(No Model.) 2 Sheets—Sheet 1.

F. SCHELP, Jr.

THILL COUPLING.

No. 520,834. Patented June 5, 1894.

Fig. 1.

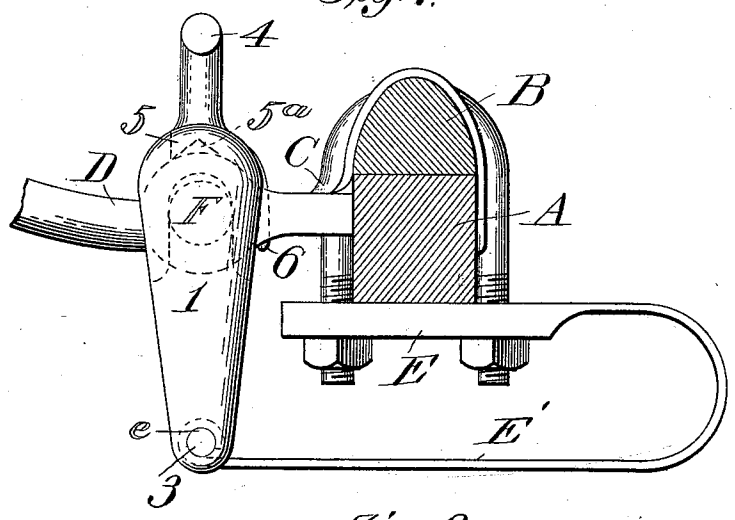


Fig. 2.

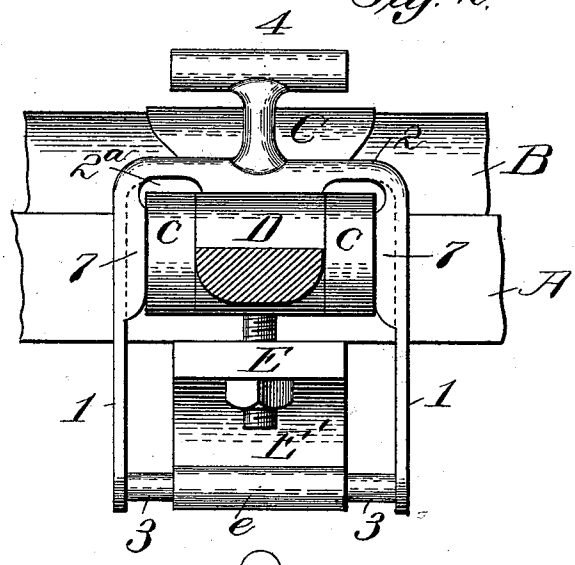
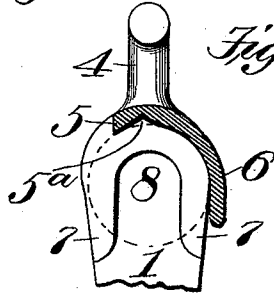


Fig. 3.



Witnesses
F. R. Cornwall
A. Ramel

Inventor:
Fred Schelp Jr.
By Paul Bakewell
his atty.

THE NATIONAL LITHOGRAPHING COMPANY,
WASHINGTON, D. C.

(No Model.) 2 Sheets—Sheet 2.

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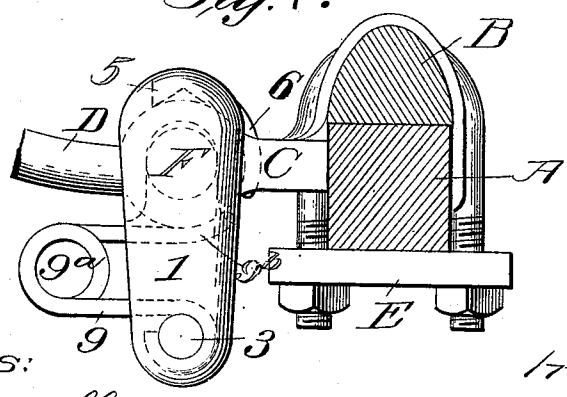
Fig. 4.



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UNITED STATES PATENT OFFICE.

FRED SCHELP, JR., OF ST. LOUIS, MISSOURI.

