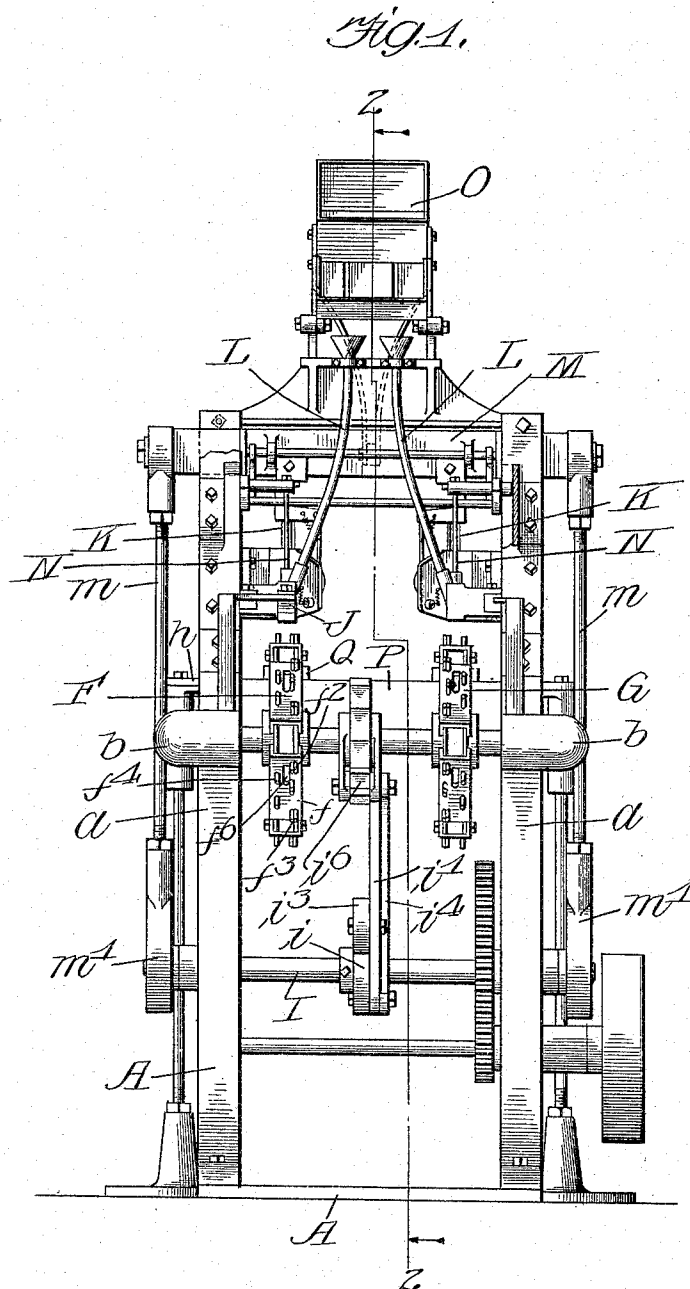


R. B. FULLER.
 AUTOMATIC MACHINERY FOR MAKING BASKET COVERS.
 APPLICATION FILED DEC. 12, 1907.

947,324.

Patented Jan. 25, 1910.

