

J. H. GREENSTREET.
BOX BLANK AND CLEAT THEREFOR.
APPLICATION FILED APR. 17, 1911.

1,115,066.

Patented Oct. 27, 1914.

Fig. 1.

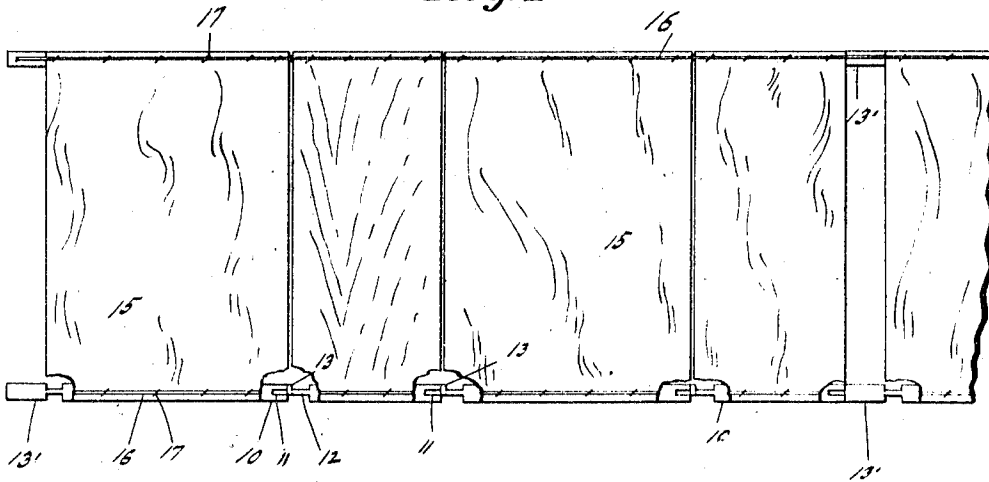


Fig. 2.

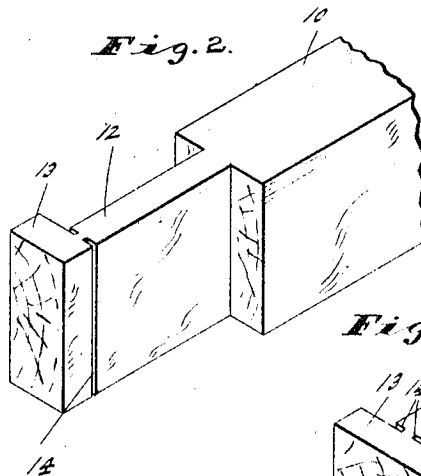


Fig. 3.

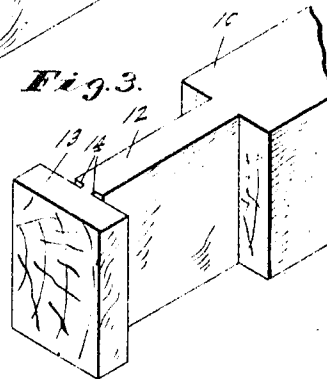
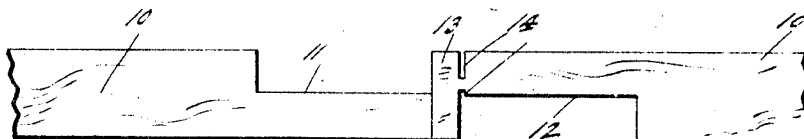


Fig. 4.



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UNITED STATES PATENT OFFICE.

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BOX-BLANK AND CLEAT THEREFOR.

1,115,066.

Specification of Letters Patent.

Patented Oct. 27, 1914.

Application filed April 17, 1911. Serial No. 621,630.

To all whom it may concern:

Be it known that I, JASON H. GREENSTREET, a citizen of the United States, residing at Indianapolis, in the county of Marion and State of Indiana, have invented a new and useful Box-Blank and Cleat Therefor, of which the following is a specification.

In the manufacture of box blanks from cleats, sheets, binding wire and staples, it is necessary that the cleats be so relatively spaced end to end, that when the various sections of the blank are folded to positions at right angles to adjacent sections, the cleats must overlap, interlock or abut in such manner as to cause the sheets to properly overlap and in such manner as to interengage so as to stiffen and support the sheets. In order to accomplish the proper spacing of the cleats in the production of such blanks, it has heretofore been customary to use spacing members inserted between the adjacent ends of the cleats and withdrawn after the various portions of the blank were connected, such spacing members being used over and over in the production of successive blanks.

The object of my present invention is to produce a cleat, and blank formed from a series of such cleats, of such character that the cleat itself will carry its own spacing member. Each spacing member may be readily broken off just before the blank is folded into box form. By this arrangement the necessity of spacing members in the blank forming machine is avoided and the blank itself is stiffened for shipment so that in shipment the connecting wires will not become buckled at the points between the adjacent edges of the sections.

It is to be understood that the adjacent ends of cleats for box blanks of this type are given many different forms depending either upon the use to which the box is to be put or upon the fancy of the manufacturer, and the drawings which are submitted herewith are only intended as illustrative of particular applications of my invention and not in any way as limiting the application thereof.

The accompanying drawings illustrate my invention.