THILL-COUPLING.

SPECIFICATION forming part of Letters Patent No. 520,834, dated June 5, 1894.

Application filed March 27, 1893. Serial No. 467,726. (No model.)

To all whom it may concern:

Be it known that I, FRED SCHELP, Jr., a citizen of the United States, residing at St. Louis, in the State of Missouri, have invented a certain new and useful Improvement in Thill-Couplings, of which the following is a full, clear, and exact description, reference being had to the accompanying drawings, forming a part of this specification, wherein like symbols of reference refer to like parts wherever they occur, and in which—

Figure 1 is a view in side elevation of my improved coupling. Fig. 2 is a front elevation of the same. Fig. 3 is a vertical cross sectional view of the hanger frame. Fig. 4 is a side elevation of another form, the bottom being broken away.

My invention relates to a new and useful improvement in thill couplings, and consists, generally stated, in the peculiar formation of the hanger frame, and in the means, which is carried by the frame, for bearing against the shaft or pole eye, which is held in contact with the eye, by a spring, as will hereinafter appear.

Another feature resides in the peculiar construction of this hanger frame, whereby the same not only is supported and pivoted on the pivot pin, but said frame holds the pin in position.

In the drawings, A indicates the axle, B the axle bed, C the coupling clip, *c* the jaws of the clip, and D the shaft or pole eye, all of such parts being of ordinary or approved construction.

In the construction as set forth in Figs. 1 and 2, the clip tie E is flattened, extending rearwardly, and then bent upon itself, forming a spring E′, the forward end of which is connected to, or bears against the lower cross bar of the hanger frame in this instance being illustrated by an eye *e* surrounding the cross bar 3, as will hereinafter appear.

The pivot bolt or pin F which passes through the eyes *c* of the coupling clip C and the shaft or pole eye D, is in the form of a cylindrically shaped body, having its ends free from the usual head and screw threads. This pin F is of a length sufficient to extend out through the jaws *c* of the coupling clip, for purposes which will hereinafter appear.

My improved hanger frame comprises in this instance, the side pieces 1, top cross piece 2, and connecting bar 3, which connects the lower extremities of the side pieces. Extending from the top cross piece 2, is a handle 4 whose function will readily be understood. Projecting from the underneath side of the cross piece 2, is a forward bearing lip 5, which, when the frame is in position, bears against the upper periphery of the shaft or pole eye. Immediately to the rear of this lip, the cross piece 2 is preferably recessed as at 5^a, for the purpose of permitting the lip to obtain a better bearing surface, by presenting a sharp corner to the eye D. Extending rearwardly and downwardly from the cross piece 2, is a retaining lip 6, of a width preferably the same or less than the width of the shaft or pole eye, which lip, when in position behind the eye D, prevents displacement of the frame, in conjunction with other co-acting parts which will now be described.

The upper inner side faces of the side pieces 1, are formed with a projecting portion 7, which portions are recessed flush with the inner faces of said side pieces, to form pockets 8, as shown in Fig. 3, into which pockets the ends of the pivot pin F is received, which pin is allowed a slight vertical play in the pockets to compensate for wear, the side walls of the pockets preventing lateral movement of the frame relative to the pin.

For obvious reasons, the underneath side of the cross piece 2 is recessed as at 2^a to prevent contact with the eyes of the coupling clip.

The spring E′ hereinbefore referred to, is attached through the medium of the eye *e* encircling the cross bar 3, to the frame, and by its resiliency, has a tendency to always force the bearing 5, down on the eye D.

To disengage the parts, assuming that they are already assembled, as shown in Figs. 1 and 2, the frame is lifted up until the side walls of its pockets 8 and the lip 6, permit it to be moved backward or forward out of the path of the pivot pin F, which, when removed, by sliding it out at either side, frees the shaft or pole eye.

To assemble the parts, the shaft or pole eye is passed through the frame, the pin F in-

serted, and the yoke lifted up until its pockets are in line with the pin, when the resiliency of the spring E′ will assert itself, and the parts assume their operative position.

