(No Model.) 2 Sheets—Sheet 1.

M. ARNOLD.

SLAT FASTENER FOR BELTS.

No. 461,177. Patented Oct. 13, 1891.

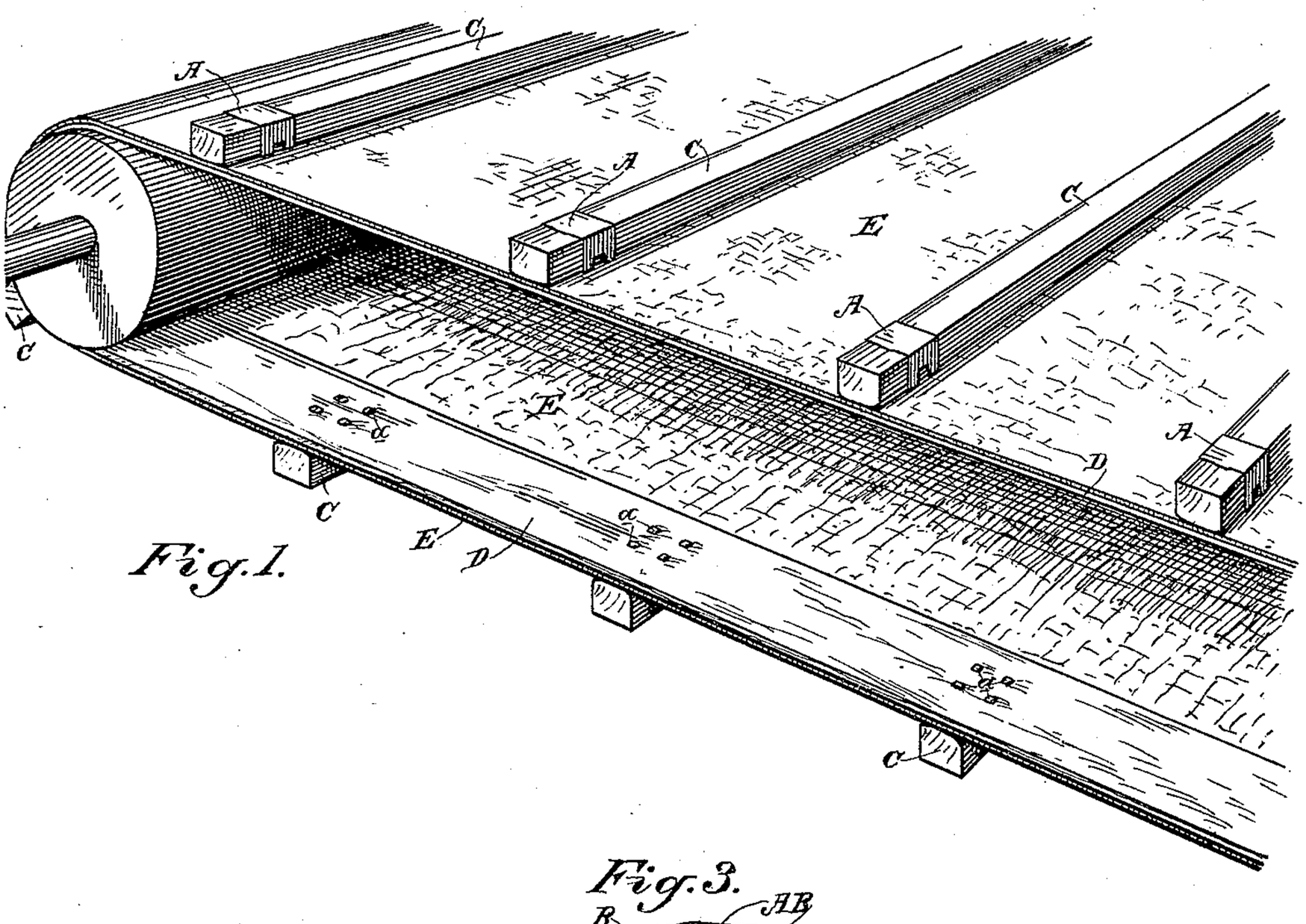


Fig. 1.

