

No. 679,598.

Patented July 30, 1901.

D. O. BRUNNER.

PAPER STAPLER.

(Application filed Oct. 27, 1900.)

(No Model.)

Fig. 1.

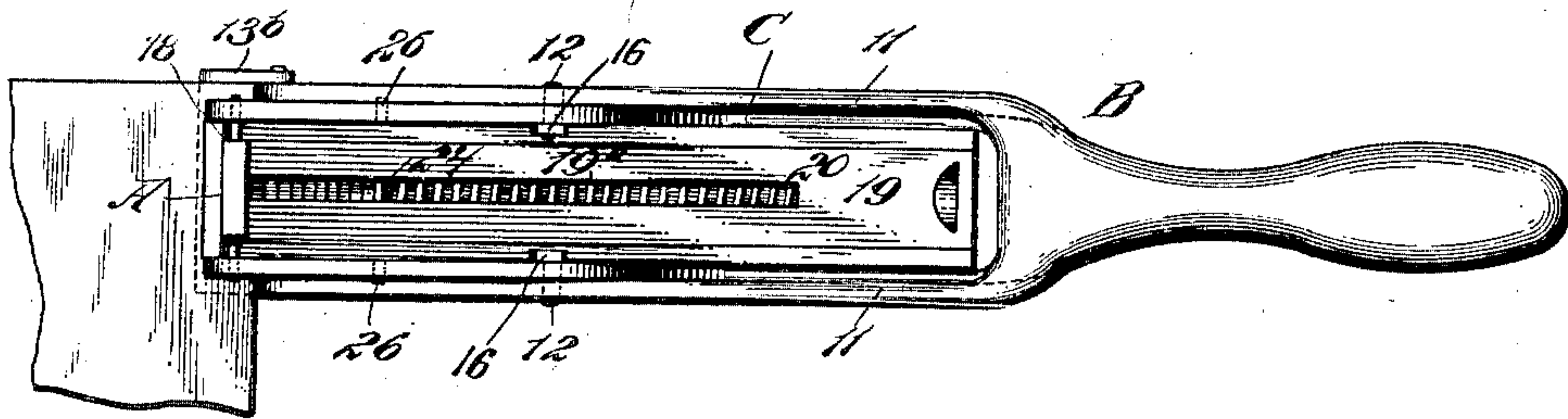


Fig. 2.

