R. W. FOUTS.

COTTER KEY.

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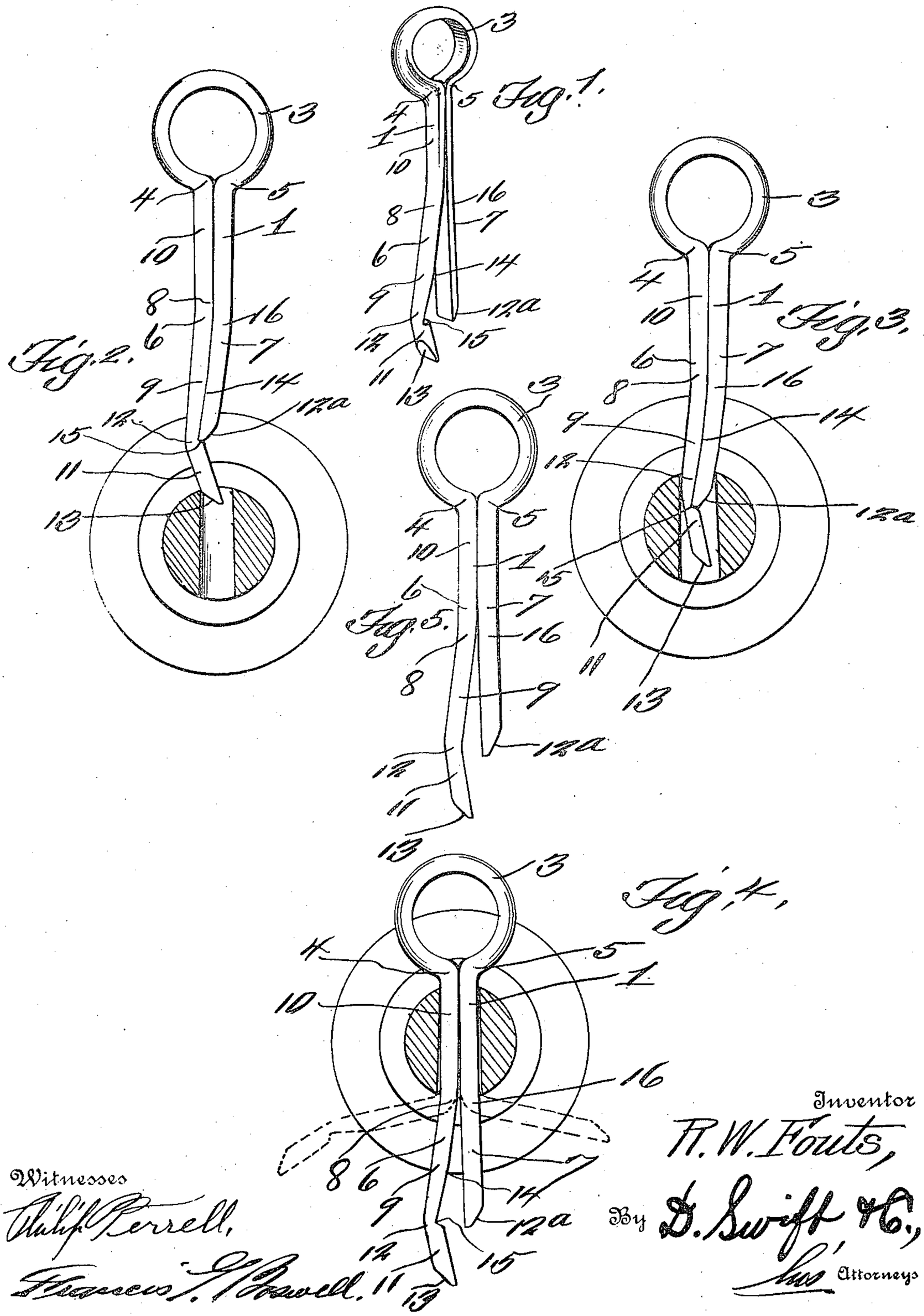

Fig. 1.

Fig. 2.

Fig. 3.

Fig. 5.

Fig. 4.

Witnesses

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UNITED STATES PATENT OFFICE.

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COTTER-KEY.

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To all whom it may concern:

Be it known that I, ROY W. FOUTS, a citizen of the United States, residing at Dawson, in the county of Richardson and State of Nebraska, have invented a new and useful Cotter-Key; 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.

This invention belongs to the sub-class or art of gibs and keys, and particularly relates to a new and useful cotter key, and as an object of the invention it is the aim to provide a key of this nature comprising such improved features of construction, as to facilitate the inserting of the same through an aperture of a spindle to hold a member on a shaft or the like, regardless of whether the aperture is in sight, or obscured from view. If the aperture is obscured from view the cotter key may be easily inserted, by first locating the aperture through the method of sense of feel or touch, after which the key may be easily inserted.

Another object of the invention is to provide an improved cotter key having one of its prongs longer than the other, the longer prong being bent or deflected over the shorter prong and having its extremity alined with the extremity of the shorter prong, the outer faces of both prongs adjacent their extremities being beveled off, acting very materially in facilitating the insertion of the key in its aperture. The longer prong not only facilitating the use of the key in this regard, owing to its deflection or bent over disposition, but also acting to facilitate the separation of the prongs, subsequently to having inserted the key.

