Feb. 2, 1926. 1,571,482

C. D. KING

PAPER FASTENER

Filed May 23, 1924 2 Sheets-Sheet 1

Fig.1

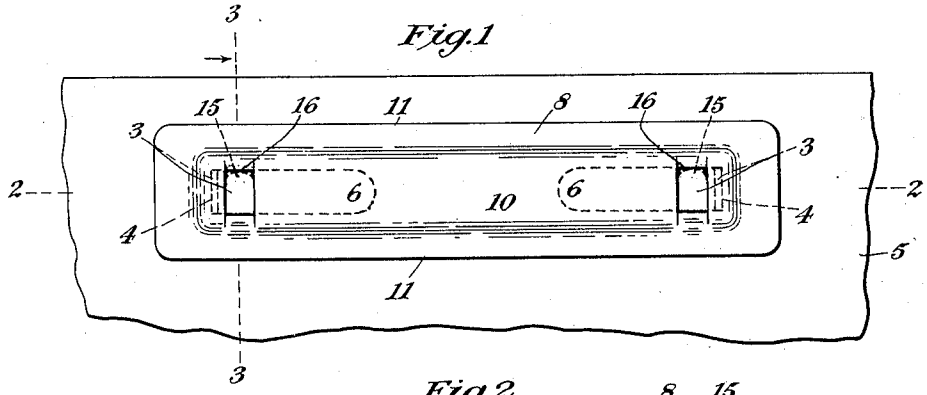


Fig.2

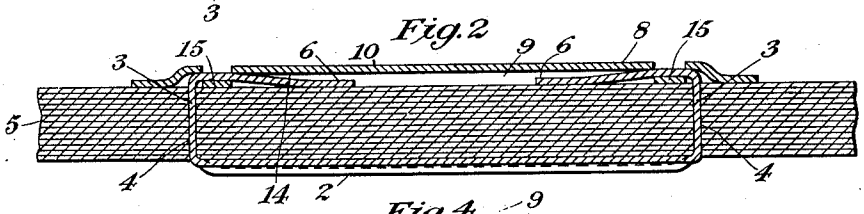


Fig.4

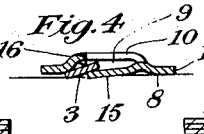


Fig.3

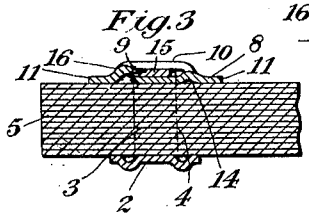


Fig.6

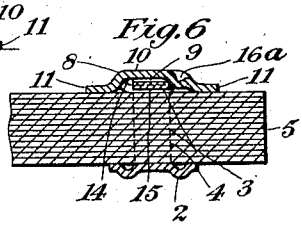


Fig.18

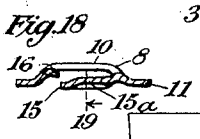


Fig.19

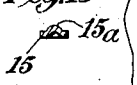


Fig.5

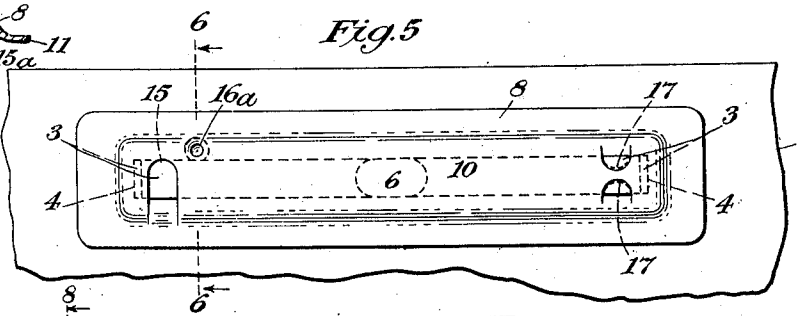


Fig.7

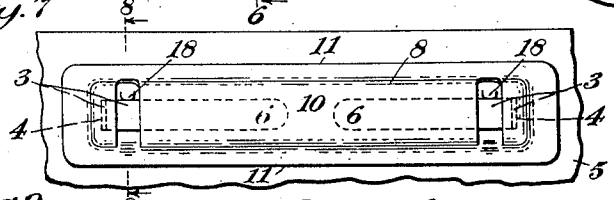


Fig.8

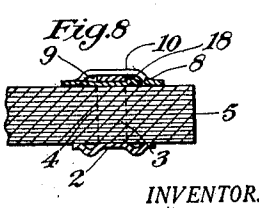
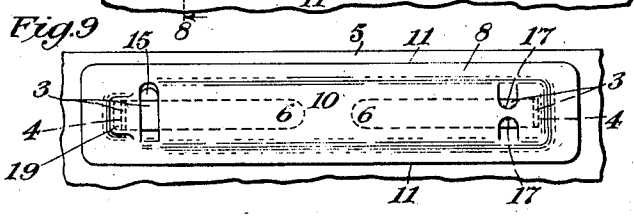


Fig.9



INVENTOR.

