May 24, 1932. R. ORTHWINE 1,860,155

PAPER FASTENER

Filed March 13, 1931

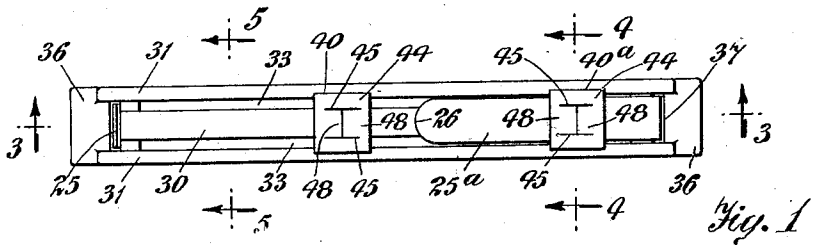


Fig. 1

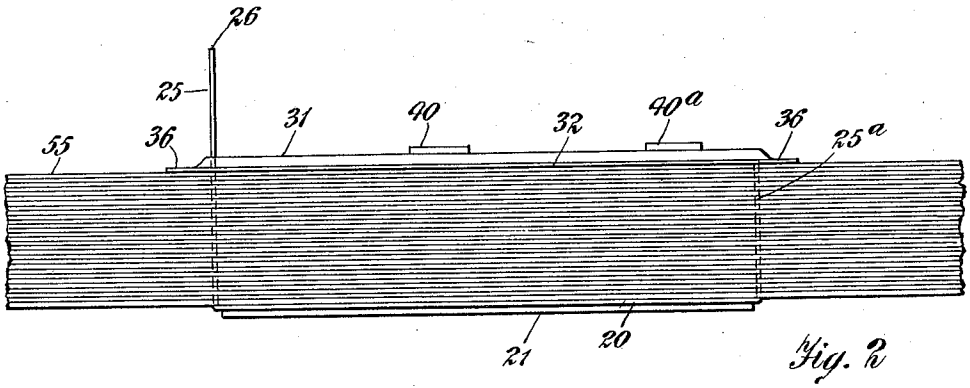


Fig. 2

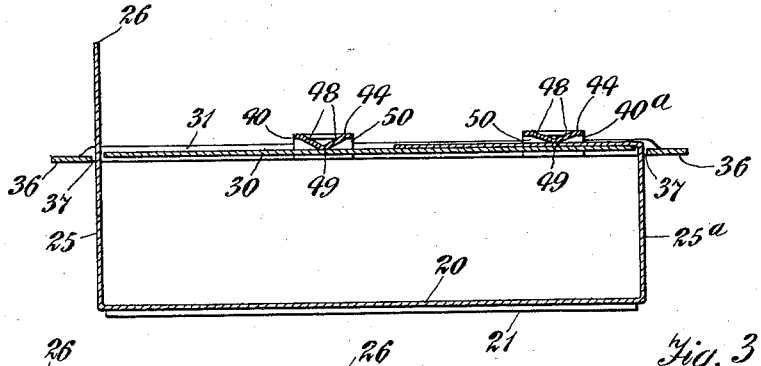


Fig. 3

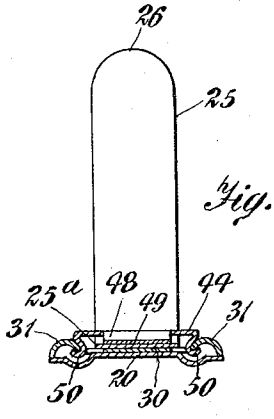


Fig. 4

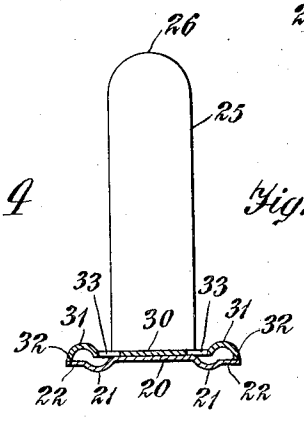


Fig. 5

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Patented May 24, 1932 1,860,155

UNITED STATES PATENT OFFICE

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PAPER FASTENER

Application filed March 13, 1931. Serial No. 522,223.

This invention relates to a paper fastener.

The object of the invention is the production of a fastener, by means of which sheets of paper and the like can be easily clamped together or released.

The second object of the invention is the production of a fastener for sheets of paper and the like, which is simple in construction and which comprises members that are maintained in operative position by means of movable locking clasps.

