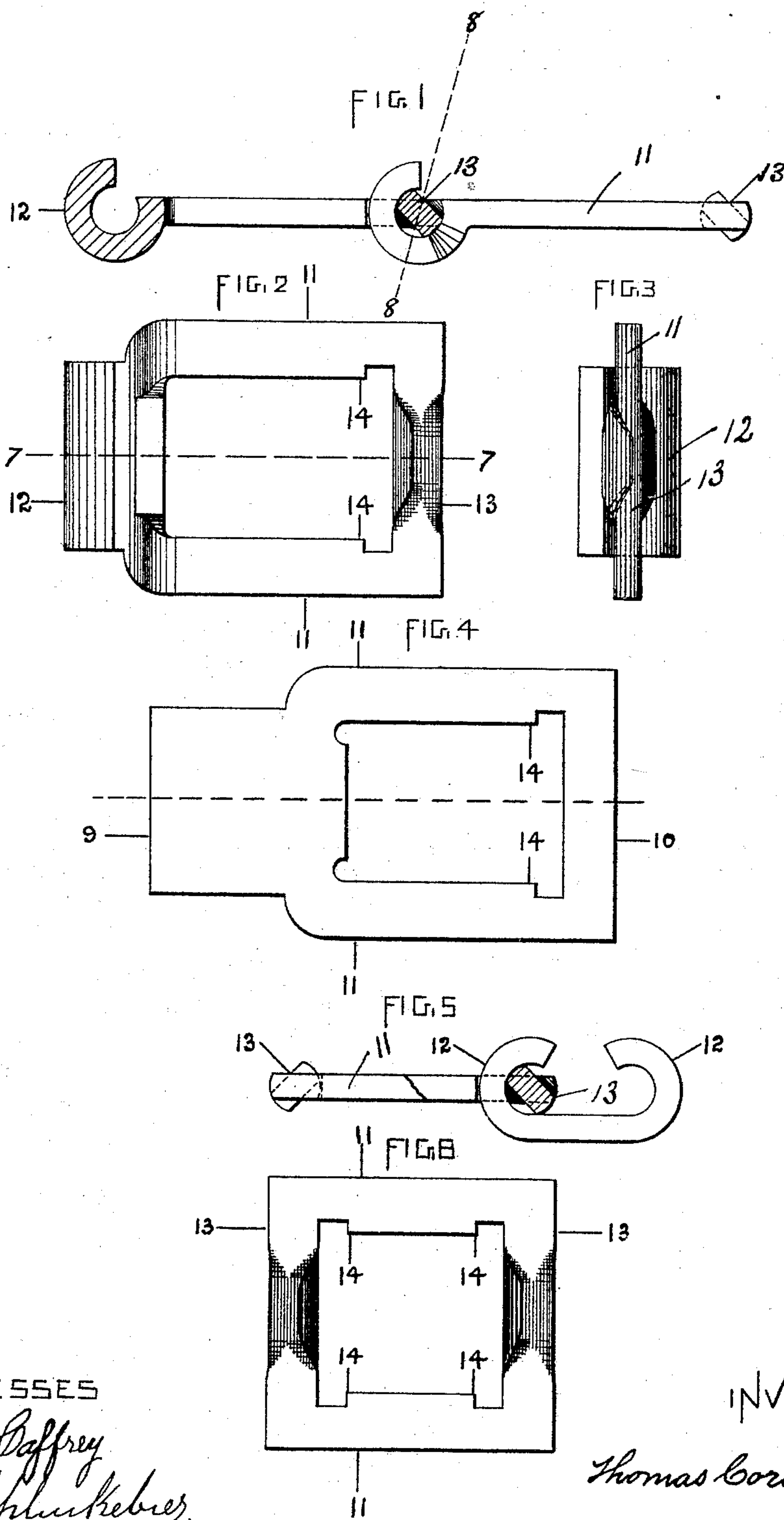


(No Model.)

T. CORSCADEN.  
DRIVE CHAIN.

No. 482,723.

Patented Sept. 20, 1892.



WITNESSES  
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# UNITED STATES PATENT OFFICE.

THOMAS CORSCADEN, OF NEW BRITAIN, CONNECTICUT, ASSIGNOR TO THE  
STANLEY WORKS, OF SAME PLACE.