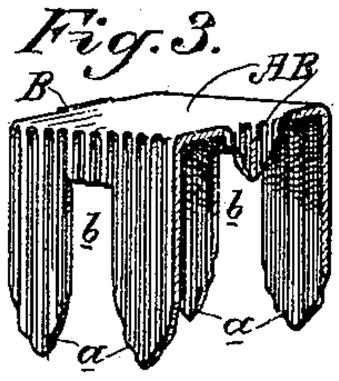
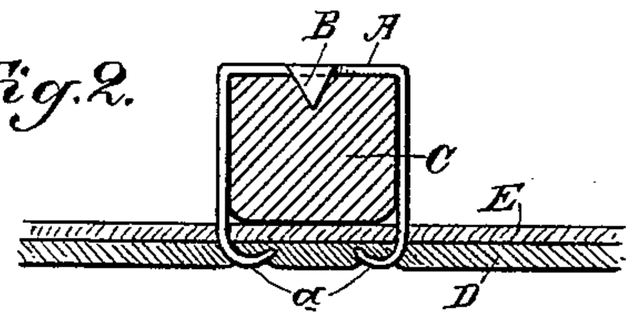


Fig. 3.

Fig. 2.



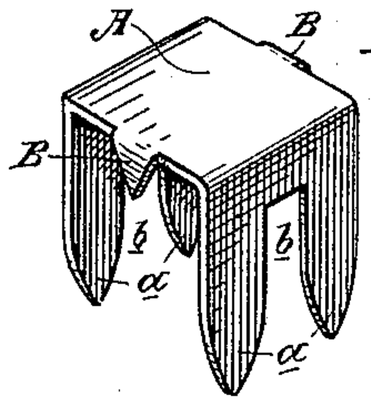


Fig. 4.

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(No Model.) 2 Sheets—Sheet 2.

M. ARNOLD.

SLAT FASTENER FOR BELTS.

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Fig. 5.