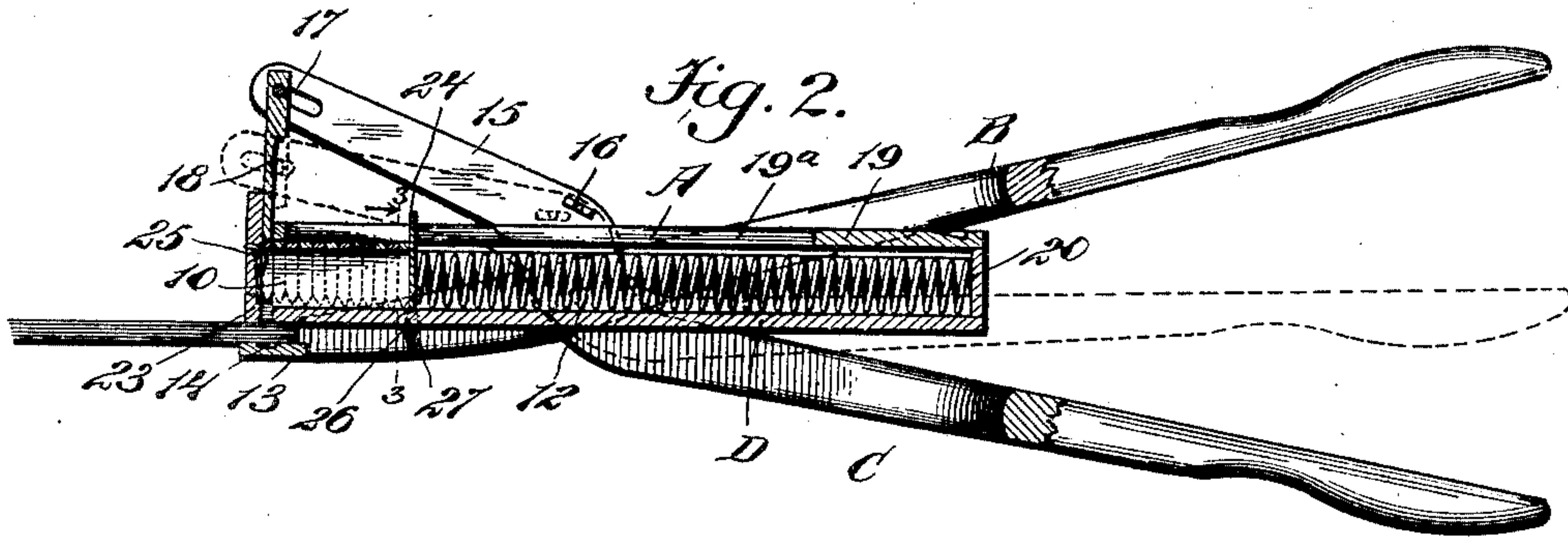


Fig. 3.

