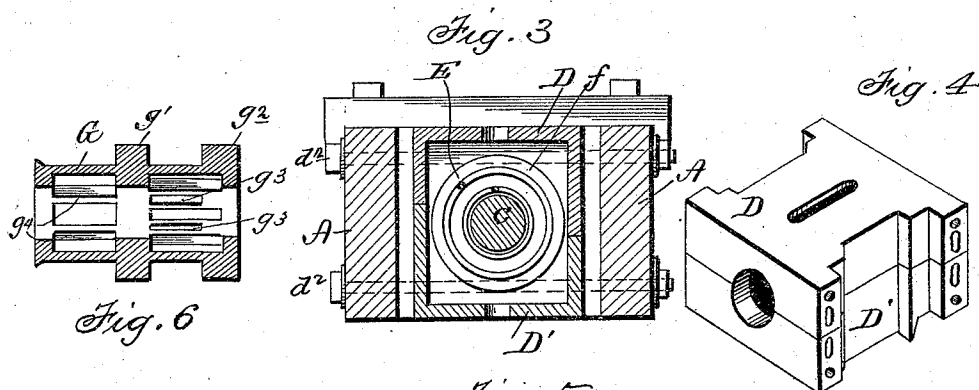
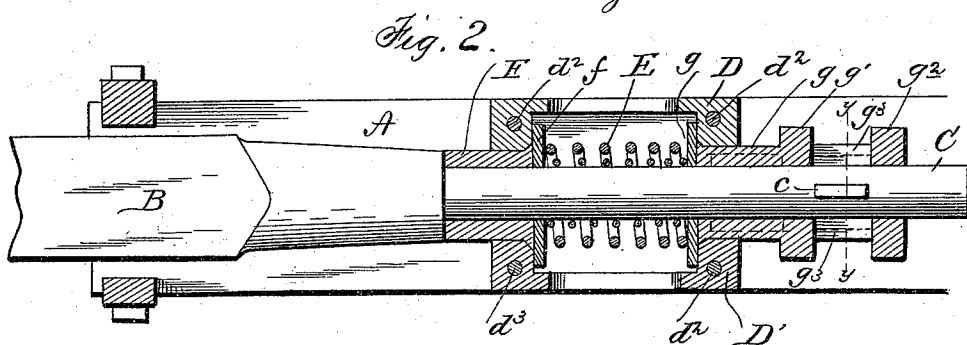
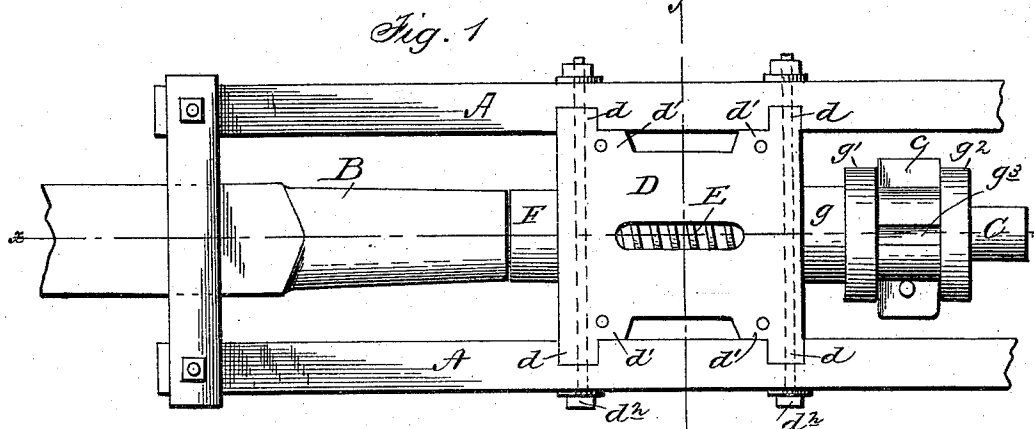


(No Model.)

A. D. STENTIFORD.
DRAW BAR ATTACHMENT.

No. 550,850.

Patented Dec. 3, 1895.



Witnesses
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UNITED STATES PATENT OFFICE.

ALBERT D. STENTIFORD, OF PALATKA, FLORIDA.

