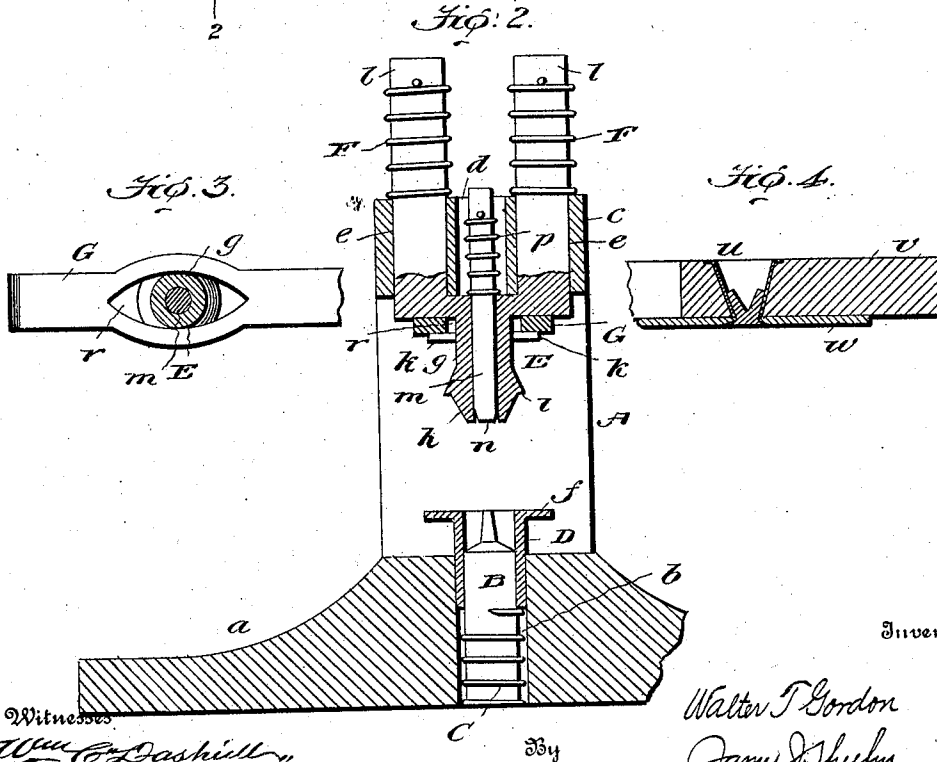
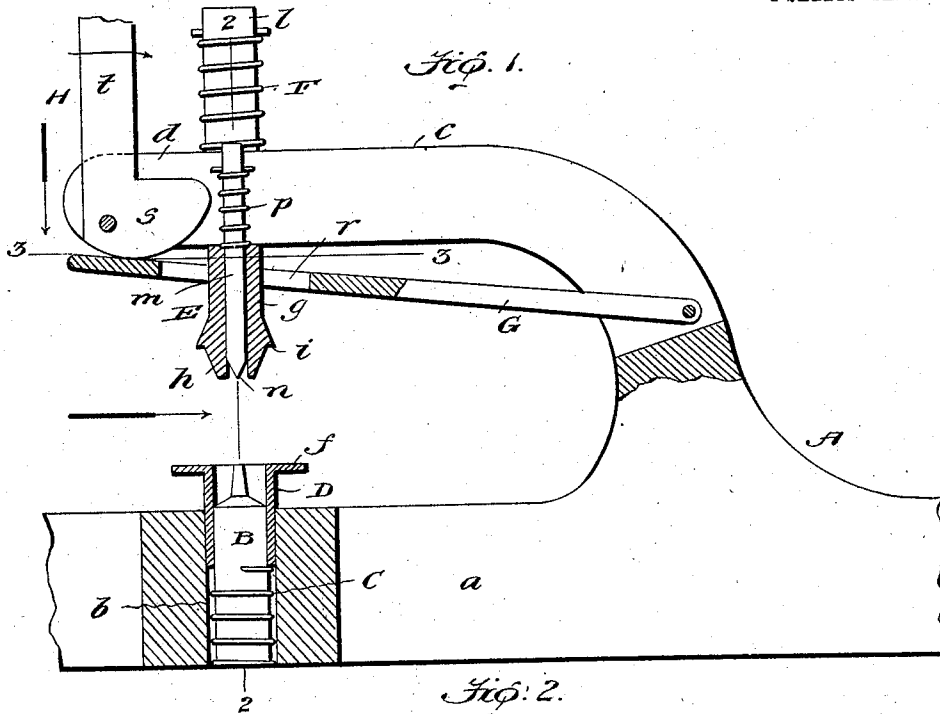


No. 824,007.

PATENTED JUNE 19, 1906.