In the accompanying drawings, Fig. 1 represents a top plan view of an exemplification of the paper fastener partly in clamped operative position; Fig. 2 shows a front view of Fig. 1 with sheets of paper clamped in the fastener; Fig. 3 represents a section of Fig. 1 on the line 3, 3; Fig. 4 shows an enlarged section of Fig. 1 on the line 4, 4 and Fig. 5 indicates an enlarged section of Fig. 1 on the line 5, 5.

This paper fastener in this instance comprises a bottom supporting member having the central body portion 20, which at its sides has formed therewith the longitudinal downwardly extending curved side flanges 21, and the bearing seats 22. Similar clamping arms 25 and 25ª having each the curved outer end 26, extend from the central body portion 20 adjacent to its ends.

A top retaining member comprises the central body portion 30, having the longitudinal upwardly curved side flanges 31, with the bearing ends 32. Longitudinal guide openings 33 are formed between the central body portion 30 and the curved flanges 31. At the ends of the curved flanges 31 are formed the flat bearing flanges 36. Openings 37 are formed in the flanges 36, adjacent to the central body portion 30.

Similar locking clasps are indicated at 40 and 40ª. Each locking clasp comprises the head 44 having the longitudinal slits 45 to form the downwardly inclined clamping portions 48, having the peak bearing end 49. Each head 44, has also formed therewith at its sides the longitudinal downwardly curved flanges 50, which extend under the inner edges of the curved flanges 31, and slidably lock therewith.

In Figs. 4 and 5, it will be noted that the top retaining member having the central body portion 30, is shown bearing on the central body portion 20 of the bottom supporting member, and which is the position the members will occupy, before the paper fastener has clamped the sheets of paper or other sheets that are to be fastened together.

When the paper fastener is to be used, the top retaining member having the central body portion 30, is removed from the bottom supporting member having the central body portion 20. Both the clamping arms 25 and 25ª are located at right angles to the body portion 20, as shown for the clamping arm 25, in the drawings.

The sheets of paper 55, to be fastened together are pierced by the clamping arms 25 and 25ª, and are located one over the other, upon the bottom supporting member having the central body portion 20. The top retaining member having the central body portion 30, is now placed on the top most sheet 55, the clamping arms 25 and 25ª, extending through the openings 37 of the said top retaining member. The said arms are now bent and brought to bear against the top face of the central body portion 30 of the top retaining member as shown for the arm 25ª, in the drawings. Finally the locking clasps having the heads 44, are moved over the top faces of the bent over portions of the arms 25 and 25ª, as shown for the latter in the drawings, to locate the peak ends 49 of the said clasps against the top faces of the bent over portions of said arms 25 and 25ª. The sheets 55, will then be tightly clamped together in the paper fastener.

Various modifications may be made in the invention and the present exemplification is to be taken as illustrative and not limitative thereof.

Having described my invention, what I desire to secure by Letters Patent and claim is:

1. In a fastener of the character described the combination of a bottom supporting member, clamping arms, adapted to have portions thereof bent over, extending from said bottom supporting member, a top retaining member having openings adjacent to its ends, nor-

mally spaced from said bottom supporting member, said members adapted to have sheets of material clamped between them and pierced by said arms, said arms extending through the openings of the top retaining member, a pair of locking clasps, flanges at the sides of each clasp slidably locked with the top retaining member, and a downwardly inclined clamping portion with a peak end formed with each clasp, said peak ends adapted to bear on the bent over portions of said clamping arms, to maintain said portions against said top retaining member.

2. In a fastener of the character described the combination of a bottom supporting member, clamping arms extending from said bottom supporting member, adapted to have portions thereof bent over, a top retaining member having openings and normally spaced from said bottom supporting member, said top retaining member comprising a central body portion, longitudinal curved flanges spaced from said central portion with guide openings between them and said central body portion of said top retaining member, the said members adapted to have sheets of paper and the like clamped between them and pierced by said arms, said arms extending through the openings of the top retaining member, a pair of locking clasps each comprising a head, flanges extending from each head extending through the guide openings of the top retaining member and slidably locked with the curved flanges of said top retaining member, and downwardly inclined clamping portions having a peak end formed with each head, said peak ends adapted to bear on the bent over portions of said arms that extend through the openings of the top retaining member.

3. In a locking clasp the combination of a sliding head, downwardly inclined clamping portions with a peak bearing end formed with the head and longitudinal curved flanges at the sides of said head.

Signed at the borough of Manhattan, city of New York, in the county of New York and State of New York this 26th day of February A. D. 1931.

RUDOLF ORTHWINE.