4 SHEETS—SHEET 1.

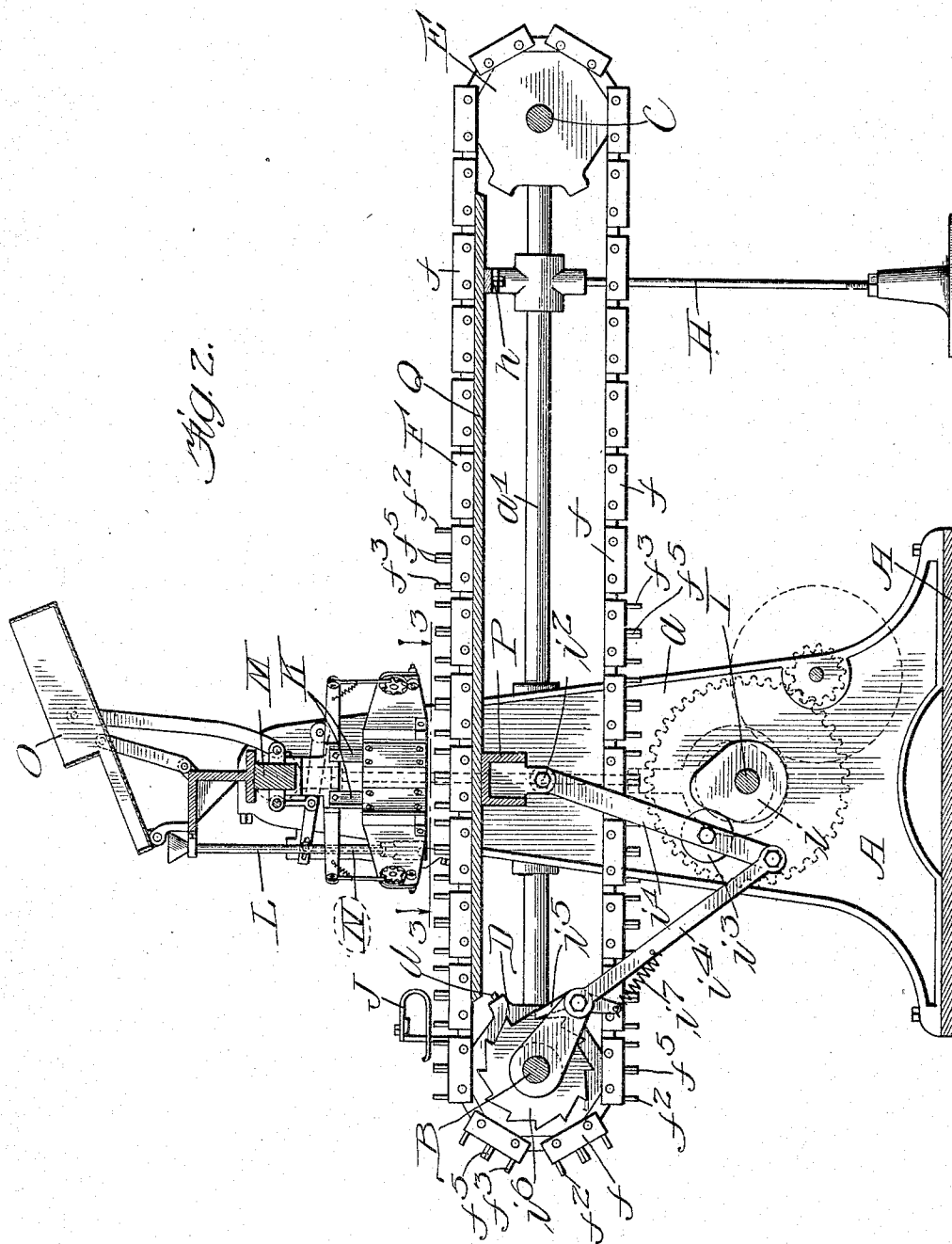


Witnesses:
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4 SHEETS—SHEET 2.