W. T. GORDON.
RIVETING DEVICE.
APPLICATION FILED JAN. 17, 1905.

2 SHEETS—SHEET 1.



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2 SHEETS—SHEET 2.

Fig. 5.

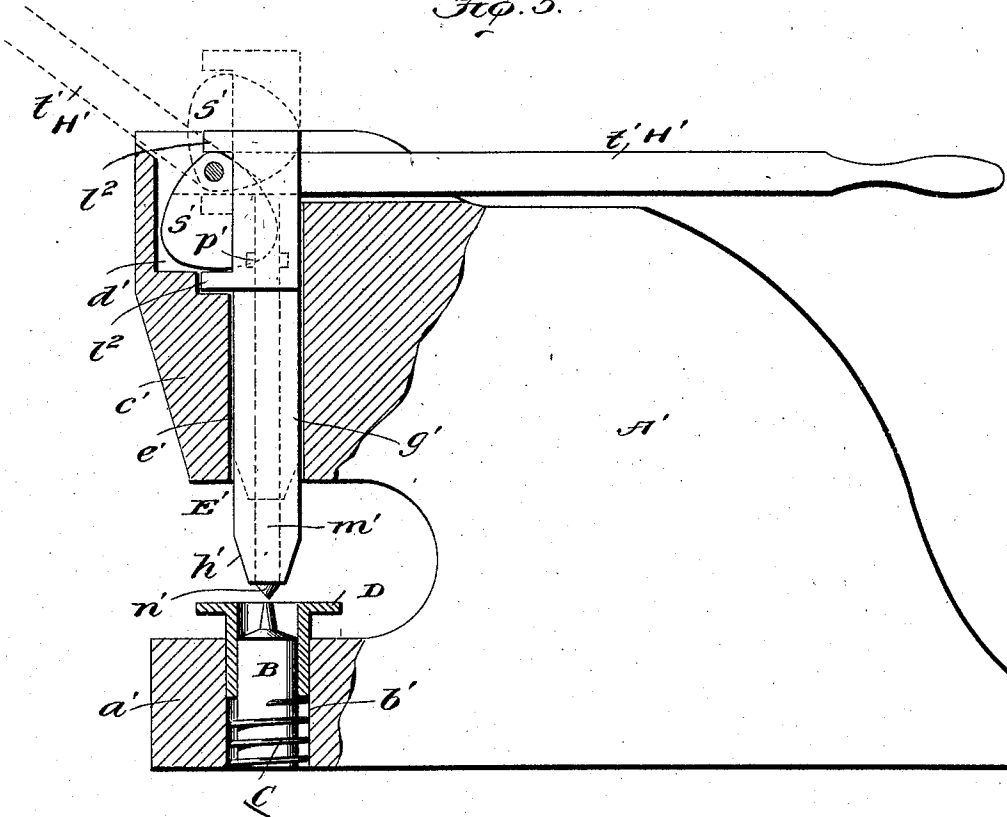


Fig. 6.

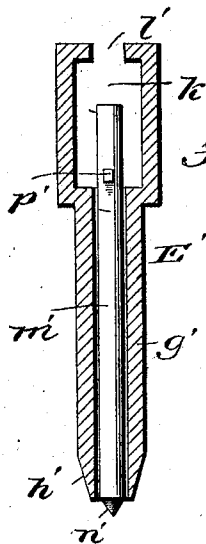
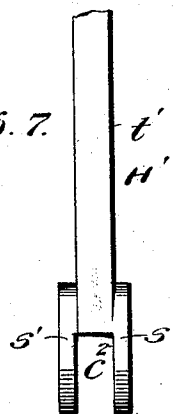


Fig. 7.



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UNITED STATES PATENT OFFICE.

WALTER T. GORDON, OF JUNIPER, OREGON.

RIVETING DEVICE.

No. 824,007.

Specification of Letters Patent.

Patented June 19, 1906.

Application filed January 17, 1905. Serial No. 241,464.

To all whom it may concern:

Be it known that I, WALTER T. GORDON, a citizen of the United States, residing at Juniper, in the county of Umatilla and State of Oregon, have invented new and useful Improvements in Riveting Devices, of which the following is a specification.

My invention pertains to riveting devices; and it contemplates the provision of a simple and inexpensive device constructed with a view of expeditiously riveting together the slats and belts of drapers and the like, and this with but a minimum amount of effort on the part of the operator.