Another feature of the invention is that by providing a longer prong with its end portion bent or deflected adjacent the extremity of the shorter prong, a guide for the short prong is provided. In other words, by first inserting the additional length of one prong in the aperture, the shorter prong will easily follow, particularly owing to its outer beveled part adjacent its extremity.

Another feature of the invention is that the longer prong substantially centrally or midway of its length is slightly bent at an obtuse angle to the base of the prong, which not only permits the deflected end portions to overlie the extremity of the shorter prong, when the two prongs are pressed together for insertion in an aperture, but also acts to cause the longer prong to automatically separate from the shorter prong subsequently to the key's insertion in a spindle, so that both prongs may be more easily fully separated.

Another feature of the invention is that the longer prong adjacent the bend, which forms the bent end portion, is formed or constructed with a recess, of the shape shown, into which the shorter prong may be depressed, in order to further facilitate the insertion of the key through an aperture of a shaft or spindle pintle.

In practical fields the details of construction may necessitate alterations, falling within the scope of what is claimed.

The invention comprises further features and combination of parts, as hereinafter set forth, shown in the drawings and claimed.

In the drawings:—Figure 1 is a view in perspective of the improved cotter pin. Fig. 2 is a view showing the pin in position to be inserted in an aperture. Fig. 3 is a view showing the pin partially inserted, illustrating how the longer prong with its bent end portion, acts as a guide for the shorter prong. Fig. 4 is a view partly in section and partly in elevation showing the pin completely inserted, showing how the prongs automatically separate in full lines, and completely separated or bent in dotted lines. Fig. 5 is a detail view in elevation of the cotter pin showing the recess of the longer prong omitted.

Referring more especially to the drawings, 1 designates the cotter pin as a whole, which comprises an elongated piece of metal, preferably semi-circular in cross section, which is curved or rolled upon itself to form an eye 3 (which constitutes a head) and is again bent at 4 and 5 to form long and short prongs 6 and 7. The longer prong 6 substantially centrally or midway of its length is bent at 8, providing a portion 9 extending at an obtuse angle to the part 10. The end portion 11 of the portion 9 is bent at 12 on an obtuse angle to the part 9 in the opposite direction, in which case the end portion 11 deflects or overlies the extremity of the shorter prong when the two prongs are pressed together, thereby acting as a guide for the shorter prong, in order to facilitate the insertion of both prongs in an aperture. The bending of the longer prong substantially midway of its length facilitates and

causes the two prongs to automatically separate, subsequently to the complete insertion of the cotter pin in an aperture of a spindle pintle. The outer semi-cylindrical surfaces of both prongs adjacent their extremities are beveled off as shown at 12ª and 13, thereby acting to assist in the insertion of the cotter key in an aperture. The face 14 of the longer prong adjacent the bend between the part 9 and the portion 11 is constructed with a recess 15 to receive the shorter prong, to further assist in causing an easy insertion of the cotter key in an aperture. This recess not only assists in this regard, but also in disposing the extremity of the shorter prong farther under the extremity of the longer prong.

However, in Fig. 5 this recess is omitted. The prong 7 substantially at its central portion as shown at 16 is slightly bent outwardly, the drawing shows this bend so slight that it is hardly preceptible by the naked eye, nevertheless this bend exists. When the two prongs are to be inserted in an aperture as shown, they are pressed together as shown, therefore said prongs will assume bent positions as clearly shown in Figs. 2 and 3. The bend 16 and the bend 8 enable the two prongs to automatically separate as shown in full lines in Fig. 4, subsequently to the cotter pin having been completely inserted through the aperture.

The invention having been set forth, what is claimed as new and useful is:—

1. A cotter pin comprising a circular head having a pair of oppositely disposed prongs, one being longer than the other, the shorter prong substantially midway of its length being bent slightly outwardly the longer prong approximately midway of its length being bent outwardly in the opposite direction, said bend being greater than the bend of the shorter prong thereby causing the two prongs to automatically separate after passing through a cotter pin receiving opening of a shaft, the free end of the shorter prong being beveled upon its outer face, the longer prong near its free end portion being bent at an obtuse angle to the portion beyond the first bend and in an opposite direction, so as to fully overlie the end of the shorter prong, so as to guide the longer and shorter prongs through a receiving opening, said longer prong upon its inner face adjacent the second bend being provided with a notch or recess into which the free portion of the shorter prong is received, the inner face of the longer prong from substantially adjacent the first bend being gradually tapered toward and into the notch or recess, so that the shorter prong will enter the notch or recess evenly, said notch or recess constituting means to insure that the portion beyond the second bend will overlie the extremity of the shorter prong, the outer face of the longer prong adjacent its extremity being beveled.

2. A cotter pin comprising a head and having a pair of oppositely disposed prongs, one being longer than the other, the shorter prong substantially midway of its length being bent slightly outwardly, the longer prong being bent substantially midway of its length forming a portion extending at an obtuse angle to the base of the longer prong, the angularly disposed portion having an end part forming an additional length beyond the shorter prong with its extremity overlying the shorter prong and extending at an obtuse angle to the first angularly disposed portion, one face of the longer prong adjacent its second bend having a recess to receive the shorter prong, the outer surfaces of both prongs adjacent their extremities being beveled.

In testimony whereof I have signed my name to this specification in the presence of two subscribing witnesses.

ROY W. FOUTS.

Witnesses:
CHESTER W. SIPE,
F. P. PAGE.