Figure 1 is a plan of one complete blank and a portion of the initial section of another blank, embodying my invention, the adjacent corners of the sheet material being broken away in order to show the form and relation of the cleats; Fig. 2 a perspective

view of one end of the cleat such as is used in the blank shown in Fig. 1; Fig. 3 a perspective view of a slight modification of a cleat like that shown in Fig. 2; Fig. 4 a plan of the adjacent ends of two cleats of a different overlapping form.

In the drawings, 10 indicates a cleat of any desired form formed at one end 11 so as to properly cooperate with a portion 12 formed near one end of a similar cleat. Heretofore it has been the custom to form the portion 12 at the end of the cleat but in my present invention I make the cleat as much longer than usual as the distance desired between the two cleats and this additional length 13 is separated from the portion 12 by notches, kerfs or any other suitable formation 14 so as to weaken the connection between the part 12 and the part 13 to a sufficient extent so that while the part 13 will remain in place during the ordinary handling of the cleats in the production of the desired blank, and will thus serve as a spacing member between the cleats, such portion 13 may be readily broken off when it is desired to fold the blank into box form. Where a four-sided box is to be produced, each fourth cleat will be provided with an extra long spacing member 13', as indicated in Fig. 1. The sheets 15 will be connected to the cleats 10 by binding wires 16 and staples 17 or in any other desired manner. The particular manner by means of which the sheets and cleats are connected together may be selected without departing from my invention.

It will be understood, of course, that, if desired, a spacing member 13 might be formed at each end of each cleat but for ordinary box blanks this would make the spacing member so thin that difficulty might be had in maintaining its integrity during the production of a blank. Such construction would not depart from my invention but I do not recommend its use.

It will, of course, be understood that the same results might be obtained by putting a spacing member on both ends of one cleat and omitting any spacing member on the adjacent cleat, and also that the long spacing member on each fourth cleat, in a four-sided box, may be omitted where the blanks are to be formed individually in a machine, or a machine is provided with an initial spacing member which will produce the desired space between the last and the first

sections of the adjacent blanks; all without departing from the spirit of my present invention.

I claim as my invention:

1. As an article of manufacture, a cleat for box blanks having its ends formed to co-act with other cleats when such blank is in folded condition and carrying at one end a detachable integral spacing portion normally preventing folding up of the blank.
2. As an article of manufacture, a cleat for box blanks having its ends formed to co-act with other cleats when such blank is in folded condition and carrying at one end a detachable spacing portion normally preventing folding up of the blank.
3. As an article of manufacture, a box blank comprising sheets and cleats with the sheets connected to the cleats and two or more such cleats arranged end to end to form sections and the sections connected by flexible members, the said cleats having adjacent ends abutting and formed for co-action when the sections are folded into box form and said cleats also carrying detachable integral spacing members normally preventing folding up of the blank.
4. As an article of manufacture, a box blank comprising sheets and cleats with the sheets connected to the cleats and two or more such cleats arranged end to end to form sections and the sections connected by flexible members, the said cleats having adjacent ends abutting and formed for co-action when the sections are folded into box form and said cleats also carrying detachable spacing members normally preventing folding up of the blank.
5. As an article of manufacture, a cleat for box blanks having its ends formed for ultimate lateral overlapping engagement with similar cleats, and carrying at one end an integral spacing portion required to be removed before overlapping of adjacent cleats in a folded box blank can be accomplished.
6. As an article of manufacture, a box blank comprising sheets and cleats with the sheets connected to the cleats to form sections and the sections connected by flexible members, the said cleats having their adjacent ends formed for lateral overlapping engagement when the sections are folded into box form, and said cleats also carrying integral spacing portions required to be re-

moved before the blank can be folded to bring adjacent ends of the cleats into lateral overlapping association.

7. As an article of manufacture, a box blank comprising a plurality of straight edged sheets arranged in spaced relation edge to edge, two series of cleats secured transversely to said sheets in parallel relation and abutting end to end, said cleats having their adjacent ends formed for ultimate lateral overlapping engagement with each other when the sheets are folded into overlapping relationship, each of said cleats having a portion abutting against its neighbor and required to be removed before the portions formed for overlapping engagement can be folded into such lateral overlapping engagement, and binding wires secured to said sheets and cleats and extending continuously across the sheets.

8. As an article of manufacture, a box blank comprising a plurality of straight edged sheets arranged in spaced relation edge to edge, and two series of cleats secured transversely to said sheets in parallel relation and abutting end to end, said cleats having their adjacent ends formed for ultimate lateral overlapping engagement with each other when the sheets are folded into overlapping relationship, each of said cleats having a portion abutting against its neighbor and required to be removed before the portions formed for lateral overlapping engagement can be folded into such overlapping engagement.

9. As an article of manufacture, a box blank comprising two series of abutting cleats arranged end to end, said cleats formed at their adjacent ends for ultimate lateral overlapping engagement when brought into angular relationship and having portions required to be removed before such angular overlapping relationship can be established, and sheet material secured to said cleats, adjacent cleats being flexibly connected to each other.

In witness whereof, I, have hereunto set my hand and seal at Indianapolis, Indiana, this 13th day of April, A. D. one thousand nine hundred and eleven.

JASON H. GREENSTREET. [L. S.]

Witnesses:

ARTHUR M. HOOD,
FRANK A. FAHLE.