

J. CARLSON.
FASTENING DEVICE.
APPLICATION FILED MAY 11, 1912.

1,054,824.

Patented Mar. 4, 1913.

Fig. 1

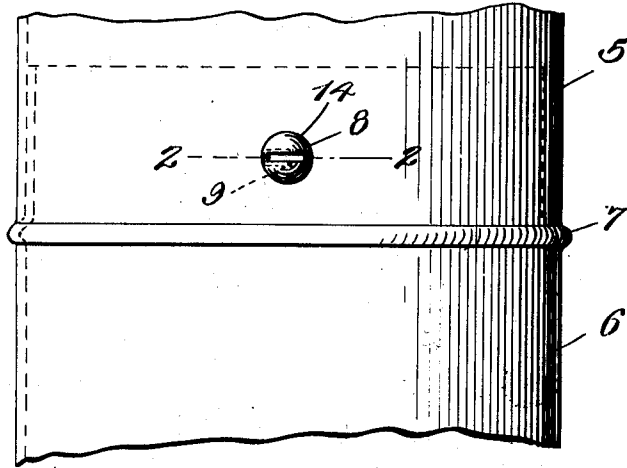


Fig. 2

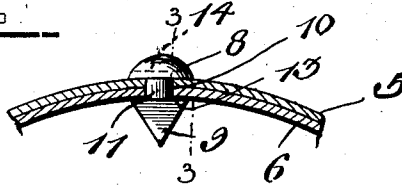


Fig. 3

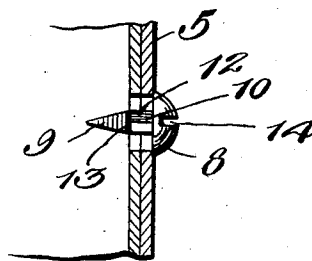
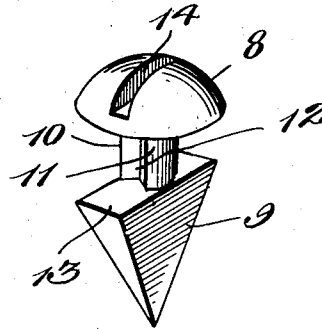


Fig. 4



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UNITED STATES PATENT OFFICE.

JOHN CARLSON, OF CASS LAKE, MINNESOTA.

FASTENING DEVICE.

1,054,824.

Specification of Letters Patent.

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Application filed May 11, 1912. Serial No. 696,758.

To all whom it may concern:

Be it known that I, JOHN CARLSON, a citizen of the United States, residing at Cass Lake, in the county of Cass and State of Minnesota, have invented certain new and useful Improvements in Fastening Devices, of which the following is a specification, reference being had to the accompanying drawings.

10 This invention relates to improvements in fastening devices and has for its primary object to provide a simple, inexpensive and efficient device for this purpose whereby sheet metal members may be securely connected together and held against accidental separation.

Another object of the invention is to provide a fastening pin or bolt having a piercing spur adapted to be forced through the metal sheets to be connected, a head and a shank connecting the head to the spur and the said shank having convex faces to permit the same to be turned or rotated and longitudinally grooved faces to receive the metal on opposite sides of said shank whereby the same may be held against turning movement.

30 Still another object of the invention resides in the provision of a device for the above purpose which may be easily and quickly applied, will at all times retain a permanent position with relation to said sections and absolutely prevent their disconnection.

35 With the above and other objects in view as will become apparent as the description proceeds, the invention consists in certain constructions, combinations and arrangements of the parts that I shall hereinafter fully describe and claim.

40 For a full understanding of the invention, reference is to be had to the following description and accompanying drawing, in which—

45 Figure 1 is a fragmentary elevation of a stove pipe illustrating the invention by showing the metal sections of the same joined together by means of my improved fastener; Fig. 2 is a longitudinal section taken on the line 2—2 of Fig. 1; Fig. 3 is a section taken on the line 3—3 of Fig. 2; and Fig. 4 is an enlarged perspective view of the fastener.

50 Corresponding and like parts are referred to in the following description and designed

in the accompanying drawing by like reference characters.

Referring in detail to the drawing, 5 and 6 designate the pipe sections or other sheet metal members to be connected.

My improved fastener, best shown in Fig. 4 of the drawing, is preferably constructed from a single piece of steel and includes a head 8 which is connected to a substantially triangular shaped piercing spur 9 by means of the shank 10. The opposite faces or sides of the spur 9 are beveled or inclined to the point or apex of the spur, as clearly shown so that the point of said spur may be readily forced through the ends of the pipe sections, and the shank 10 is provided with opposite convex faces 11, the other faces of said shank being longitudinally channeled or grooved as shown at 12. The spur 9 at its wider end extends upon opposite sides of the shank 10 to form the shoulders 13 and in the application of the device, these shoulders extend longitudinally of the stove pipe sections. Pressure is then exerted upon the fastener to force the piercing spur 9 through the connected ends of the pipes. It will be observed that the convex faces 11 of the shank 10 are contiguous to the shoulders 13 of the spur so that after said spur has been forced entirely through the metal pipe sections, said shank may be readily turned to position the shoulders 13 in a plane at right angles to the slit or cut formed through the pipe sections by the spur 9, as clearly shown in dotted lines in Fig. 1. The edges of the slit or cut in the metal pipe sections will thus close upon the shank 10 and engage in the longitudinal grooves or channels 12 thereof. Thus the shank will be securely held against further turning movement and the shoulders 13 of the spur retained out of alignment with the slit or cut through the pipe sections. The head 8 of the fastener is preferably provided with a slot or kerf 14 for the accommodation of a suitable instrument to facilitate the turning of the shank after the spur is first inserted through the ends of the pipe sections.

From the foregoing it is thought that the construction and manner of application of my improved fastening device will be clearly understood. Owing to the one piece construction of the device, it will be obvious that the same can be manufactured at com-

paratively small cost, and is extremely simple, durable and efficient in practical use. It will of course be obvious that the fastener can be made in various shapes and sizes and while I have hereinbefore set forth in detail the specific form and construction thereof, it will be understood that I am not restricted in carrying out the invention to such specific features, but that various modifications therein are contemplated and may be resorted to without departing from the scope of the protection afforded by the appended claims.

Having thus described the invention what is claimed is:

1. A fastener of the character described comprising a shank having a head on one end and a spur on its other end, said spur forming shoulders extending on opposite sides of the shank, said shank being provided with a recess, substantially as and for the purpose specified.

2. A fastener of the character described, comprising a spur, a head and a shank integrally connecting the spur and head, said shank being of substantially circular form in cross section and having opposite convex faces, one of the other faces of said shank

being provided with a longitudinal groove substantially as and for the purpose specified.

3. A fastener of the character described, comprising a spur, a head and a shank integrally connecting the spur and head, said shank being of substantially circular form in cross section and having opposite convex faces and longitudinally extending grooves in the other faces thereof substantially as and for the purpose specified.

4. A fastener of the character described comprising a shank having a head formed on one end, a spur formed on the other end of the shank and providing shoulders extending upon opposite sides of said shank, said shank being of substantially circular form in cross section and having opposite convex faces and recesses in the other faces of said shank, substantially as and for the purpose specified.

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

JOHN CARLSON.

Witnesses:

H. N. HARDING,
AL. J. HALL.