With the foregoing in mind the invention will be fully understood from the following description and claims when taken in connection with the accompanying drawings, forming part of this specification, in which—

Figure 1 is a view, partly in side elevation and partly in vertical longitudinal section, of a device constituting one embodiment of my invention. Fig. 2 is a transverse section taken in the plane indicated by the line 2 2 of Fig. 1 with some parts in elevation. Fig. 3 is a detail horizontal section taken in the plane indicated by the line 3 3 of Fig. 1 looking downwardly. Fig. 4 is a detail sectional view illustrating the relative arrangement of the belt and slat of a draper and rivet members, through the medium of which the slat and belt are connected. Fig. 5 is a view similar to Fig. 1, illustrating another embodiment of the invention. Fig. 6 is a detail section taken at right angles to Fig. 5 and illustrating the tubular portion and the plunger of the upper member comprised in the modified device, and Fig. 7 is a detail elevation of the operating-lever of the modified device.

Referring by letter to said drawings, and more particularly to Figs. 1 to 4 thereof, A is the main frame of my novel device. The said frame is preferably, though not essentially, of cast metal and comprises a base or work-support *a*, having a socket *b* and an overhanging arm *c*, bifurcated at its forward end, as indicated by *d*, and provided at opposite sides of the said bifurcation with vertically-disposed apertures *e*, Fig. 2.

Disposed in the socket *b* of the work-support with its upper end flush with the upper side of said support is a rivet-block or anvil B, and also disposed in the said socket is a coiled spring C and a rivet-holder D. The said holder D is tubular in form and is ar-

anged around the upper portion of the block or anvil B and on the spring C, as shown. In virtue of this construction and relative arrangement of parts it will be noticed that the holder D will retain a rivet on the upper end of the block B after the manner illustrated and will be forced downwardly by the upper member of the device, so as to leave the rivet free to pass through the belt of a draper or the like, as shown in Fig. 4. It will also be noticed that when the holder D is forced downwardly a flange *f* at its upper end will bring up against the upper side of the work-support, and when the upper member of the device is raised the spring C will operate to return the said holder D to its normal position. (Shown in Fig. 1.)

E, Figs. 1 and 2, represents the upper riveting member of the device. The said upper member E comprises a tubular portion *g*, having a truncated taper *h* at its lower end and also having a flange *i*, lateral projections *k*, Fig. 2, and upwardly-extending guide-rods *l*, a punch *m*, disposed and movable vertically in the tubular portion *g* and having a chisel-shaped lower end *n*, and a coiled spring *p*, surrounding the punch *m* and interposed between an abutment thereon and the portion *g* and having for its purpose to return the punch to and normally hold the same in the position shown. The upper portion of the punch *m* is disposed in the bifurcation *d* of the overhanging arm *c*, while the guide-rods *l* are disposed and movable vertically in the apertures *e* of said arm. The flange *i* of the tubular portion *g* is designed to permit of the ready removal of the work when the same adheres to and moves upwardly with the taper portion *h*, a prying instrument being interposed between the flange and the work for the purpose.

F F are coiled springs surrounding the guide-rods *l* of the member E and interposed between abutments on the said rods and the upper side of the overhanging arm *c*, so as to tend to return the member E as a whole to and normally retain the same in the position illustrated relative to the arm *c*.

G is a vertically-swinging lever fulcrumed on the rear portion of the arm *c* and having an opening *r*, receiving the portion *g* of the member E at a point above the lateral projections *k*, and H is an operating-lever fulcrumed in the bifurcation *d* of the arm *c* and having a head *s*, arranged to engage the free

portion of the lever G, and a handle *t*, arranged to engage the upper end of the punch *m*, as hereinafter more fully described.

In the practical use of my novel device a rivet is placed on the block or anvil B and in the holder D, and the fastening member *u*, complementary to the rivet, is placed on the truncated taper *h* of the upper member E, where it will be retained against casual displacement by frictional contact. The slat *v* is then superposed on the belt *w*, to which it is to be fastened, and thus relatively arranged the said parts are placed on the upper end of the rivet-holder D. With this done, the level H is swung in the direction indicated by arrow in Fig. 1, when, as will be readily observed, the member E as a whole will be moved downwardly to place the fastening member *u* in the correspondingly-shaped aperture of the slat *v* and the punch *m* will be forced downwardly, so as to split and upset the rivet in the reduced end of the member *u*. Incident to the operation just described it will be observed that because of the reduced end of the fastening member *u* projecting a slight distance through the slat it will operate, in connection with the stem of the rivet, as a cutting-tool, and hence will remove a core from the belt as an aperture is made in the belt by the rivet-stem.

As will be readily observed by reference to Fig. 1, the downward movement of the member E as a whole is effected through the medium of the head *s* of the lever H and the vertically-swinging lever G, while the downward movement of the punch *m* is effected by the handle *t* of lever H acting directly upon the upper end of the punch *m*. When the lever H is returned to the idle position shown in Fig. 1, it will be observed that the springs F and P will hold the lever G under pressure against the head of lever H, and thereby prevent casual movement of the latter lever.