## DRIVE-CHAIN.

SPECIFICATION forming part of Letters Patent No. 482,723, dated September 20, 1892.

Application filed January 30, 1892. Serial No. 419,825. (No model.)

*To all whom it may concern:*

Be it known that I, THOMAS CORSCADEN, a citizen of the United States, residing at New Britain, in the county of Hartford and State of Connecticut, have invented certain new and useful Improvements in Drive-Chains, of which the following is a specification.

In the accompanying drawings, Figure 1 is an edge view of two of the links of my chain placed together and in alignment with each other and the link at the left being shown in longitudinal section on line 7 7. (See Fig. 2.) Fig. 2 is a plan view of one of the links. Fig. 3 is an end view of one of the links at the pintle end. Fig. 4 is a plan view of the blank from which I make the links, Figs. 1, 2, and 3, of sheet wrought metal. Fig. 5 is an edge view of two links, the left hand one of which has a pintle at each end constructed in accordance with my invention, while the other link is adapted for use therewith; and Fig. 6 is a plan view of the left-hand link of Fig. 5.

My chain is of the class in which the links are detachable one from the other when in the relative positions shown by the right-hand link and the broken line 8 8 in Fig. 1. I prefer to make my chain of links, each having a knuckle at one end and a pintle at the opposite end, as shown in Figs. 1, 2, and 3; but my invention is applicable to a chain formed in part by links having a knuckle at each end and in part by links having a pintle at each end, said two kinds of links being shown in Fig. 5, while the link with a pintle at each end is also shown in Fig. 6. I also prefer to make the links in either case of wrought sheet metal; but it is of course evident that the same form of link may be made of cast metal.

In making the link shown in Figs. 1, 2, and 3 from sheet metal I first cut out the blank shown in Fig. 4. The middle opening in this blank is substantially of the same form as in the finished links. One end is provided with the knuckle-blank 9 and the other end with the pintle-blank 10, said knuckle and pintle blanks being connected by the flat side bars 11, which are of substantially the same size and form as in the completed link. I have therefore used the same reference-figures to

designate these side bars both in the blank and in the completed link. The knuckle-blank 9 is rolled or coiled into the knuckle 12, substantially the same as the knuckle of a hinge, only the blank is shorter, so as to leave an opening at the back of the knuckle of a width greater than the thickness of the pintle 13, which is of the same thickness as the side bars 11. In order to extend the wearing-surface of the inner edge of the pintle over the arc of a longer chord than it otherwise would, I twist or bend a portion of the pintle between the ends of the flat side bars, so that its flat surfaces occupy within the portion so bent different planes from those which are occupied by the flat surfaces of the unbent portions. I thus cause the bearing edges of the pintle to extend over the inner curved surface of the knuckle 12 for nearly twice as much of its curve as viewed in side view as it would do if the pintle-blank 10 had been left in its original form, although the pintle is of a flattened form in cross-section.

The left link in Fig. 5 and the link in Fig. 6 each have connecting side bars 11 and a pintle 13 at each end, said pintle being twisted or bent between the ends of the flat side bars, as hereinbefore described, and sustaining the same relation thereto. In fact, the pintle ends of this link and that shown in Figs. 1, 2, and 3 are alike, but the links differ, because the former link has two pintle ends and the latter has only one; but I use the former link with links having two knuckles 12, as shown in Fig. 5, so that a chain formed as shown in Figs. 1 or 5 will have the pintle of each link embraced within the knuckle of the adjoining link. If desired, the openings between the side bars may be narrowed up somewhat at a distance from the pintle slightly in excess of the thickness of the metal in the knuckle to form shoulders 14 for engaging the outer surface of the knuckles and preventing any radial displacement of the pintle when the links are assembled together to form a chain.

By means of my improvements I am enabled to forego the necessity of swaging up a pintle of a thickness in cross-section greater than that of the original thickness of the



blank, either for the purpose of obtaining a fair degree of durability or for attaching and detaching the links, and I am therefore able to construct economically a durable and perfect working chain.

I claim as my invention—

In a drive-chain, a link having a pintle of a flattened form in cross-section and flat side bars extending in their flat form to the

outer edge of said pintle, while a portion of said pintle between said side bars is bent or twisted, substantially as described, and for the purpose specified.

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Witnesses:

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H. SCHLURKEBIES.