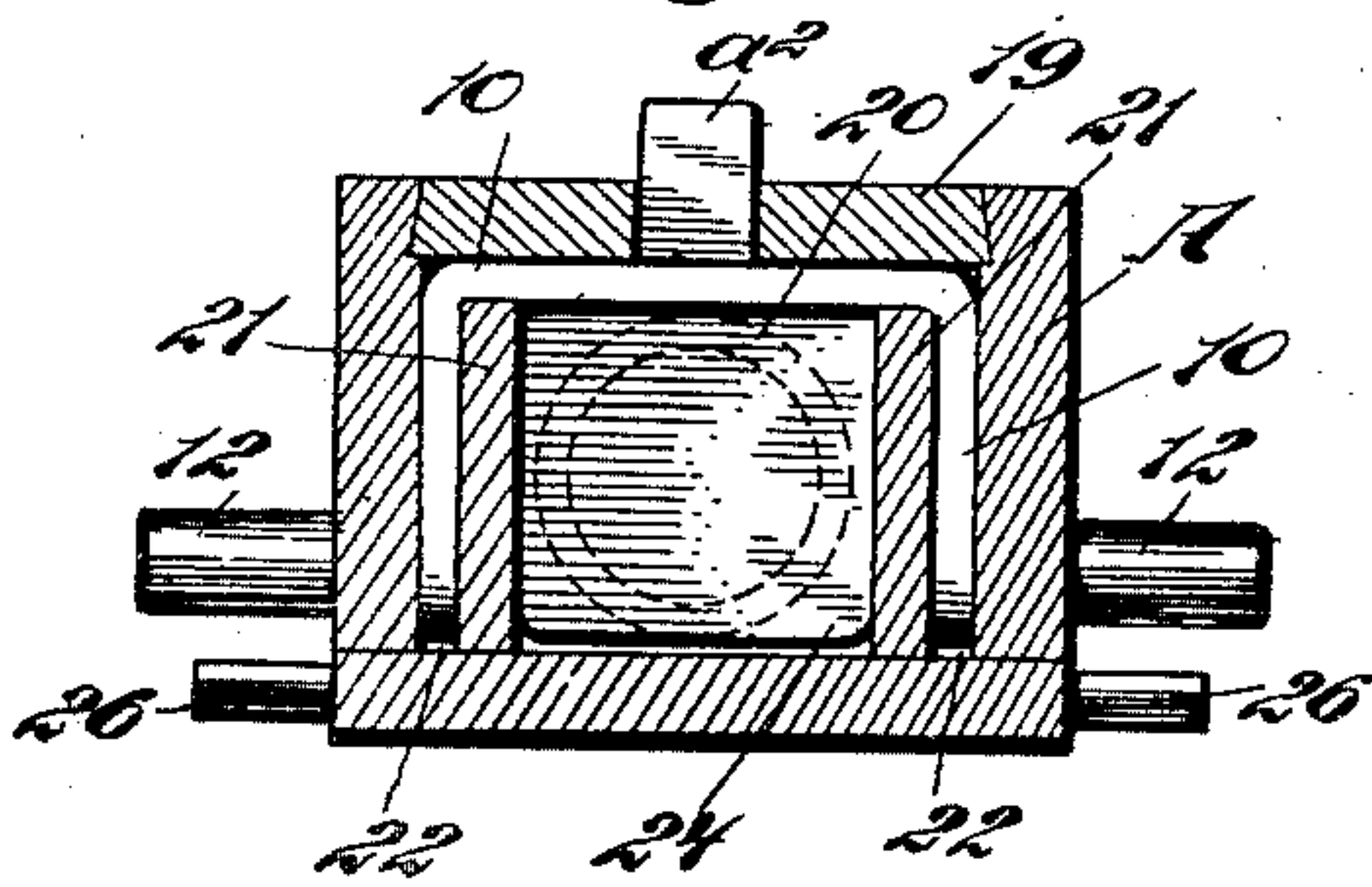
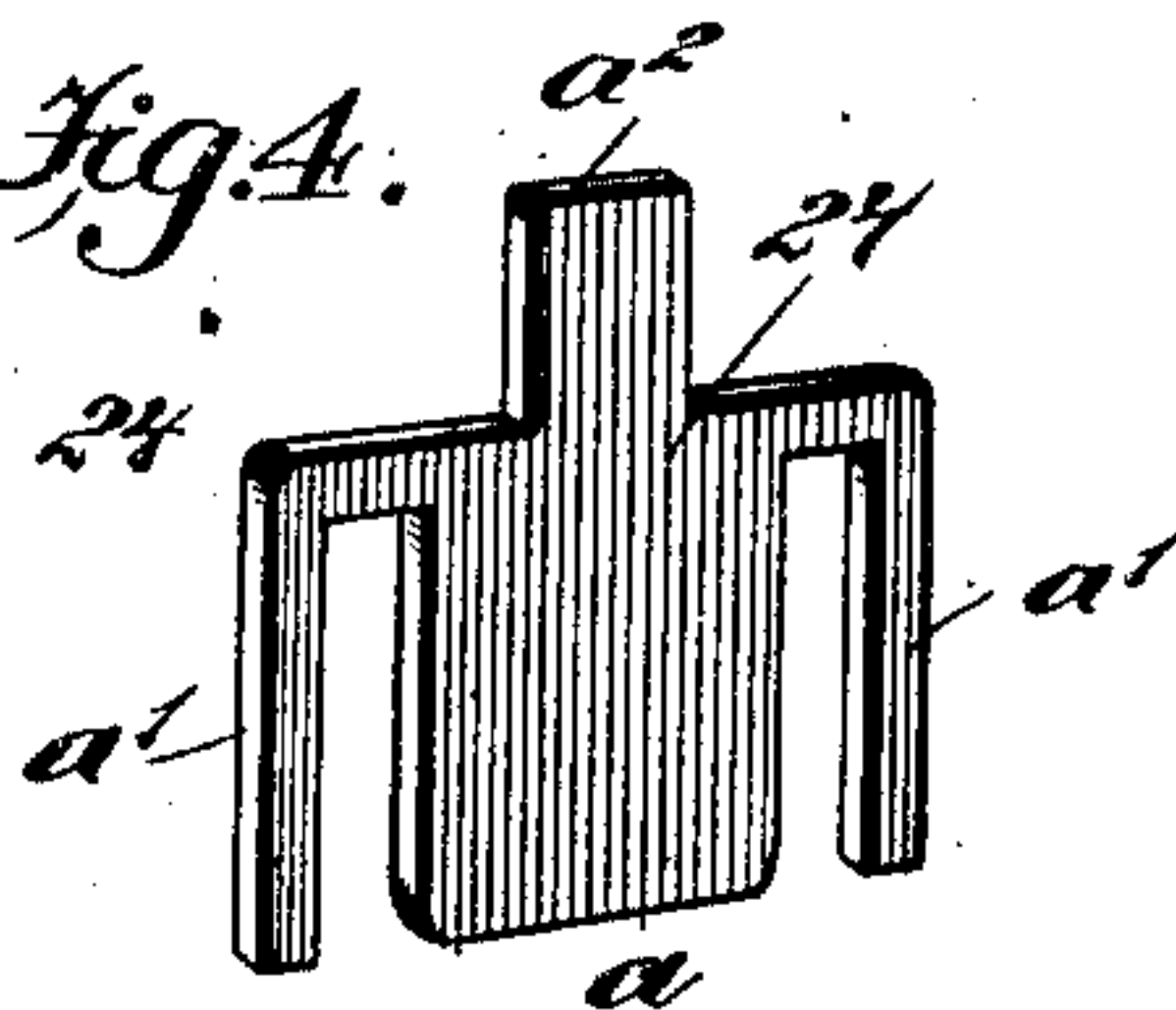


Fig. 4.