While I prefer to employ a lower riveting member comprising a block B, a spring C, and a rivet-holder D, as shown and described, I do not desire to be understood as confining myself to such construction of lower riveting member, as a lower riveting member of any construction compatible with the purposes of my invention may be employed without involving a departure from the scope of my invention as claimed.

It will be gathered from the foregoing that through the medium of my novel device a person is enabled to expeditiously and securely rivet the slats and belt of a draper or the like together, and this with the expenditure of but very little effort. It will also be gathered that the device is simple and compact in construction and embodies no delicate parts such as are likely to get out of order or be broken after a short period of use.

Referring now to the embodiment of my invention shown in Figs. 5 to 7, A' is the

main frame. Said frame A' comprises a work-support *a'*, having a socket *b'* and an overhanging arm *c'*, chambered adjacent to its forward end, as indicated by *d'*, and provided with a vertically-disposed aperture *e'*. The work-support *a'* is shown as equipped with an anvil B, a spring C, and a work-holder D, similar to those shown in Figs. 1 to 4 and before described, which parts constitute a lower riveting member; but I desire it distinctly understood that the said work-support may be provided with a lower riveting member of any other suitable description without involving a departure from the scope of my invention. E', Figs. 5 and 6, is the upper riveting member. This member comprises a tubular portion *g'*, having a truncated taper *h'* at its lower end and also having a diametrical opening *k'* in its upper portion and a communicating opening *l'* in its upper end, and a punch *m'*, disposed and movable vertically in the tubular portion *g'* and having a suitably-pointed lower end *n'* and also having an enlargement *p'*, arranged to hold it against undue downward movement in the portion *g'*. The upper part of the tubular portion *g'* is disposed in the chamber *d'* of arm *c'* and is provided with a lateral projection *l'*, arranged to bring up against the lower wall of said chamber, while the lower part of said portion *g'* is arranged and movable vertically in the aperture *e'*. H' is an operating-lever fulcrumed in the chamber *d'* of the arm *c'* and having a bifurcation *c'* to receive the punch *m'* and also having heads *s'* at opposite sides of said bifurcation and a handle *t'*, arranged to engage the upper end of the punch.

The embodiment shown in Figs. 5 to 7 is operated in the same manner as that shown in Figs. 1 to 4, the movement of the lever H' from the position shown by dotted lines in Fig. 5 to the position shown by full lines in said figure serving to move the member E' as a whole downwardly, after which the lever-handle *t'* bears upon and forces the punch *m'* downwardly. Incident to the movement of said lever H' in the opposite direction, the heads *s'* thereof acting against the upper wall of the opening *k'* serve to raise the tubular portion *g'* of the member E' to the position shown by dotted lines in Fig. 5, when the lower wall of the opening *k'* acting against the enlargement *p'* of punch *m'* will raise said punch to the position shown by dotted lines in Fig. 5. In the event of the work adhering to the tapered lower end of the tubular portion *g'* when said portion is positively moved upwardly by lever H' it will be observed that the arm *c'* will displace the work from the said tapered end.

It will be gathered from the foregoing that the embodiment shown in Figs. 5 to 7 is a material simplification of that shown in Figs. 1 to 4 and embodies no springs or other

parts likely to get out of order after a short period of use.

I have entered into a detailed description of the construction and relative arrangement of the parts embraced in the present and preferred embodiments of my invention in order to impart a full, clear, and exact understanding of the said embodiment. I do not desire, however, to be understood as confining myself to such specific construction and relative arrangement of parts, as such changes or modifications may be made in practice as fairly fall within the scope of my invention as claimed.

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

1. In a riveting device, the combination of a main frame comprising a work-support and an overhanging arm, a lower riveting member, an upper riveting member comprising a tubular portion having an exteriorly-tapered lower end, and a punch disposed in and movable independently of the tubular portion, and a lever having a head arranged to di-

rectly engage and depress the tubular member and a handle arranged to directly engage and depress the punch.

2. In a riveting device, the combination of a main frame comprising a work-support and an overhanging arm, a lower riveting member, an upper riveting member comprising a tubular portion having a diametrical opening in its upper part and an opening in its upper end and a punch disposed in and movable independently of the tubular portion and having an enlargement arranged to bear on the lower wall of the first-mentioned opening in the tubular portion, and a lever mounted in the overhanging arm and having a head at one side of the upper part of the punch to engage the tubular portion, and a handle arranged to bear on the punch.

In testimony whereof I have hereunto set my hand in presence of two subscribing witnesses.

WALTER T. GORDON.

Witnesses:

ADOLPH R. HAEFT,
WALTER G. MOORE.