DRAW-BAR ATTACHMENT.

SPECIFICATION forming part of Letters Patent No. 550,850, dated December 3, 1895.

Application filed August 20, 1895. Serial No. 559,943. (No model.)

To all whom it may concern:

Be it known that I, ALBERT D. STENTIFORD, a citizen of the United States, residing at Palatka, in the county of Putnam and State of Florida, have invented certain new and useful Improvements in Draw-Bar Attachments; 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.

My said invention consists in various improvements in the details of construction of draw-bars of that particular character known as the "Butler" and illustrated in Patent No. 253,833, among others, said improvements relating particularly to the spring-case and the means of connecting said draw-bar therewith, whereby the device is rendered more durable and convenient in use, as will be hereinafter more particularly described and claimed.

Referring to the accompanying drawings, which are made a part hereof, and on which similar letters of reference relate to similar parts, Figure 1 is a top or plan view of the draft-timbers of common form and arrangement with my improved draw-bar connections mounted thereon; Fig. 2, a longitudinal vertical section through the same on the dotted line xx in Fig. 1; Fig. 3, a cross-section on the dotted line zz in Fig. 1; Fig. 4, a detail perspective of the spring-case separate; Fig. 5, a cross-section on the dotted line yy in Fig. 2, and Fig. 6 a detail longitudinal section on the dotted line uu in Fig. 5.

In said drawings the portions marked A represent the draft-timbers; B, the draw-head; C, the draft-bolt; D D', the spring-case; E, the spring; F, the front sleeve, and G the rear sleeve.

The draft-timbers A, the draw-bar head B, and draft-bolt are all of a common and well-known construction and arrangement and need no special description herein, except such as is incidental to the description of the parts which contain my improvements.

The spring-case is composed of two duplicate parts D D', arranged in horizontal positions, instead of vertical, as in the construc-

tion in the Butler patent above referred to, for the purpose which will be presently more fully described. At each end of said spring-case and on each corner are formed outwardly-extending vertical ribs or lugs d , which are let into vertical recesses in the draft-timbers provided therefor. Said corners are further strengthened by brace-pieces d' , left in the corners between said lugs d and the main body of said case. Said case is secured in its position by means of transverse bolts, the upper half D being secured by the bolts d^2 and the lower half by the bolts d^3 .

The spring E is of any usual or desired construction, preferably the double-coiled spring commonly used and located in said spring-case, interposed between washers f and g , which abut against the inner ends of the sleeves F and G.

The sleeve F is of a common construction, mounted in an aperture in the front end of the spring-case, its inner end being normally in the same plane with the inner surface of the front end of said spring-case and provided with an external flange, which limits its outward movement and prevents it from sliding through said aperture, its outer end being adapted to abut against the inner end of the coupling-head. The collar or washer f , before referred to, is mounted against the inner end of said sleeve and serves as a seat for the front end of the spring. The sleeve G is connected with the rear end of the spring-case in a similar manner, and at the point of its connection is of a similar form, the collar or washer g being mounted against its inner end for the rear end of the spring to bear against. Said sleeve extends a considerable distance beyond the end of said spring-box and has two annular strengthening rings or collars g' g^2 cast thereon, one, g^2 , being at its extreme outer end, and the other, g' , being at that distance from the end of the spring-case which will limit the forward movement of said sleeve at the point desired. Between the collars g' g^2 are formed transverse holes g^3 for the draft-bolt key c , which extends through one of said holes and said draft-bolt, securely connecting the draft-bolt and sleeve,

so that any motion of one, either longitudinal or rotary, is imparted to the other. I have shown two such holes through said collar, so that when one has become worn the other may
 5 be used and the life of the part thus prolonged. The draft-bolt key is preferably a thin wide piece of steel, set with its width in the direction of the length of the draw-bar, as shown, and said holes are therefore cor-
 10 respondingly long narrow openings. Said sleeve is in main a comparatively thin casting, but is provided with longitudinal ribs g^4 , which extend from the collar g' to near its inner end and are positioned exactly in line
 15 with the holes in the outer portion of the sleeve for the draft-bolt key c , and are of a depth to extend down closely to the surface of the draft-bolt. Similar ribs are also preferably cast on the interior of the outer end of
 20 said sleeve on each side of the holes for said key to strengthen the part and furnish a stiff firm seat for the key.