Charles D. King

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C. D. KING

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Fig.10

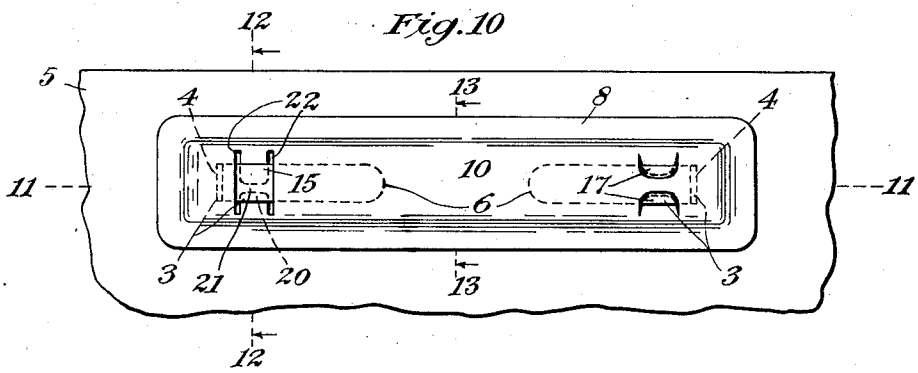


Fig.11

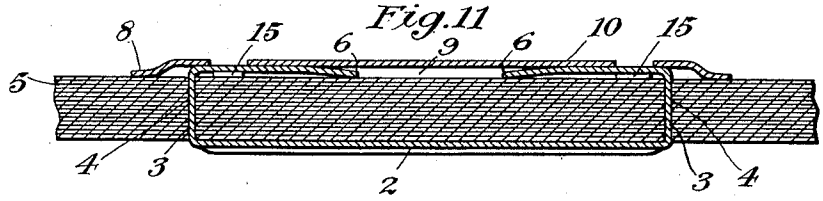


Fig.12

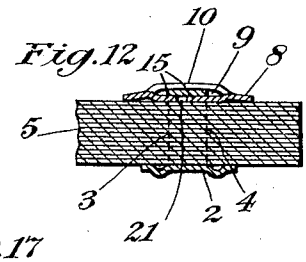


Fig.13

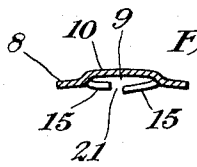


Fig.16

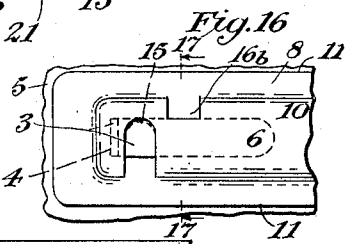


Fig.17

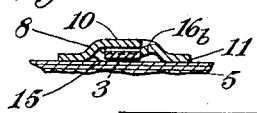


Fig.14

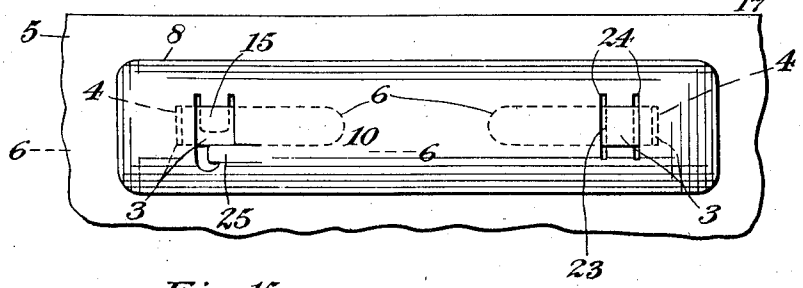
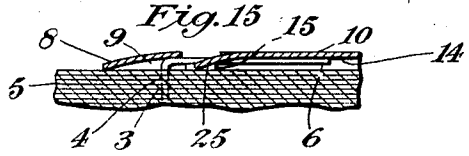


Fig.15



INVENTOR

Charles D. King.

Patented Feb. 2, 1926. 1,571,482

UNITED STATES PATENT OFFICE.

CHARLES D. KING, OF RUTHERFORD, NEW JERSEY.

PAPER FASTENER.