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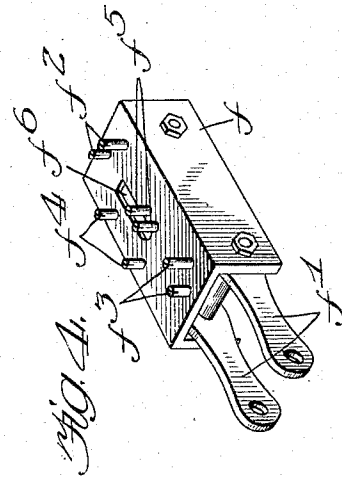
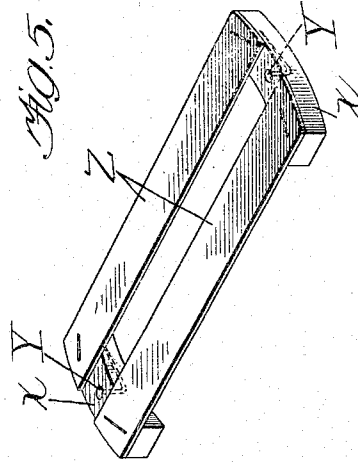
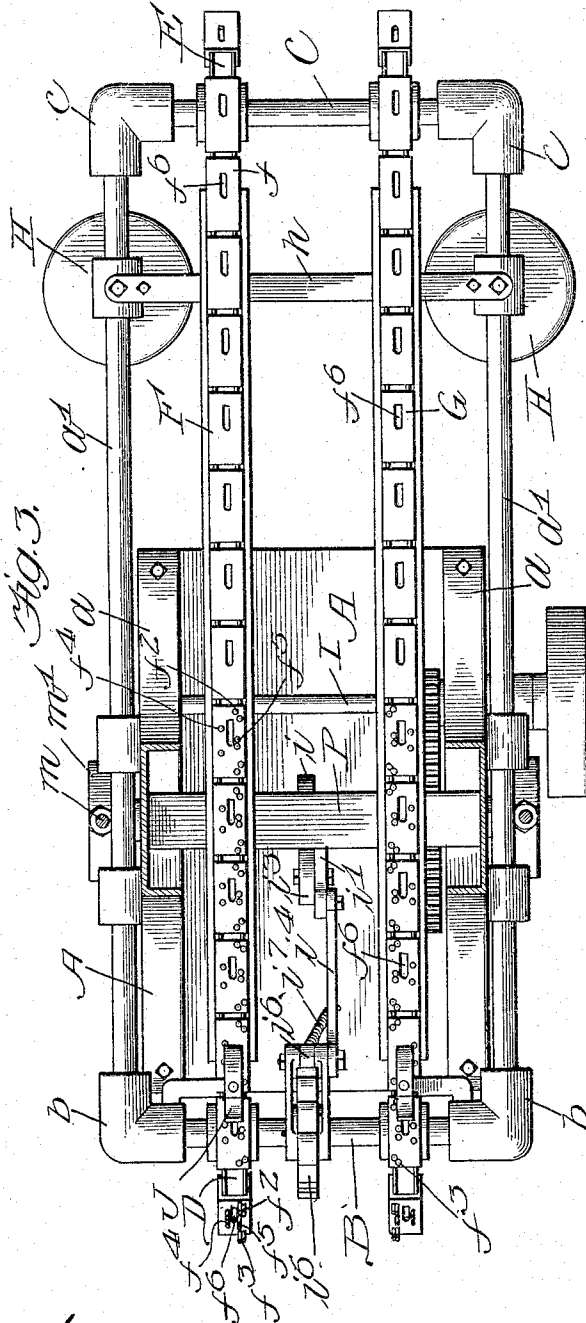
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