(No Model.)

F. VON HEFNER-ALTENECK.

TEMPORARY BINDER.

No. 480,324. Patented Aug. 9, 1892.

Fig. 1.

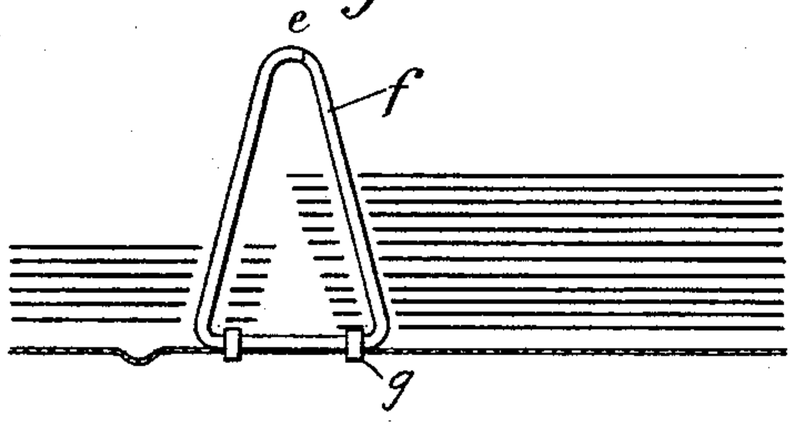


Fig. 2.

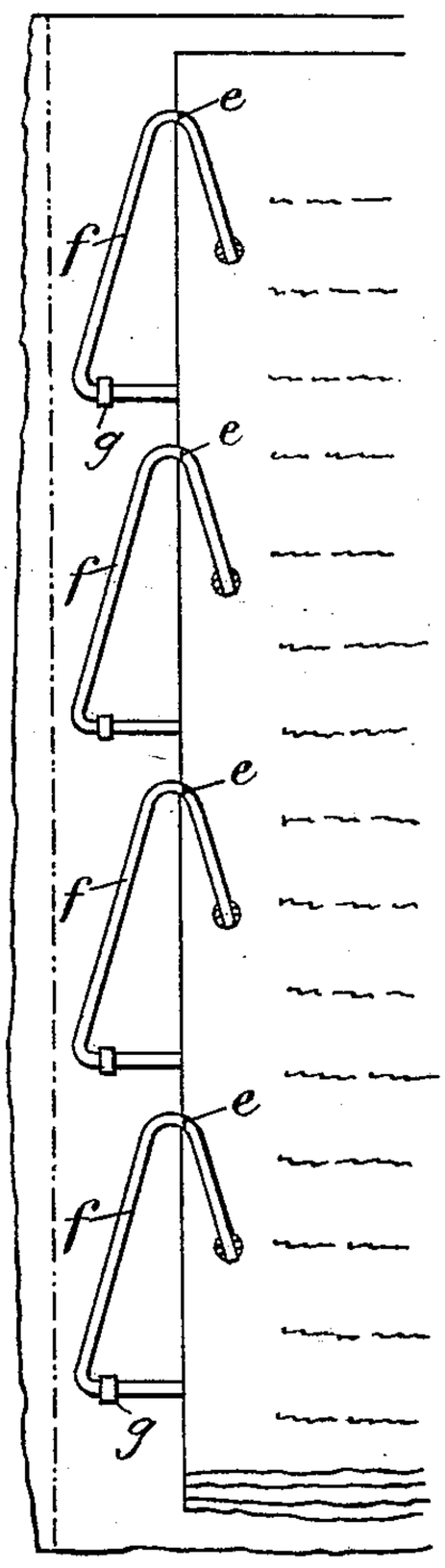


Fig. 3.

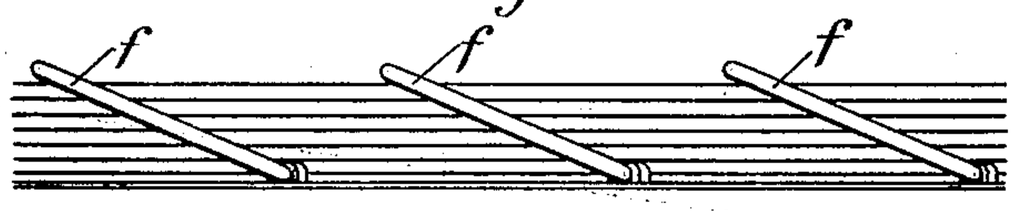


Fig. 4.