In the form shown in Fig. 4 the frame is formed with the side pieces 1, having the recesses or pockets 8 in their inner upper edges, said side pieces being connected by a cross bar 3, as in the former construction. One of the side walls of the pocket 8, in this form, is extended downward and outward, forming a way for the passage of the pin F, opening to the front or rear as desired. In lieu of the spring E′ as in the other construction, I mount on the cross bar 3, a spring 9, formed with the coils 9^a and the connecting cross piece 9^b, which extends rearwardly from the coils 9^a, where it is slightly curved upwardly, and bears against the under side of the coupling jaws. It is obvious that instead of the spring 9,—9^a,—9^b, a flat leaf spring may be substituted without any material change of construction or operation. In this form the top walls of the recesses or pockets 8, bear against the pin F, thus supporting the frame at this point and permitting the same to move with the shaft or pole eye, when the latter is moved vertically, thus preventing, to a great extent, the rattle and noise which usually accompany the moving parts of a thill coupling. The extension 9^b of the spring 9—9^a, by bearing directly on the under side of the eyes *c* of the coupling clip C, forces the bearing 5, on the top cross piece 2, to bear against the shaft or pole eyes.

I am aware that many minor changes in the construction, arrangement and combination of the several parts of my device, can be made and substituted for those herein shown and described, without in the least departing from the nature and principle of my invention.

Having thus described my invention, what I claim, and desire to secure by Letters Patent of the United States, is—

1. In a thill coupling, the combination with the coupling jaws, shaft or pole eye, and pivot pin, of a frame which surrounds said parts and retains the pivot pin in place, said frame bearing against the shaft or pole eye, and a spring for holding said frame in yielding contact with said eye, substantially as described.

2. In a thill coupling, the combination with the coupling jaws, shaft or pole eye, and pivot pin, of a frame which surrounds said parts and bears against the shaft or pole eye, a projection on said frame for retaining it in place, and a spring for forcing the same into yielding contact with the eye, substantially as described.

3. In a thill coupling, the combination with the coupling jaws, shaft or pole eye, and pivot pin, of a frame which surrounds said parts and which is pivoted on the pivot pin, and means on the frame for bearing against the shaft or pole eye, substantially as described.

4. In a thill coupling, the combination with the coupling jaws, shaft or pole eye, and pivot pin, of a frame which surrounds said parts, which is pivoted on the pivot pin, means carried by the frame for bearing against the shaft or pole eye and a spring for holding the same in contact with the eye, substantially as described.

5. In a thill coupling, the combination with the coupling jaws, shaft or pole eye, and pivot pin, of a frame which is provided with recesses or pockets in its inner side faces, into which the pivot pin is received, means carried by the frame for bearing against the shaft or pole eye, and a spring which bears against the lower cross piece of the frame for forcing the same in a direction to permit the bearing on the frame to contact with the eye, substantially as described.

6. In a thill coupling, the combination with the coupling jaws, shaft or pole eye, and pivot pin, of a frame which is composed of two side pieces formed with recesses or pockets in their inner side faces, and a bottom cross piece, a bearing carried by said frame for contacting with the shaft or pole eye and a spring which bears against the lower cross piece for forcing said frame downward, substantially as described.

7. In a thill coupling, the combination with the coupling jaws, shaft or pole eye, and pivot pin, of a frame which is composed of two side pieces, a top cross piece, and a bottom cross piece, said side pieces being recessed for the reception of the pivot pin, a lip on the top cross piece which bears against the shaft or pole eye, a projection which extends to the rear of the eye, and a spring for forcing the frame downwardly, said spring having a bearing on the lower cross piece, substantially as described.

8. In a thill coupling, the combination with the coupling jaws, shaft or pole eye, and pivot pin, of a frame which is composed of two side pieces which embrace the pivot pin, upper and lower pieces which connect said side pieces, a lip on the under side of the upper cross piece which bears against the shaft or pole eye, said lip being formed as to leave a space on one side of the same, and a spring which bears against the lower cross piece to hold the lip in contact with the eye, substantially as described.

In testimony whereof I hereunto affix my signature, in presence of two witnesses, this 15th day of March, 1893.

FRED SCHELP, JR.

Witnesses:
F. R. CORNWALL,
HUGH K. WAGNER.