

(No Model.)

R. H. PFAFF & F. K. LEWIS.
METHOD OF COVERING BOW SOCKETS.

No. 505,278.

Patented Sept. 19, 1893.

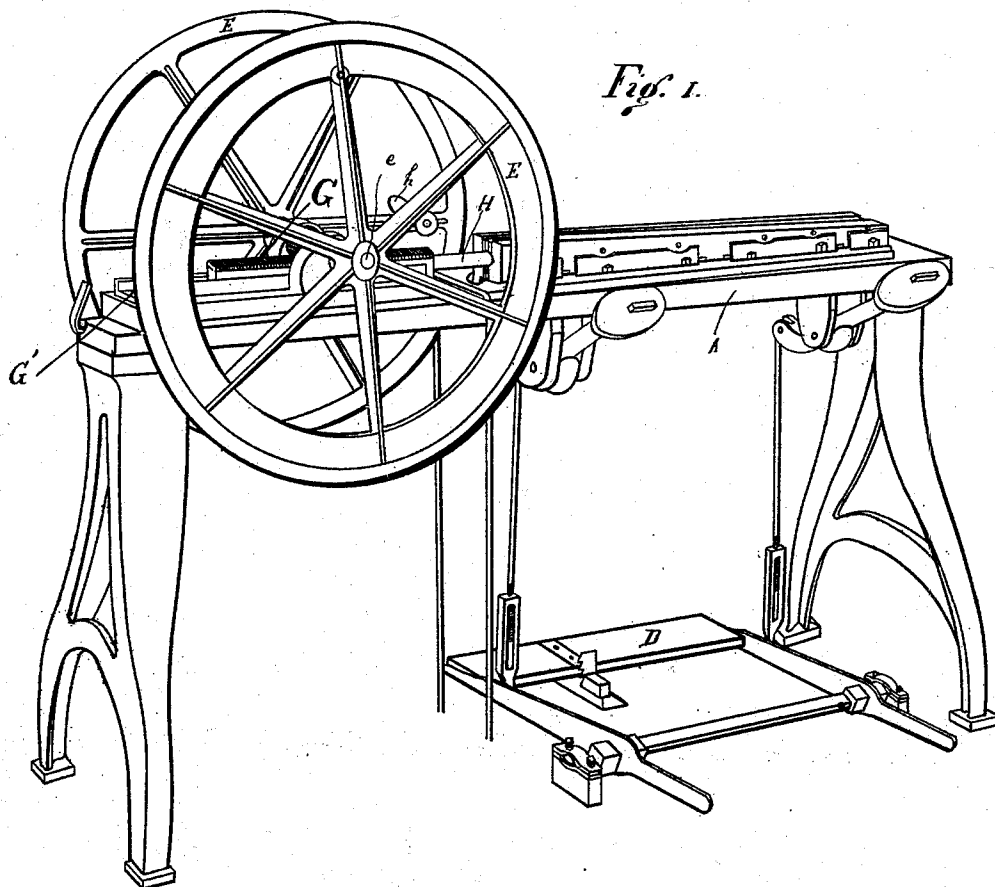


Fig. 1.

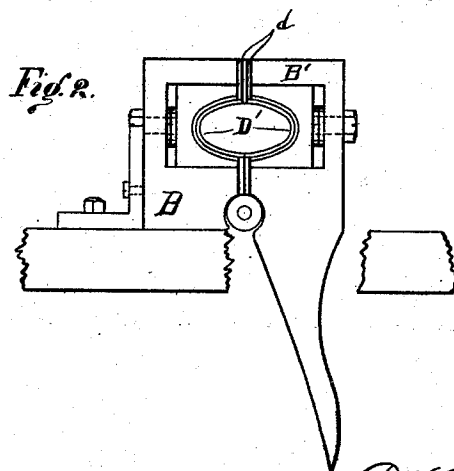


Fig. 2.

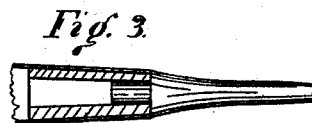


Fig. 3.

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METHOD OF COVERING BOW-SOCKETS.

SPECIFICATION forming part of Letters Patent No. 505,278, dated September 19, 1893.

Application filed February 4, 1890. Serial No. 339,190. (No model.)

To all whom it may concern:

Be it known that we, RUDOLF H. PFAFF and FREDERICK K. LEWIS, citizens of the United States, and residents of Ashtabula, county of Ashtabula, and State of Ohio, have invented certain new and useful Improvements in Methods of Covering Bow-Sockets, of which the following is a specification, the principle of the invention being herein explained and the best mode in which we have contemplated applying that principle, so as to distinguish it from other inventions.