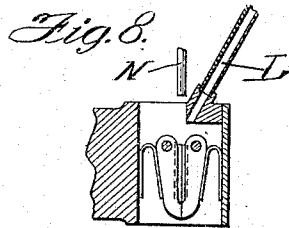
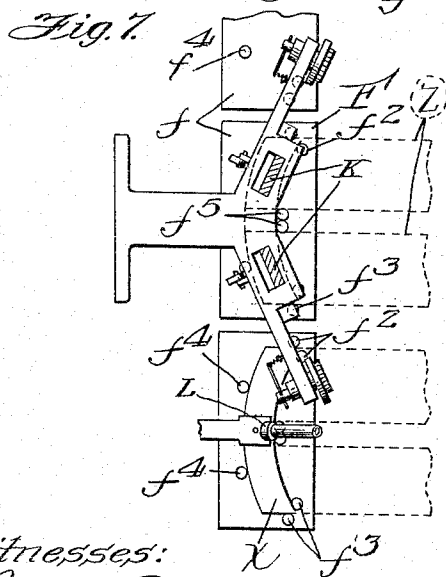
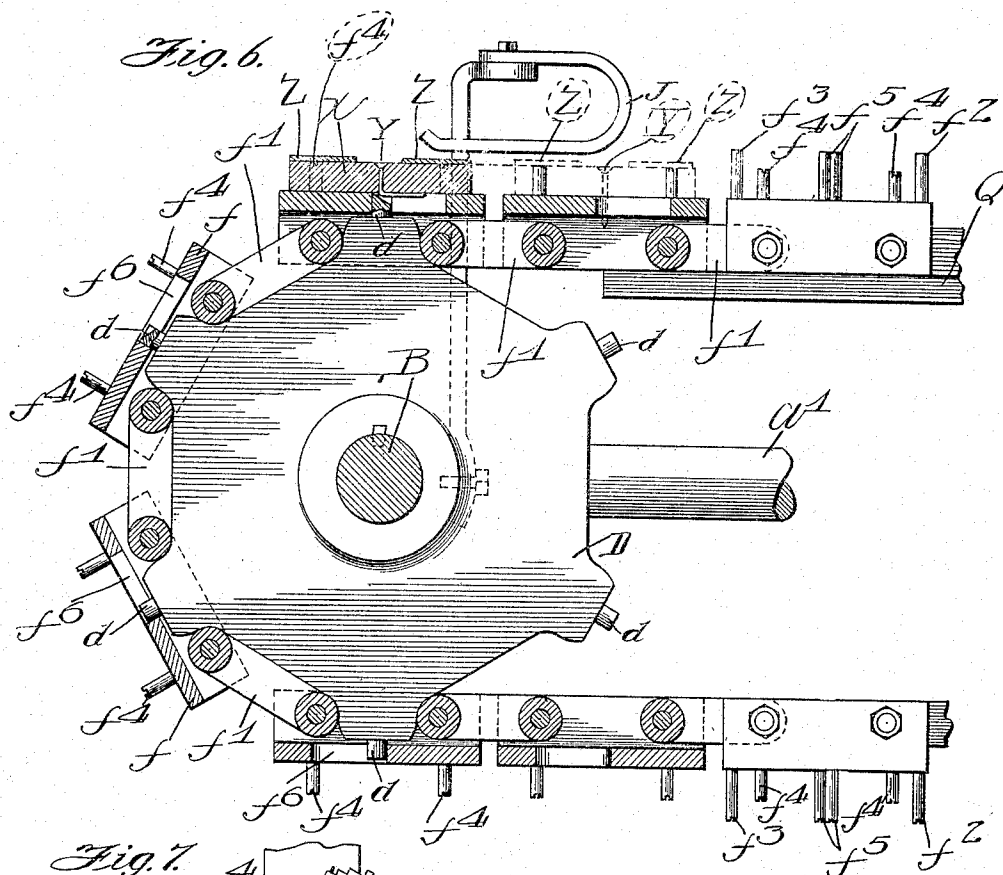
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4 SHEETS—SHEET 4.