In using the Butler draw-bar, before referred to, it has been found defective in that
 25 the spring-case frequently breaks at the corners under the severe usage to which it is subjected. Again, upon the breakage of a spring, which is of comparatively frequent occurrence, it is necessary to withdraw all the
 30 bolts by which the spring-case is secured, remove said case, and take it apart before said broken spring can be removed and a new one put in its place. Again, no means being pro-
 35 vided to hold the draft-bolt key in any particular position against the outer end of the rear sleeve, it will frequently draw against the portions of said end which are not braced by the internal ribs and under severe strain
 40 crush in said end, destroying said collar, sometimes also bending said key, so that it is removed with great difficulty. My improve-
 45 ments are designed to overcome these disadvantages. The lugs d on each corner of the spring-box and the brace-pieces d' , interposed between said lugs and the main body of the case, afford said case the needed strength at
 50 the points desired and prevent its breakage, while at the same time affording as secure a connection with the draft-timbers. By divid-
 55 ing said case horizontally into two parts, as shown most clearly in Fig. 4, it is only necessary when a spring becomes disabled to remove the two bolts d^3 , which secure the lower part D' of the case, and remove said part,
 60 when the rear end of the draft-bolt may be pulled down, the disabled spring removed, and a new one put in its place very quickly and conveniently, it being only necessary to withdraw the key c and allow the sleeve G to
 65 slide off the draft-bolt, put on the new spring, and again assemble the parts. By means of the extended portion of the sleeve G , contain-
 ing the holes for the draft-bolt key, and the location of said holes directly behind and in
 70 line with the ribs on the interior of the front

end of said sleeve, the thrust or pull is always against the ends of said ribs and the breakage of the sleeve in the manner before described is thus prevented. It will be seen, therefore, that these improvements, although
 75 relating to the details of construction, add materially to the life and value of the device and also result in a saving of considerable valuable time in removing old springs and putting in new ones.

Having thus fully described my said invention, what I claim as new, and desire to secure by Letters Patent, is—

1. The combination, of the draft timbers, the spring case mounted between said tim-
 80 bers and secured in place by bolts which extend through transverse perforations in said draft timbers and said case, said case being composed of two parts each extending across the space between said draft timbers in a
 85 horizontal position, and being secured by the bolts one above the other and each independently of the other, the draft bolt passing through said case, the spring surrounding
 90 said draft-bolt within said case, the front and rear sleeves projecting through the ends of said case, and the key securing said parts together, substantially as set forth.

2. The combination with the draft timbers, of the spring case consisting of two dupli-
 95 cate horizontally disposed parts fitted together to incase the springs, both parts being formed with the vertical lugs d on its sides at each end to fit in recesses in said
 100 draft timbers, and provided with the brace pieces d' in the corners between said lugs and the side from which they project, the spring within said case, the sleeves, the draw-bar
 105 and the key for securing said several parts together, substantially as set forth.

3. The combination of the draft timbers, the spring case secured thereto, the spring in said case, the draft bolt extending through
 110 said case within said spring, the sleeve F mounted to operate in a suitable aperture in the front end of said case, its inner end affording a rest for the front end of the spring, the sleeve G mounted in the rear end of said
 115 case, its inner end affording a rest or bearing for the rear end of said spring, and its outer end extending a considerable distance beyond said case and having two annular rings or collars g' and g^2 formed thereon the first being at that point thereon which will
 120 come against the end on the case and limit the inward movement of the sleeve as desired, and the other being on the end thereof a distance from the first which will admit the width of the key to be used, a perforation
 125 for said key between said collars, and said key extending through said perforation and a corresponding perforation in said draft bolt, and adapted to bear against said front collar, substantially as set forth.

4. The combination of the spring case, the

spring mounted within said case, the front sleeve, F, the rear sleeve, G, formed with the two collars, g' g^2 , the draft-bolt key hole formed between said two collars, and internal ribs formed directly in front of said holes, the draw-bar, and the key, substantially as set forth.

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

ALBERT D. STENTIFORD.

Witnesses:

J. W. GROVES,
C. B. HERB.