Application filed May 23, 1924. Serial No. 715,274.

To all whom it may concern:

Be it known that I, CHARLES D. KING, a citizen of the United States, residing at Rutherford, in the county of Bergen and State of New Jersey, have invented certain new and useful Improvements in Paper Fasteners, of which the following is a specification.

This invention relates to paper fasteners and particularly to tongued paper fasteners which are adapted for use with flat files of papers, letters, documents and the like.

The main object of the invention is to provide improved means for covering the end portions of the tongues of such fasteners after they have been pushed through papers and the projecting end portions bent down on the same. Another object is to provide fasteners which are lower in cost and simpler to manufacture than those now in common use. Still another object is to provide paper fasteners which are more efficient and convenient than the usual type of paper fasteners.

The means I prefer to employ to accomplish the above objects, together with other advantageous features of my improved paper fasteners which will appear hereinafter, are illustrated in the drawings accompanying and forming part of this specification, and in which—

Figure 1 is a plan of one form of my improved paper fastener drawn on an enlarged scale.

Fig. 2 is a longitudinal section of the same taken on the line 2—2 of Fig. 1.

Fig. 3 is a transverse section of the same taken on the line 3—3 of Fig. 1.

Fig. 4 is a detail transverse section of the covering member and a fastener tongue showing the mode of applying the covering member.

Fig. 5 is a plan of another form of my improved paper fastener also drawn on an enlarged scale.

Fig. 6 is a transverse section of the same taken on the line 6—6 of Fig. 5.

Fig. 7 is a plan of a third form of my invention.

Fig. 8 is a transverse section of the same taken on the line 8—8 of Fig. 7.

Fig. 9 is a plan of another modification.

Fig. 10 is a plan of a fourth form of the invention drawn on an enlarged scale.

Fig. 11 is a longitudinal section of the same taken on the line 11—11 of Fig. 10.

Fig. 12 is a transverse section of the same taken on the line 12—12 of Fig. 10.

Fig. 13 is a detail transverse section of the covering member of Fig. 10 taken on the line 13—13.

Fig. 14 is an enlarged plan of another modification of my invention.

Fig. 15 is a partial longitudinal section of the same taken on the line 15—15 of Fig. 14.

Fig. 16 is a plan of a modification of the form shown in Fig. 1.

Fig. 17 is a transverse section of the same taken on the line 17—17 of Fig. 16.

Fig. 18 is a transverse section of a modified form of my invention, and

Fig. 19 is a detail transverse section taken on the line 19 of Fig. 18.

Like characters of reference denote like parts in all the figures of the drawings.

In the various figures of the drawings the numeral 2 designates a member having two spaced apart tongues such as 3, which are adapted to be passed through perforations 4 in a file of papers 5, after which the projecting end portions are bent down flat on the uppermost paper and the member 2 then holds the papers together.

In order to cover and protect the bent down portions of the tongues 3 and prevent the ends 6 from catching up loose papers and other things, a member which acts as a covering member and shield for the tongues is provided, and is denoted in the various figures of the drawings by the numeral 8.

Ordinarily the member 8 is provided with a space or hollow 9 underneath the middle part and which may be formed in any suitable way such as by forming the member 8 of sheet metal by stamping in a press and by forming a portion 10 at the middle part higher than the side portions 11. It will be evident that a longitudinal space or hollow 9 will be formed underneath by such stamping operation throughout the greater part of the length of the member 8.

In order to secure said member 8 to the file of papers, means are provided to engage with the bent down portions of the tongues 3 and are ordinarily placed near each end of the member 8. Any suitable means may be employed for this purpose and several forms and modifications are shown in the drawings and described hereinafter and are to be considered as illustrative but not limiting.

The means shown in Figs. 1, 2, 3 and 4, consist of two short depending transverse tongues such as 15, ordinarily integral with the member 8 and a little lower at the ends than at other parts. Near each of said transverse or lateral tongues is a struck down portion 16 adapted to act as a stop and engage with the bent down portion of one of the tongues 3.

The covering member 8 is applied by inserting the transverse tongues 15 under the bent down portions of the tongues 3 and pushing the member 8 laterally until each tongue 15 is under the respective tongue 3 as far as the stop portions 16 which snap down past said tongue as illustrated in Figs. 1 and 3. The operation of inserting the tongue is illustrated in Fig. 4.

To remove the member 8 it is raised slightly by inserting the finger nail under the edge 11 nearest the portions 16, whereupon these are released from the edges of the tongues 3 and the member 8 can then be moved laterally and the transverse tongues 15 slid out from under the tongues 3 and the member 8 removed from the file.