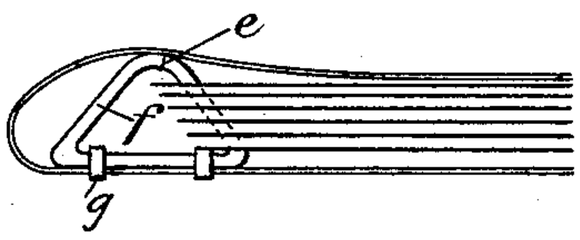


Fig. 5.

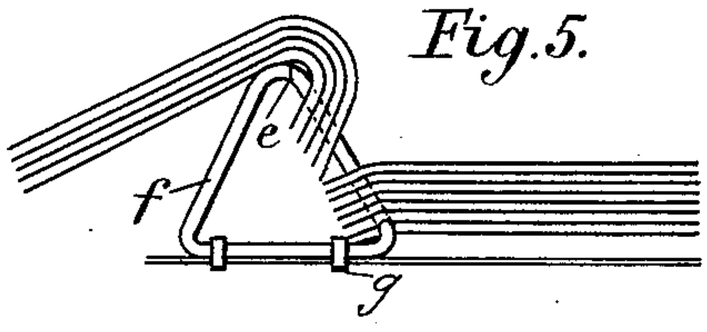


Fig. 6.

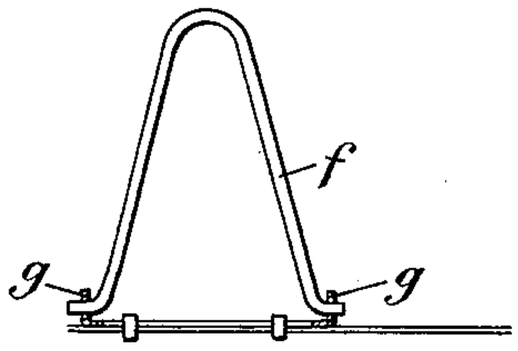


Fig. 7.

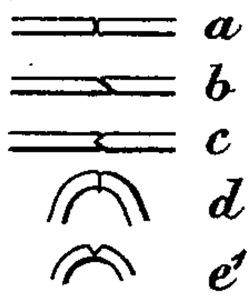
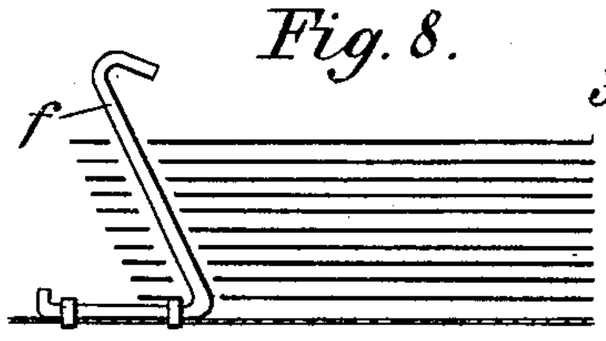


Fig. 8.



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John Cullen

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Attorney.

UNITED STATES PATENT OFFICE.

FRIEDRICH VON HEFNER-ALTENECK, OF BERLIN, GERMANY.

TEMPORARY BINDER.

SPECIFICATION forming part of Letters Patent No. 480,324, dated August 9, 1892.

Application filed May 2, 1892. Serial No. 431,468. (No model.) Patented in Germany March 16, 1890, No. 54,107; in England May 22, 1890, No. 7,979; in France May 29, 1890, No. 205,958; in Belgium June 4, 1890, No. 90,784; in Italy August 21, 1890, XXIV, 27,982, and LV, 60, and in Austria-Hungary November 14, 1890, No. 29,534 and No. 52,270.

To all whom it may concern:

Be it known that I, FRIEDRICH VON HEFNER-ALTENECK, engineer, a subject of the King of Bavaria, residing at Berlin, in the Kingdom of Prussia and German Empire, have invented certain new and useful Improvements in Means for Temporarily Securing Together Separate Papers, Letters, and the Like; and I do hereby declare the following to be a full, clear, and exact description of the invention, such as will enable others skilled in the art to which it appertains to make and use the same.

Letters Patent for this invention have been obtained in the following countries: Germany, No. 54,107, dated March 16, 1890; France, No. 205,958, dated May 29, 1890; Belgium, No. 90,784, dated June 4, 1890; Austria-Hungary, No. 29,534, XL, 3,343, and No. 52,270, XXIV, 3,291, dated November 14, 1890; Italy, XXIV, 27,928, and LV, 60, dated August 21, 1890, and Great Britain, No. 7,979, dated May 22, 1890.