WITNESSES:

A. Appleman
J. H. Hedges

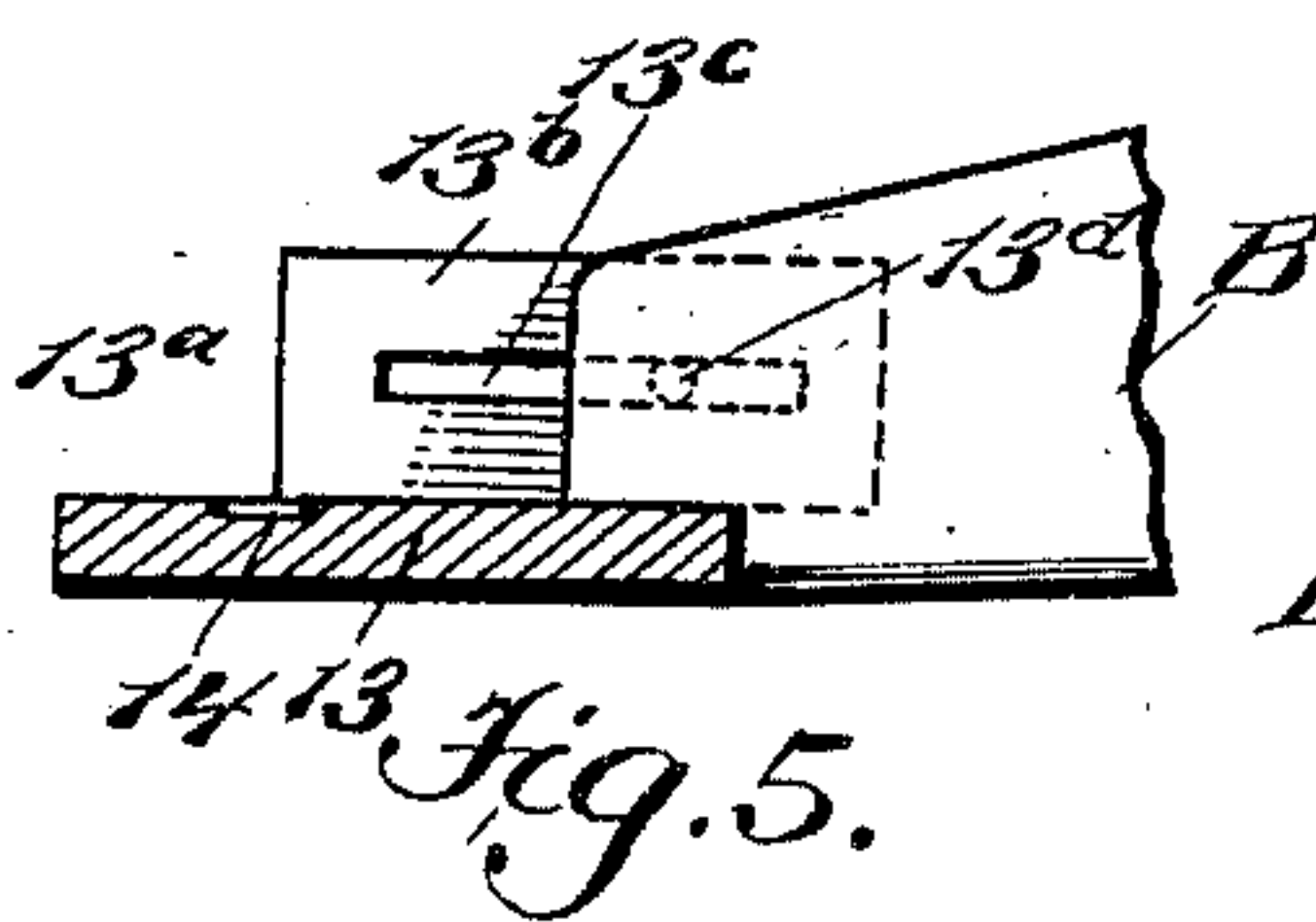


Fig. 5.

INVENTOR

Danton O. Brunner

BY

M. W. H. Hedges

ATTORNEYS

UNITED STATES PATENT OFFICE.

DANTON O. BRUNNER, OF SOMERSET, OHIO, ASSIGNOR OF ONE-HALF TO
ELISHA PEEBLES CLAYTON, OF SAME PLACE.

PAPER-STAPLER.

SPECIFICATION forming part of Letters Patent No. 679,598, dated July 30, 1901.