In the form of the invention shown in Fig. 6, the right hand end of the member 8 is provided with two depending tongues or lugs 17 struck down out of the metal of the raised portion 10, and the right hand tongue 3 is slid over them lenghtwise to the position shown in the figure. The transverse tongue 15 is then slid under the left hand tongue 3 by moving the member 8 laterally, until the stop portion 16^a snaps down over the tongue 3 and holds the member 8 in position. To remove the member 8 these operations are reversed.

The form shown in Figs. 7 and 8 is like that of Figs. 1, 2 and 3 except that stop portions 18 are provided on the tongues 15 and the portions 16 are omitted The tongues 15 are pushed under the tongues 3 laterally until the stop portions snap by the edges of the tongues 3 and prevent lateral movement of the member 8 after inserting the tongues 15.

In Fig. 9 the member 8 is provided with lugs or short tongues 17 similar to those of Fig. 6 and applied to the right hand tongue in the same way. The left hand end of the member 8 is provided with a transverse tongue 15 which is pushed under the left hand tongue 3 laterally after the right hand part is secured to the right hand tongue 3. The member 8 is then slid lengthwise to the left and the bend of the left hand tongue 3 enters the recess or pocket 19 and is held thereby against lateral movement.

In the form shown in Figs. 10, 11, 12 and 13 a difference is made in the length of the lateral tongue 15 at the left hand end and a second tongue or lug 20 is provided. The tongue 15 is longer than the tongue or lug 20 and there is a space or slot 21 between their ends. When the right hand tongue 3 has been covered by passing it over the tongues or lugs 17, the left hand end of the member 8 is brought over the left hand tongue 3. The tongue 15 may if desired be bent downward a little so that the slit 21 is well open. The upper lug 15 is then passed under the tongue 3 and the latter passes through the space or slit 21 between the lugs or tongues 15 and 20. The left hand portion of the member 8 is then pushed laterally until the tongue 15 is brought near the ends of the slits 22. As soon as the lower edge of the left hand tongue 3 is in line with the tip of the lower tongue 20, the member 8 is pressed toward the papers and also laterally and oppositely to the first lateral movement thereof, causing the lower lug 20 to pass under the tongue 3. On releasing the pressure on the member 8, the latter stays in place on the left hand tongue 3 with both the lugs or tongues 15 and 20 under the tongue 3. For removing the member 8 the above operations are reversed.

In the form of the invention shown in Figs. 14 and 15, the bent down portion of the right hand tongue 3 is secured to the covering member by means of a portion of metal 23 struck down from the web by slitting in two places such as 24 so that the tongue end 6 can pass between the portion 23 and the under side of the member 8.

At the other end two tongues or lugs 15 and 25 are formed by stamping them out of the web of the member 8, the tongue 15 being similar to that numbered 15 in Fig. 1. The said tongue 15 is slipped under the left hand tongue 3 as described for the form in Fig. 1 and the lug 25 is pushed down past the lower edge of the tongue 3 thus holding the member 8 in position laterally. To remove the member 8, the lug 25 must be pushed up again and the member 8 can then be moved laterally from the tongue 15 and endwise from the member 23.

In the modified form of the invention shown in Figs. 16 and 17, the member 2 is like that in the other forms, and the member 8 is like that of Figs. 1, 2, 3 and 4 except that the portions 16^b are used in place of the portions 16. The operation of applying and removing the member 8 is similar to that in the above-named form. Figs. 18 and 19 show a method for stiffening the construction of the tongues 15.

It will be noted that in all the forms herein illustrated, the end portions of the tongues 3 of the member 2 are bent down flat on the uppermost paper of the file 5, after which, the member 8 is placed over to cover them, and is then secured to them. This takes place without materially moving or changing said bent down portions and usually with the effect of wedging portions

under the bent down tongue portions so that the papers are more tightly held or bound by the combined fastener parts. This is very advantageous and is furthermore combined with the feature of efficiently shielding the tongue ends 6 together with the remainder of the bent down portions of the tongues 3. The binding effect is a slight compression of the papers due to the pushing of the tongues 15 under the bent down tongue portions near the bends thereof and also to the lugs or short tongues 17 when these are employed.

It is evident that the different parts may be modified or changed in various ways and any suitable form of parts may be employed without departing from the principle of the invention, and I do not therefore confine myself to the details of construction here shown.

What I claim is:—

1. In combination, in a two piece paper fastener, a member having tongues to be pushed through papers and the projecting end portions bent down on the same, a member to be placed over and cover said bent down portions in such position, and means movable into position in the plane of the paper to secure them to said member.