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UNITED STATES PATENT OFFICE.

RUSSELL B. FULLER, OF EVANSVILLE, INDIANA.

AUTOMATIC MACHINERY FOR MAKING BASKET-COVERS.

947,324.

Specification of Letters Patent.

Patented Jan. 25, 1910.

Application filed December 12, 1907. Serial No. 406,184.

To all whom it may concern:

Be it known that I, RUSSELL B. FULLER, a citizen of the United States of America, and resident of Evansville, Vanderburg county, Indiana, have invented a certain new and useful Improvement in Automatic Machinery for Making Basket-Covers, of which the following is a specification.

My invention relates to automatic machinery for making basket covers, such, for example, as the covers used on ordinary fruit baskets. A machine of this character is disclosed in my prior patent Number 888,989, issued May 26, 1908. It will be seen that the links of the endless work-carrier are provided with curved recesses for receiving the curved cleats of the basket covers. It will also be seen that, in my said prior patent, the nailers or devices for inserting the long nails through the central portions of the cleats are located between the staplers, so that the long nails and the staples for securing the slats to the cleats are inserted in one and the same cover by one and the same operation. As hereinafter described, however, I provide means whereby the link-belts are adapted to carry the cleats without the necessity of recessing the links thereof, every other link being of a box-like form and provided on its upper surface with vertical pins arranged in position to receive the cleats between them. Furthermore, with my improved arrangement, the nailers or devices for inserting the nails or long flexible attaching devices through the cleats are arranged outside of the staplers,—that is to say, at a point beyond the staplers in the direction of the travel of the endless carrier or work-holder. With this arrangement, the staplers insert the staples to secure the slats to the cleats of one cover, and at the same time the cover which has been finished, and which has passed out from under the staplers, is receiving the long nails or flexible attaching devices. The staples and nails are thus driven simultaneously, but not in one and the same cover. While the staples are being driven in one cover the long nails or flexible attaching devices are being inserted in another cover.

In addition, the cleat-carrying links of my improved work-holder or endless carrier are provided with openings adapted to receive the ends of the nails or flexible attaching devices, and the sprocket wheels over which the endless link-belts travel are provided

with clench-blocks adapted to deflect the nails or flexible attaching devices and cause the same to be bent flat-wise upon the under surfaces of the cleats of each basket cover. While the long nails or flexible attaching devices of the cover are being thus bent upwardly and flat-wise on the surfaces of the cleats, the basket covers are held down by spring guards or pressing devices, which latter are located practically over the sprocket wheels which carry the said clench-blocks. In this way, I provide a machine which will staple together the slats and cleats of a basket cover, insert through the cleats the long nails or flexible attaching devices, and then throw the cover out in a finished condition and with the said nails or flexible attaching devices bent into position suitable for stacking the covers one upon the other, as is usual in the shipment of articles of this character. The nature and advantages of my invention will, however, hereinafter more fully appear.

In the accompanying drawings, Figure 1 is an end view of a basket cover machine embodying the principles of my invention. Fig. 2 is a vertical longitudinal section on the line 2—2 of Fig. 1. Fig. 3 is a horizontal section on line 3—3 of Fig. 2. Fig. 4 is a detail perspective view of a portion of one of the endless link-belts which constitute the traveling work-holder or carrier. Fig. 5 is a perspective of one of the completed basket covers. Fig. 6 is an enlarged longitudinal section through one end of the link-belt constituting one side of the endless carrier, showing the sprocket wheel which is provided with clench-blocks for folding the nails flatwise upon the lower surfaces of the basket-cleats, and showing the springs or pressing devices by which the covers are held down while the nails or flexible attaching devices are being folded. Fig. 7 is an enlarged horizontal section through the staplers and nailer at one side of the machine, showing the location of the same relatively to the endless link-belt which travels below. Fig. 8 is a detail sectional view of a portion of one of the nailers or devices for inserting the long flexible attaching devices through the central portion of the cleats.

As thus illustrated, my improved basket cover machine comprises a suitable body frame A composed of upright side castings α , and horizontal side members α^1 , as shown more clearly in Fig. 3 of the draw-