Application filed October 27, 1900. Serial No. 34,615. (No model.)

To all whom it may concern:

Be it known that I, DANTON O. BRUNNER, a citizen of the United States, and a resident of Somerset, in the county of Perry and State of Ohio, have invented a new and Improved Paper Fastener or Stapler, of which the following is a full, clear, and exact description.

One purpose of the invention is to provide a simple, economic, and durable hand-operated machine for driving staples through two or more sheets of material and to so construct the device that a number of staples may be placed in a suitable chamber formed for the purpose in the device and so that the said staples in the chamber may be automatically fed one after the other to a plunger, through the means of which plunger the staples are driven into the material and are clenched upon a table forming a portion of the device.

Another purpose of the invention is to so construct the device that the operation of feeding the staples and driving them is brought about by operating handles forming a portion of the device.

The invention consists in the novel construction and combination of the several parts, as will be hereinafter fully set forth, and pointed out in the claims.

Reference is to be had to the accompanying drawings, forming a part of this specification, in which similar characters of reference indicate corresponding parts in all the figures.

Figure 1 is a plan view of the improved device. Fig. 2 is a longitudinal vertical section through the device. Fig. 3 is a transverse section taken practically on the line 3-3 of Fig. 2. Fig. 4 is a detail perspective view of a follower adapted to travel in the staple-carrying chamber of the device; and Fig. 5 is a longitudinal section through one of the handle members of the device, that member which carries the table or anvil upon which the staples are clenched, the section being through the table and the end of said member carrying the table.

The device comprises three main parts—namely, a box-body A and two handle members B and C. The box-body A is provided with a chamber D, in which a series of staples 10 is so supported that one staple will follow

the other to a point where the staples are to be driven, which point is at the outer end of the body, and this outer end portion of the body extends beyond the top thereof for a purpose to be hereinafter explained.

The handle members B and C are arranged to cross each other, and said handle members are bifurcated, so as to receive between their members 11 the body A, as shown in Fig. 1. Trunnions 12 are formed upon opposite sides of the box-body A, and these trunnions serve to pivot the handles B and C upon the said box-body. The lower portion of the handle B, which is the uppermost one, extends below the forward portion of the box-body A, as is particularly shown in Fig. 2, and at the forward end of the forward portion of the handle member B a table or anvil 13 is located at the bottom portion of said handle member, as shown in Fig. 5. This table or anvil 13 is provided with a recess 14 in its upper face, usually at the center; but this recess may extend from end to end of the table or anvil, as desired. The recess is adapted to receive the ends of a staple driven through material, so that the ends of the staple projecting through the bottom surface of the material may be clenched.

At the forward end of the sections of the handle member B spaces 13^a are produced immediately above the table or anvil 13, as is illustrated in Fig. 5, and at one side of a section of the handle member B a slide 13^b is located at the exterior of the said member, as shown in Figs. 1 and 5. This slide is provided with a slot 13^c and with a guide-screw 13^d, extending through the slot.

When a staple is to be driven through material at a point near one side, for example, the slide 13^b is carried outward and is secured in its adjusted position by the guide-screw 13^d, which is in the nature of a set-screw, and when a staple is to be driven through the material at a point about centrally between its sides the slide 13^b is carried rearward, so as to uncover the entire portion of the spaces 13^a at the front of the handle member B. When the slide 13^b is in this latter position, the material through which the staple is to be passed may be carried as far as desired beyond either side of the device.

The forward portions of the sections of the lower handle member C are carried upward and forward from their pivot-point 12 beyond the upper portion of the box-body A, and these upwardly and forwardly extending portions have projections 16 formed upon their inner faces, adapted when the two handle members at their rear ends are brought together to engage with the upper portion of the box-body A and force the said body to occupy a substantially horizontal position, which position it occupies throughout the operation of the device. The upward-projecting portions of the lower handle member C are provided with longitudinal slots 17 at their forward ends, and the pivot-pins of a plunger 18 are passed through these slots 17. The plunger is adapted to extend down through a suitable opening into the chamber containing the staples 10 and to engage with the foremost staple, which is the one to be driven. This plunger 18 is guided in its movement by the upward extension of the front wall of the box-body A, as is shown in Fig. 2. The box-body A is provided with a sliding top 19, having a longitudinal groove 19^a made therein in order to accommodate the upper portion of a follower 24, to be hereinafter described. A spring 20, usually a coil-spring, is located in the box-body A, having bearing against its rear wall, and in said box-body at each side of the spring 20 longitudinal partitions 21 are formed, which do not extend to the sliding top 19, as shown in Fig. 3. The upper bow portions of the staples rest upon the top of these partitions 21, while the legs of said staples extend down into the space 22, formed between the side walls of the box-body and the longitudinal partitions 21, as is also clearly shown in Fig. 3.