2. In combination, in a two piece paper fastener, a member having tongues to be pushed through papers and the projecting end portions bent down on the same, a covering member having single ply edges lying in contact with the upper paper and having a longitudinal hollow in its under side in which said bent down tongue portions can lie when said member is placed over them, and means to clamp them to said member in such position.

3. In combination, in a paper fastener, a member having spaced apart tongues to be pushed through papers and the projecting end portions bent down thereon, a member to be placed over and cover said bent down portions, and means for securing said covering member to them which include an element for each end movable into position on the surface of the upper paper.

4. In combination, in a paper fastener, a member having spaced apart tongues to be pushed through papers and the projecting end portions bent down thereon, a member to be placed over and cover said bent down portions, and means for securing said member to them which are movable into and out of position in the plane of the upper paper and include a portion movable laterally into position under one of them.

5. In combination, in a paper fastener, a member having spaced apart tongues to be pushed through papers and the projecting end portions bent down on the same, a member to be placed over and cover said bent down tongue portions, and the bends thereof, and means movable into and out of position in the plane of the upper paper and adjacent to the bends of said portions to secure said last-mentioned member to them.

6. In combination, in a paper fastener, a member having spaced apart tongues to be pushed through papers and the projecting end portions bent down on the same, a member to be placed over and cover said bent down portions, and means for securing said member to said portions which include two cooperating elements, one of which is to be pushed under one of said portions and the other is a stop for said portion.

7. The combination with a member having two spaced apart tongues to be pushed through papers and the projecting end portions bent down on the same, of a covering member having means for securing said bent down portions to its under side which means include a depending tongue secured to it and adapted to be pushed under one of said portions.

8. In combination, in a paper fastener, a member having two spaced apart tongues to be pushed through papers and the projecting end portions bent down on the same, and a member to cover said bent down portions and the bends thereof and having means to clamp it to said portions which include a laterally-disposed tongue to be pushed under one of them.

9. The combination with a member having two spaced apart tongues to be pushed through papers and the projecting end portions bent down on the same, of a covering member having means for securing the said bent down portions to its under side which include a depending tongue adapted to be pushed laterally under one of said bent down tongue portions.

10. The combination with a member having two spaced apart tongues to be pushed through papers and the projecting end portions bent down on the same, of a covering member having means for securing the said bent down tongue portions to its under side which include two cooperative elements one of which is to be pushed laterally under one of said bent down portions and the other is a stop for said portion.

11. In combination, in a paper fastener, a member having two spaced apart tongues to be pushed through papers and the projecting end portions bent down on the same, and a member to cover said bent down portions and having means to clamp it to them which include two laterally-disposed tongues spaced so as to be pushed under said portions near the bends thereof.

12. In combination, in a paper fastener, a member having two spaced apart tongues to be pushed through papers and the projecting end portions bent down on the same, and a covering member higher at the middle

than at the side edges and having a longitudinal hollow under said middle portion in which hollow said bent down tongue portions can lie and means to clamp said member to said portions which include two depending lateral tongues spaced so as to be pushed under said bent down portions laterally near the bends thereof and stop portions to retain said member in position.

13. In combination, in a paper fastener, a member having two spaced apart tongues to be pushed through papers and the projecting end portions bent down longitudinally thereon, and a member to cover said bent down portions and having means to secure it thereto which include two lateral tongues spaced apart and each having an upwardly-disposed projection to engage with the longitudinally arranged tongues to retaining the covering member in position.

14. In combination, in a paper fastener, a member having two spaced apart tongues to be pushed through papers and the projecting end portions bent down longitudinally thereon, and a member to cover said bent down portions and having means to secure it thereto which include a lateral tongue to go under one of said bent down portions and a recess in the covering member to be pushed endwise into engagement with the bend of one of said bent down portions.

15. In combination, in a paper fastener, a member having two spaced apart tongues to be pushed through papers and the projecting end portions bent down on the same longitudinally, and a member to cover said bent down portions and having means to secure it to them which include two lateral tongues at one end oppositely-disposed with free ends facing and a space between through which a bent down longitudinal tongue portion can be passed for placing said lateral tongues thereunder.

16. In combination, in a paper fastener, a member having two spaced apart tongues to be pushed through papers and the projecting end portions bent down on the same longitudinally, and a member to cover said bent down portions and having means to secure it to them which include a lateral tongue at one end adapted to be passed under the bent down longitudinal tongue portion and a portion adapted to be bent down against the latter to secure it in position.

Signed at New York, in the county of New York, and State of New York, this 22nd day of May, 1924.

CHARLES D. KING.