ings. The said side members a^1 are provided at each end with transverse rotatable shafts B and C, which are carried in suitable bearings b and c . Upon these shafts
 5 are mounted sprocket wheels D and E, and upon said sprocket wheels are arranged the endless link-belts F and G. It will be seen that each link-belt is composed of alternate
 10 box-like links, such as the link f shown in Fig. 4, and intermediate links f^1 , so that each link-belt presents a practically continuous flat upper surface. The links f are provided with upright end pins f^2 and f^3 , outside pins f^4 and inside pins f^5 , adapted to
 15 receive the basket cleats between them. It will be seen that the cleats X shown in Fig. 5 are curved, and by referring to Fig. 7, it will be seen that these cleats fit accurately between the said pins, so that each
 20 link f is adapted to firmly hold a cleat of one end of the basket cover. Furthermore, it will be seen that these box-like links are provided with slots f^6 adapted to receive the flexible attaching devices or long nails Y
 25 of the said covers, which are driven in the central portions of said cleats. The slats Z are secured to the said cleats and spaced apart at opposite sides of said long nails or
 30 attaching devices, the ends of said slats being curved to match the outer curvature of said cleats. The side portions a^1 are supported at the loading end of the carrier by means of upright rods H, and the cross-piece h supports the upper strand of each
 35 endless link-belt or carrier. The castings a are connected by a shaft I which is provided with a cam i for operating the feed mechanism of the endless carrier or link-belt work-holder. A link i^1 has its upper end
 40 pivoted at i^2 , and is provided with a roller i^3 adapted to engage the said cam. The lower end of said link is connected with a rod i^4 to which is attached a dog i^5 adapted to engage the ratchet wheel i^6 on the shaft
 45 B, and the spring i^7 tends to retract the said feed mechanism. In this way, the rotation of the shaft I is accompanied by an intermittent feeding motion of the two link-belts constituting the endless traveling
 50 work-holder or carrier. It will be understood, of course, that the shaft I can be rotated by any suitable means.

At a point where the clench-blocks d on the sprocket wheels D are adapted to engage
 55 the long nails or flexible attaching devices, and just above such point, are located the springy pressing devices or guards J, whereby the basket covers are firmly held down while the clench-blocks d on the said
 60 sprocket wheels are folding the nails Y flat-wise upon the under surfaces of the cleats, as shown more clearly in Fig. 6.

The staplers K are arranged in pairs, one pair at each side of the machine, and the
 65 members of each pair suitably spaced apart

to insert staples through the slats Z and into the cleats of each cover. After the cover receives the said staples, it then passes beneath the nailers L, one of which nailers
 70 is arranged over each link-belt, as shown more clearly in Fig. 7. In this way, one cover is stapled while the preceding cover is having the long nails or flexible attaching devices inserted therein, and more room
 75 is given for the operation of the different devices,—that is to say, the arrangement in some ways is more satisfactory than with the nailers arranged between the staplers. The said staplers can be of any suitable known or
 80 approved character, and are operated by the reciprocating cross-head M, which latter is connected with the shaft I by a pitman m and eccentric cam and straps m^1 . The nailers are operated by the same cross-head, so
 85 that the nail plungers N descend at the same time that the staple drivers move down to insert the staples. These nailers can also be of any suitable, known or approved character, such as shown in Fig. 8, and may
 90 have the nails fed thereto from the rocking trough or nail receptacle O.

With this arrangement, the cleats and slats are inserted in the pins of the link-belts, at a point near the shaft C, which is
 95 the receiving end of the machine. It will be seen that the pins also serve to suitably space the slats apart on the cleats of the covers, and the latter then travel forward and pass beneath the staplers. Each cover
 100 receives the staples, and afterward each cover receives the two nails or long flexible attaching devices, the endless work-holder or carrier remaining stationary long enough to permit the covers to receive the staples
 105 and nails. The covers finally pass out from beneath the spring guards or pressing devices, and they are then complete in every respect, and the long nails or flexible attaching devices are folded upon the under
 110 surfaces of the cleats, so that the covers can be stacked upon each other in a convenient and satisfactory manner, as is customary and usual for shipping purposes.

It will be seen that the cross-beams P connect the castings a at a point immediately
 115 below the staplers, and that the link-belt supports Q are carried by the said cross-beams P and the cross-bar h . These supports Q carry the upper strands of the link-belts, and support the latter during their
 120 forward travel, and while they are sustaining the basket covers and receiving the downward pressure of the staples and nailers.