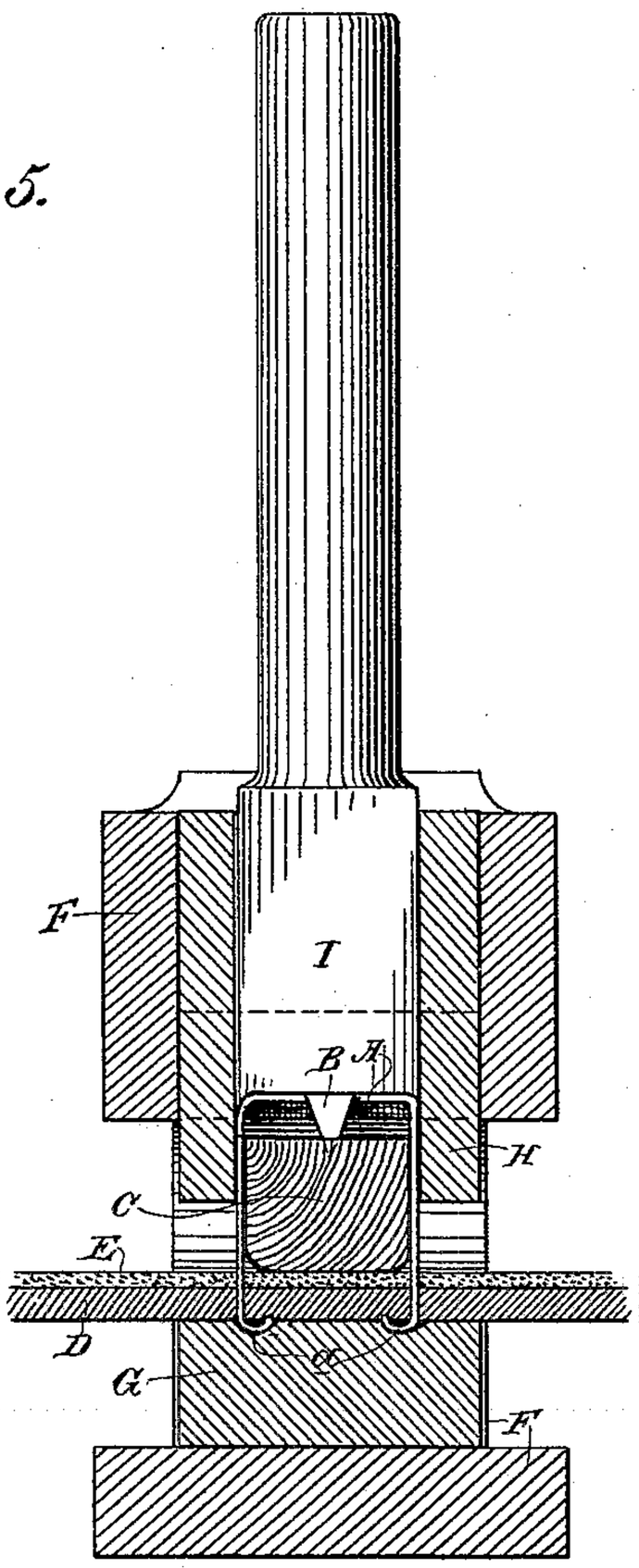
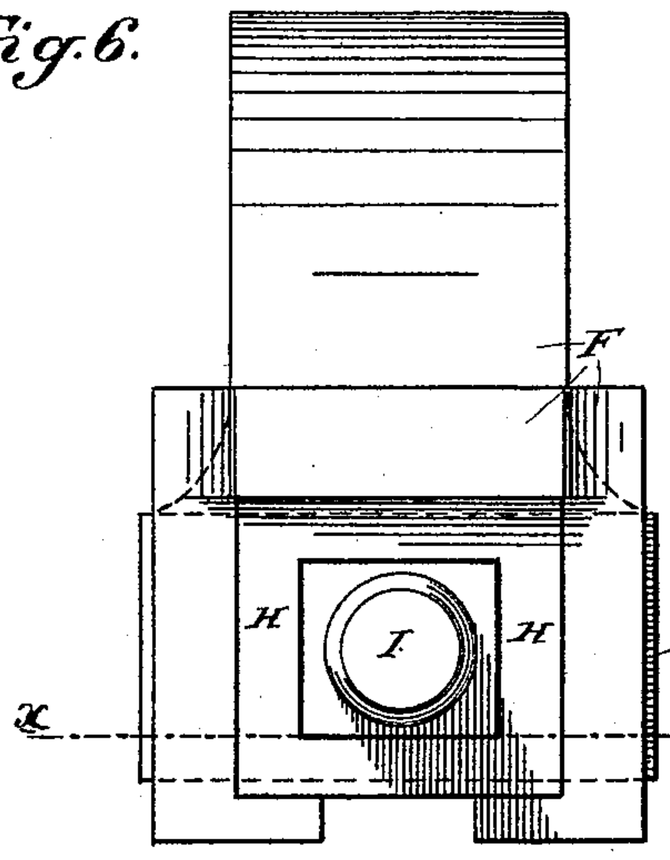


Fig. 6.



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UNITED STATES PATENT OFFICE.

MATTHEW ARNOLD, OF SAN FRANCISCO, CALIFORNIA.

SLAT-FASTENER FOR BELTS.

SPECIFICATION forming part of Letters Patent No. 461,177, dated October 13, 1891.

Application filed January 28, 1891. Serial No. 379,448. (No model.)

To all whom it may concern:

Be it known that I, MATTHEW ARNOLD, a citizen of the United States, residing in the city and county of San Francisco, State of California, have invented an Improvement in Slat-Fasteners for Belts; and I hereby declare the following to be a full, clear, and exact description of the same.

My invention relates to certain improvements in slat-fasteners for belts; and it consists of the improved fastener hereinafter fully described and claimed.

Figure 1 is a view of a portion of the belt, showing my invention. Fig. 2 is a transverse section taken across the end of one of the transverse strips and through the belt and flexible fabric. Figs. 3 and 4 show plain and corrugated rivets. Fig. 5 is a sectional view of the device for driving the rivets, taken on the line *x x* of Fig. 6. Fig. 6 is a plan view of the same.