This invention relates to improved means for temporarily securing together papers, letters, and the like, so that they can be readily separated again when required, whereby the inconvenience is obviated that occurs with all appliances of the kind at present in use, that when covers or wrappers are employed these must be of a size corresponding to the ultimate maximum thickness of the packet, although they may only contain a few papers. For this purpose a cover, wrapper, portfolio, or other appliance for holding the papers has secured to its one edge where the papers are to be attached any desired number of angular or curved wire loops, so arranged as to be capable of folding down more or less flat, as upon hinges, onto the cover. Such loops may either be of a closed triangular or other shape, divided at one point, so that the papers can be threaded onto them, the point of division being, if required, provided with a suitable fastening for preventing the papers from getting loose, or the two ends may merely abut against each other with serrated or otherwise formed faces, or the wire loops or attachments may be of a Λ shape, the ends of which are hinge-jointed to a plate, which is secured to the cover. In this case the loop may be made removable from the plate for threading on the papers. Instead of closed loops, wires of a Z or other shape may also be employed that will readily allow of the papers being threaded onto them, but will not readily allow of the papers becoming unintentionally detached.

In the accompanying drawings are shown various forms of the above-described improved fastening.

In the constructions shown at Figs. 1 to 5 they consist of a single looped piece *f*, which is divided at a suitable point, such as at *e*, Fig. 1, the two parts of the joint being sprung open to a moderate extent for the introduction of single sheets or of a few sheets together.

The joint may, in order to prevent the paper from readily passing out again through it, be either made with abutting surfaces, as at *a*, Fig. 7, kept together by spring-pressure, or the surfaces may be sloped, as at *b*, or toothed, as at *c*, or they may be formed in any other suitable manner, such as that shown at *d* or *e'*, whereby any special means for keeping the joint closed is dispensed with.

The papers to be secured are by preference previously perforated by a suitable punch or other device at a small distance from the edge where they are to be attached, as indicated at Fig. 2, the perforations being made at distances apart corresponding to those of the fastenings. The papers are strung by means of these holes onto the fastenings after having inserted the edge thereof through the opening of the joint. On closing the cover of the case or wrapper the fastenings turn down to an inclined position, which is determined by the thickness of the layer of papers strung upon them, as indicated at Figs. 3 and 4. The loop of the fastening will then pass in a sloping direction through the papers, as shown. They will thus project only slightly above the total thickness of the papers, so that the thickness of the portfolio or wrapper containing the collected papers, and consequently, also, the space in which it is stored, will only be determined by the thickness of the layer of papers and not by the height of the fastenings.

The papers secured in the above-described

manner can either be opened and turned over, as with an ordinary book, by bending the pages over the more or less inclined fastening, as at Fig. 5, or by shifting them with their holes round the loop of the fastenings to the opposite side, as at Fig. 1. This latter operation will have to be done when it is required to remove one or more of the papers from between the others, or when a fresh paper or papers have to be inserted in a particular position between the others.

The fastenings are secured to the portfolio, wrapper, or other foundation either by sewing or by metal eyes *g*, or in any manner that will permit of their being turned into angular positions, as described.

If it is not required to be able to remove and replace papers, which feature is not absolutely necessary for the purposes of the invention, the fastening can be formed closed at top, as shown at Fig. 6, in which case this is formed as a loop open at bottom and fitting with bent ends into eyes *g*, formed on a separate piece, as shown, such piece being secured to the wrapper, &c. For placing the papers upon or removing them from the fastening this has to be withdrawn from the said plate.

Fastenings made to open at top, as at Fig. 1, may also be constructed with a separate piece at bottom, acting as pivot. The fastening may also be made of a one-sided or **Z** form—as, for example, at Fig. 8—either with or without a separate hinge-piece, and a variety of other forms may be employed without departing from the nature of the invention.

What I claim is—

1. In a temporary binder, the combination, with an outer wrapper or cover, of a series of fasteners pivotally connected to the said wrapper upon one side of its central fold, said fasteners being adapted to have the loose papers strung upon them and to fold over, substantially as set forth.

2. In a temporary binder, the combination, with an outer wrapper or cover, of a series of divided fastening-loops adapted to be sprung open to have loose papers strung upon them, and the eyes pivotally connecting the said loops to the said wrapper upon one side of its central fold, whereby the said loops are free to fold over, substantially as set forth.

In testimony whereof I affix my signature in presence of two witnesses.

FRIEDRICH VON HEFNER-ALTENECK.

Witnesses:
REINHARD WAGNITZ,
ALARD VON BOIS-RAYMOND.