What I claim as my invention is:

1. In a machine of the class described, the combination of means for holding the
 125 slats and cleats of the basket covers, means for stapling the slats to the cleats, means for inserting the long nails or flexible attaching
 130

devices through the central portions of the cleats, and means for automatically folding the said long nails or flexible attaching devices flat-wise upon the under surfaces of the cleats, by forward motion of the covers.

2. In a machine of the class specified, an endless traveling work-holder provided with means for holding the materials to be operated upon, means for inserting the flexible attaching devices through the said materials, sprocket wheels for said endless traveling work-holder, said sprocket wheels provided with clench-blocks adapted to engage the said flexible attaching devices to fold the same flat-wise upon the under surfaces of the said materials.

3. In a machine of the class specified, sprocket wheels, link belts traveling over said sprocket wheels, said link belts provided with openings to permit the insertion of flexible attaching devices, and clench-blocks on the sprocket wheels adapted to fold said flexible attaching devices.

4. In a machine of the class specified, a pair of link-belts, pressing devices for holding the materials down on said link-belts, means for inserting flexible attaching devices, and sprocket wheels below said pressing devices, said sprocket wheels provided with clench-blocks adapted to engage the flexible attaching devices to fold the same flat-wise upon the under surfaces of said materials.

5. In a machine of the class specified, a pair of endless traveling link-belts, means for moving the link-belts in unison, said link-belts composed of alternate box-like links providing flat upper surfaces, intermediate or inner links, and upright pins on the tops of said box-like links, said pins disposed in position to receive and hold the curved cleats of the basket covers, each link carrying only a single cleat, and said pins serving also to space the slats apart upon said cleats.

6. In a machine of the class specified, means for carrying the basket covers forward, means for stapling the parts of the basket covers together by a plurality of staples at each end of each cover, and means for inserting the long nails or flexible attaching devices in the finished cover while the parts of the next cover are being stapled together.

7. In a machine of the class specified, means for carrying the basket covers forward, two pairs of staplers for stapling together the parts of the basket covers arranged over the said carrying means, a pair of nailers, one for each side of the machine, arranged after the staplers, and means for simultaneously operating the said staplers and nailers to cause the same to staple to-

gether the parts of one cover while the preceding cover is receiving the long nails or flexible attaching devices.

8. The improved basket cover machine, comprising sprockets provided with means for folding the long nails or flexible attaching devices of the covers, substantially as shown and described.

9. In a basket cover machine, a pair of belts having links which are each long enough to fully support only a single cleat, vertical pins on said links for holding the cleats in place thereon, and means for actuating the link-belts to feed the covers forward.

10. In a basket cover machine, belts having links every other one of which are each long enough to fully support only a single cleat, staplers for fastening slats to the cleats, and means for inserting long nails through the central portion of the cleats of one cover while the parts of another cover are being stapled together, whereby each cover is finished by successive operations thereon before leaving its original position on the links of said belts.

11. In a basket cover machine, link belts, pins on the links thereof for holding cleats thereon, said pins disposed in position to hold each cleat on a single link, means for stapling the slats to the cleats, means for feeding the belts forward, and means for inserting the flexible attaching devices through the cleats of one cover while the parts of another cover are being stapled together, whereby each cover is finished by successive operations thereon before leaving its original position on the links of said belts.

12. In a basket cover machine, a traveling work-holder, means for carrying cleats on said work-holder, means for stapling slats to the cleats, means for feeding the work-holder forward, and means for inserting long nails through the central portion of the cleats of one cover while the parts of another cover are being stapled together, whereby each cover is finished by successive operations thereon before leaving its original position on said work holder.

13. In a basket cover machine, means on a traveling sprocket chain for holding an article, a sprocket wheel for said chain, means for inserting a device through said article, and means on the sprocket wheel for engaging and folding said device.

Signed by me at Chicago, Cook county, Illinois, this 4th day of December, 1907.

RUSSELL B. FULLER.

Witnesses:

SARAH LEWIS,
ALBERT J. SAUSER.