The foremost staple 10 is adapted to pass down through an opening 23 in the bottom of the box-body A, and when the foremost staple reaches a point over the recess 23 it is freed from the longitudinal partitions 21, which terminate at the rear of said recess or opening, so that the foremost staple 10, which is just below the plunger 18, may be driven down through the opening 23 and through the material which may be introduced between the table or anvil 13 and the bottom of the box-body. A spring 25 is located within the chamber D of the box-body A at its front end, and the object of this spring is to hold the foremost staple steady while it occupies its forward position and while it is being driven down by the plunger 18, which action is brought about by drawing the rear ends of the handle members B and C together. This spring 25 serves as the only support for the foremost staple, the other staples being supported upon the aforesaid longitudinal partitions 21.

The follower 24 is usually attached to the forward end of the spring 20, although it may be independent of the spring. This follower is shown in detail in Fig. 4 and consists of a

body portion α , which is of such dimensions that it may freely slide in the space between the longitudinal partitions 21 of the box-body and side members α' , which are adapted to slide freely in the spaces 22 between the longitudinal partitions 21 and the sides of the box-body. The said follower is provided with a handle or upright section α^2 at its center, which extends through the slot 19^a in the cover 19 of the box-body. Thus the follower has guided movement in the box-body, and when the cover 19 is drawn to the rear the spring 20 is compressed and the follower will be drawn rearward with the spring, since the slot 19^a in the sliding cover 19 does not extend to the forward end of said cover, and at this time the chamber D may be filled with staples.

In order that the lower portion of the upper handle member B may be guided in its movement and in order that the horizontal position of the box-body A may not be disturbed when the handle members are carried in direction of each other, studs 26 are projected from the sides of the box-body A at its bottom, as shown in Fig. 3, and these studs travel in slots 27, made in the bifurcated portion of the said upper handle member B, as is shown in Fig. 2.

Having thus described my invention, I claim as new and desire to secure by Letters Patent—

1. In a stapling device, a box-body provided with a chamber having guides for staples and an outlet for the foremost staple, handle members pivotally attached to the box-body, which handle members cross each other and extend respectively at their forward ends above and below the box-body, a plunger pivotally connected with the upper extension of a handle member, which plunger is adapted to enter the chamber in the box-body at its forward portion and engage with a staple, a spring-support for the forward staple independent of the support for the rearwardly-following staples, a feed device for the staples located within said box-body, a table or anvil carried by the forward portion of the lower extension of a handle, which table or anvil is located below the outlet in the box-body and is adapted to move toward the box-body simultaneously with the entrance of the plunger into the said box-body, and means, substantially as described, for holding the box-body in substantially a horizontal position while the handle members are being operated.

2. In a stapler, the combination, with a box-body provided with longitudinal partitions parallel with its sides and extending from the bottom to a point near the top, the spaces between the partitions and sides of the box-body and the top of the partitions and top of the box-body being adapted to receive staples supported by the partitions, the partitions terminating short of the forward end of the box-body, a spring interiorly located in the box-body at its forward end, a follower ar-

5 ranged to travel on the said partitions and having an upward extension, a mainspring having bearing against the back of the follower and against a wall of the box-body, and
10 a sliding cover for the box-body, having a slot therein through which the extension of the follower is passed, of handle members crossing each other and having their forward portions bifurcated and pivotally connected to
15 the sides of the box-body, guides for the box-body carried by the forward members of the handles, which handles respectively extend above and below the box-body, a plunger pivotally attached to the upper extensions of the
20 handle members, which plunger is arranged

to enter the box-body at a point near the front, at which point an outlet is made in the bottom of said box-body, and a table or anvil carried by the lower extensions of a handle member, which table or anvil is located below the forward outlet in the box-body, for the purpose set forth.

In testimony whereof I have signed my name to this specification in the presence of two subscribing witnesses.

DANTON O. BRUNNER.

Witnesses:

JAMES W. GRAVES,
GEORGE G. GRAVES.