In the formation of what are known as "carrier-belts"—such as are employed in harvesting and thrashing machinery—it is usual to employ two leather or other flexible belts, which are fixed to transverse wooden strips at short intervals, the leather belts traveling over supporting driving-pulleys, and these, with the transverse strips, form the entire belt when used as a straw-carrier; but when used to convey grain or mixed grain and straw there is an intermediate belt made of canvas or suitable flexible material extending from one side to the other and covering the transverse wooden strips.

My invention is designed to provide a convenient means for securing the flexible fabric and belts to the wooden strips in such a manner as to firmly secure the parts together and to preserve the wooden strips from danger of splitting and breaking while in use. Hitherto it has been customary to secure these parts together by boring holes through the wooden strips near the ends and riveting the fabric to the strips. In my invention I employ the inclosing clamps or rivets A, which are made in the form of bands stamped out of sheet metal of sufficient thickness and having side legs provided with the points *a*, separated by an opening *b*, these points being driven through the leather and turned up or riveted upon the opposite side. The rivets may also be made with single legs on each side, if preferred, and they are struck up by suitable dies, either plain or corrugated, as shown, the latter form giving increased stiffness to the rivet.

The shape of the clamp-rivet A corresponds with the transverse section of the wooden strip or bar C, to which the leather belt D and the canvas or other fabric E (when the latter is used) are to be secured. In the present case these clamp-rivets are made rectangular in form, corresponding with the shape of the bars, as before described, and from the center of each end of that portion which extends across the top of the bar two small sharp prongs B project inward, so that when the rivet is driven these prongs will enter the wood and thus lock the rivet firmly in place and prevent its slipping endwise.

In making these belts the wooden bars are made of a length equal to the desired width of the belt, and upon each end is secured a narrow leather belt D. Between the leather belt and the wooden transverse strips is secured the canvas belt E, when the latter is used, as before described, and the single rivet secures these parts firmly together. By making this rivet with two or more independent legs and the intermediate space sufficient leather is left between each of the points to insure the proper strength to the belt, and at the same time I have two or more points of fastening situated far enough apart to insure a strong connection between the parts.

By reason of the rivet being made in the form of a band or inclosing piece it is impossible to split and break the transverse strips, and they will last as long as any other portion of the belt, and much annoyance and time are saved in repairing this portion of the belt. Various devices may be employed to drive these rivets, and in order that my invention may be clearly understood and worked without further experiment I have shown one form of device for driving these rivets. It consists of a frame F, made in the form of a horizontal yoke, which may be held in a vise or laid upon a bench. Upon the lower arm of the frame is fixed the anvil G, having slight grooves made transversely across its face, by which, when the rivets are driven, the points will be turned and caused

to re-enter the material from the lower side. The upper arm of the yoke has a square opening or guide-channel made in it directly above the anvil, and within this is fitted a correspondingly-shaped guide H, having a square opening made vertically through its center, of exact size to receive one of the rivets, and also to receive the punch I, which is used to drive the rivets. Upon each side of this guide the arms or legs *a* extend down, so that when the guide H is placed in the opening in the upper arm these guides rest upon the belt and outside of the wooden strip C, which is to be secured thereto. The legs of the rivet will then pass down between these guides and outside of the wooden strip, and the punch, which is shaped, as shown, to fit the top of the rivet, is placed in the opening in the guide and the rivet driven through by blows of the hammer upon the head of the punch, the guide and side of the wooden strip preventing the thin metal of the rivet from doubling up or buckling, and the points of the rivet will be turned by the anvil, as before described, thus securing the whole together. As these belts are usually made by those using them, this is a simple hand device, which may be conveniently used in the manufacture of such belts.

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

An improved article of manufacture, consisting of a box-shaped or inclosing fastener having a flat top, side legs extending downward therefrom at right angles with the top to inclose and clamp the part to be secured and having their lower ends pointed, and the prongs B, projecting inwardly from the center of the ends of the flat-top portion of the fastener, substantially as herein described.

In witness whereof I have hereunto set my hand.

MATTHEW ARNOLD.

Witnesses:
LINCOLN SONNTAG,
S. H. NOURSE.