying flaps 8. These staples are driven from a box-like head 10 of the stapling machine, with the driving plane being located in moderately close proximity to the front wall of the head.

According to the present invention there is provided an adapter base plate 11 which is screwed or otherwise rigidly secured to said head 10 so as to present a planar facing for the head 10 disposed parallel with the driving plane of the machine. This base plate, with a complementing cover plate 12, produces two outrigger arms in each of which there is mounted a respective one of two

2

guide bars 13 which are arranged to slide in an endwise direction along a respective vertical axis. The outrigger arms are so designed that the lower edges lie in a horizontal plane at or above that in which the bearing face 9 (FIG. 2) of the machine lies, preferably the former so as to foot upon the carton face which is being stapled and consequently stabilize the machine against rocking. Three-sided boxes 14 formed by the cover plate and employing the base plate 11 as a floor provide slide journals in which said bars are loosely received. Each said box is open at its top and bottom. An open-bottom vertical slot 15 is formed in the front wall of each box to accommodate a respective stop-pin 16 which is threaded or otherwise fixedly secured to each bar so as to project forwardly therefrom at the bottom end. A similar stop-pin 17 is fixed to the upper end of each bar.

The depth of the slots is such as permits the respective bars to rise within the boxes to a level at or above the horizontal plane in which the bearing surface 9 of the stapling machine lies. The bars drop by gravity so as normally to occupy the lowered position shown by full lines in FIGS. 1 and 2, whereat the stop-pins 17 bear upon the top edge of the respective box 14 and the lower ends project a substantial distance below the working plane occupied by the bearing surface 9 of the stapling machine.

It is believed that the invention will have been clearly understood from the foregoing detailed description of my now-preferred illustrated embodiment. In stapling along the edge of a carton the lowered guide bars bear against the adjacent side face and prescribe for the applied staples a rectilinear line running exactly parallel with the side face and spaced therefrom a distance which can be increased or decreased at will by either shimming the adapter frame 11-12 or substituting for the base plate 11 another thicker or thinner plate, as may be desired. In applying staples along the top of a carton on any line which does not closely parallel an edge it is only necessary that the operator lift the machine and set the same down on said top whereupon the bars automatically rise within the journal boxes in that the moderate weight of the bars is far overbalanced by the weight of the machine.

Changes in the details of construction can be resorted to without departing from the spirit of the invention. It is my intention that no limitations be implied and that the hereto annexed claims be given the broadest interpretation to which the employed language fairly admits.

What I claim is:

1. In combination: an industrial stapling machine of a type employed to staple cartons and which bears upon and is moved by hand along the horizontally disposed top surface of the carton, and a guide bar carried by said machine for vertical motion between a functioning lowered position in which a guide portion of the bar bears against a side face of the carton and an out-of-the-way elevated position, said guide portion of the bar, when lowered, occupying a plane forwardly spaced from and paralleling the plane in which the staples are driven.

2. In combination: an industrial stapling machine of a type employed to staple cartons and which bears upon and is moved by hand along the horizontally disposed top surface of the carton, and a guide bar carried by said machine for free vertical motion between a functioning lowered position in which a guide portion of the bar bears against a side face of the carton and an out-of-the-way elevated position, said guide portion of the bar, when lowered, occupying a plane forwardly spaced from and paralleling the plane in which the staples are driven.

3. In combination: an industrial stapling machine of a type employed to staple cartons and which bears upon and is moved by hand along the horizontally disposed top surface of the carton, and a guide bar carried by said

3

machine for gravity movement from an out-of-the-way elevated position into an operating lowered position where-
at the same will bear against a side face of the carton,
the bearing portion of the bar, when lowered, occupying
a plane forwardly spaced from and paralleling the plane
in which the staples are driven.

4. In combination with an industrial stapling machine
of a type employed to staple cartons and which drives
its staples in a plane lying approximately normal and
transverse to the machine's travel, being moved by hand
from one to another stapling position while bearing by
its underside upon the horizontally disposed top surface
of the carton, an attachment for the front face of said
machine formed to provide two vertical slide boxes each
open at the top and bottom and located one at one side
and the other at the other side of the horizontal median
line of the machine in a common plane forwardly spaced
from and paralleling said plane in which the staples are

4

driven, and a respective guide bar journaled in each of
said boxes for endwise sliding motion between an out-of-
the-way elevated position and a functioning lowered posi-
tion in which an exposed toe portion bears against a side
face of the carton.

5. Structure according to claim 4 in which the bars
move by gravity into said lowered position.

10 6. Structure according to claim 4 in which the bars
move by gravity into said lowered position, means being
provided for limiting the endwise motion of the bars.

15 7. Structure according to claim 4 in which the slide
boxes are comprised of a flat base plate and an overly-
ing separate cover plate both removably secured to the
stapling machine, the base plate producing a floor wall
for the boxes.

No references cited.