Our invention relates to methods for covering carriage bow sockets. Heretofore in covering bow sockets the cover has been gripped by the hand and the bow socket inserted in the cover. After the cover has been drawn onto the bow socket as far as it will easily and readily go without pressure the operator grasps the bow socket and gradually works the cover down into place. It has been impossible for the workmen to grasp the seam of the cover, for the reason that it would soon cut into the skin of their hands. They have therefore been careful to grasp only the smooth portion of the cover and have not grasped the seam thereof; neither have they been able to completely grasp the entire section of the circumference of the bow socket and hence in working the cover onto the socket, it has been impossible to prevent the covers wrinkling and cracking, owing to the fact that they were not retained in a right line or extended position; that is, no man could keep a cover in a longitudinally extended position while working it on with the hand, nor could he keep the entire length of the seam in a right line.

In our improved method of covering bow sockets, we utilize a machine to overcome the difficulty incident to the hand method of drawing on bow sockets.

Referring to the drawings:—Figure 1 is a perspective view of the bow socket covering machine. Fig. 2 is an end view of the jaws and sockets. Fig. 3 is a detail view of the pilot and extremity of the bow socket.

A is a machine bed provided with a stationary jaw B secured to said bed, and a movable hinged jaw B' hinged to said stationary jaw. Any suitable mechanism may be provided, as, for instance, cams C, connected with

foot treadle D to operate said hinged jaw and bring it into engagement with the stationary jaw for the purpose of gripping the bow socket and its cover. It may be noticed that each of said jaws is provided with a longitudinal groove D' suitably lined with a proper material that will not injure the cover of the bow socket. Metal strips *d* are provided on the upper longitudinal edge of the respective jaws, and between these strips the bow socket cover seam is tightly gripped as the jaws are brought together, and retained in a right line.

The bow socket actuating portion of the machine consists of the wheels E secured to shaft *e* that is respectively journaled near the wheels. On said shaft is secured a pinion F meshing with rack G that has longitudinal sliding bearing in the ways G'. Secured to the forward extremity of said rack is mandrel H of less diameter than the opening in the base of the bow socket. A crank *h* is secured to one of the wheels by means of which it may be rotated in a proper manner. We use the term base to denote the large end of the socket although strictly speaking it is the top of the bow socket, while the small end of the socket we term the top, although it is really the base.

In carrying out our method we first introduce a pin or pilot J shown in Fig. 3, in the upper extremity of the bow socket. This pilot it will be noticed is of smooth, tapering form; the base of which is about the diameter of the upper extremity of the bow socket. This is for the purpose of guiding the leather onto the bow socket, and preventing the sharp angular corners at the upper extremity of the socket from cutting or otherwise injuring the leather of the socket, as the leather is drawn into position on the socket. This may be considered the first step in the method, namely, inserting the pilot within the opening in the extremity of the socket. There are certain classes of bow sockets which terminate in a slat iron exactly similar in form to the pilot, said slat iron being welded or brazed or otherwise secured into the socket. In this class of bow sockets, it is of course, neither necessary nor possible to insert the pilot, and the insertion of the same can no longer in that instance be considered a step in the method.

After the cover has been drawn on as far as it will easily go without friction, the partly covered socket is inserted within the jaws, care being had to keep the seam of the cover 5 uppermost in order that it may be gripped between the longitudinal metal strips on the upper portion of the jaws. The jaws are then closed by means of the foot power and the wheels partly rotated, forcing forward the 10 rack that carries the mandrel. Said mandrel is of less diameter than the opening on the base of the bow socket, and enters the same and engages with the wood filler that extends down near to the base of the bow socket. 15 This forces the bow socket forward and as the bow socket seam and cover are gripped by the jaws they remain stationary. By rotating the wheels a sufficient distance the bow socket is forced home into the cover or 20 in other words, drawing the cover entirely over the socket until the socket is completely covered.

It will be noticed that as the cover and seam are gripped in the jaws certain transverse 25 sections of the circumference of the bow socket cover are gripped their entire peripheral or circumferential area. The cover is held in stretched unwrinkled right line position and is so gripped by means of the jaws 30 that it is not rubbed or abraded when the socket is forced fully into position; in fact the operation may be said to be accomplished without any sliding friction on the cover.

By means of the foregoing, we are enabled

to insert the socket within the cover without 35 injuring the gloss or enamel of the cover in any way, either by wrinkling the cover or by any sliding frictional resistance caused by the insertion of the socket. By means of the pilot we avoid any tendency to cut the leather 40 as the socket is inserted therein.

The foregoing description and accompanying drawings set forth in detail, one form of carrying out the method of our invention; change may be made therein provided the 45 principles of construction respectively recited in the following claim are employed.

We therefore particularly point out and distinctly claim as our invention—

An improved method of covering bow 50 sockets, which consists in first forming the bow socket cover with a longitudinal seam; then closely inclosing the cover and clamping its seam so as to hold the cover and seam extended and supported throughout the entire 55 length of the same, and finally forcing the two parts together, one in relation to the other, so as to cause the cover to snugly fit upon the bow socket, substantially as set forth. 60

In testimony that we claim the foregoing to be our invention we have hereunto set our hands this 1st day of February, A. D. 1890.

RUDOLF H. PFAFF.

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Witnesses:

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