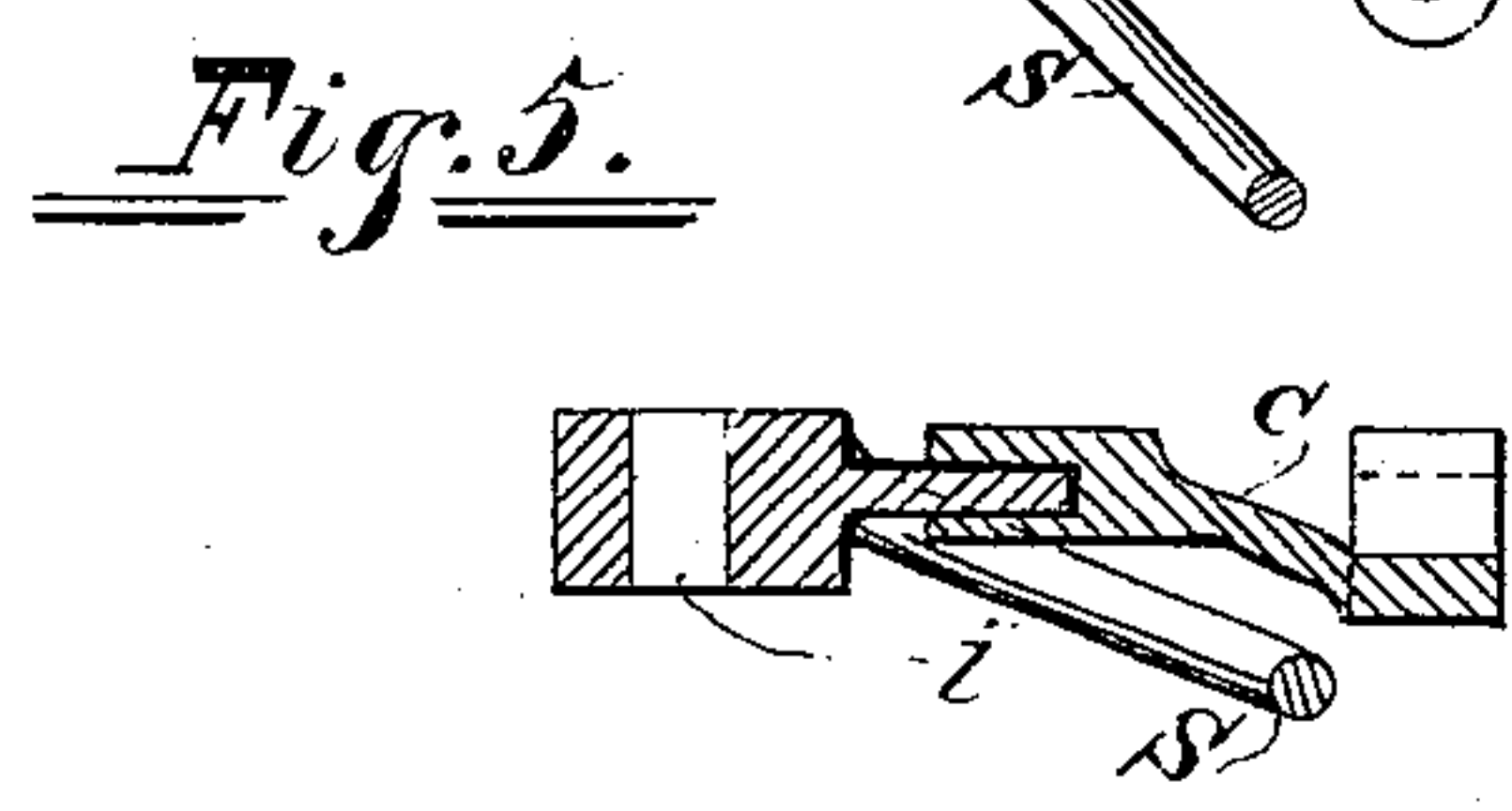
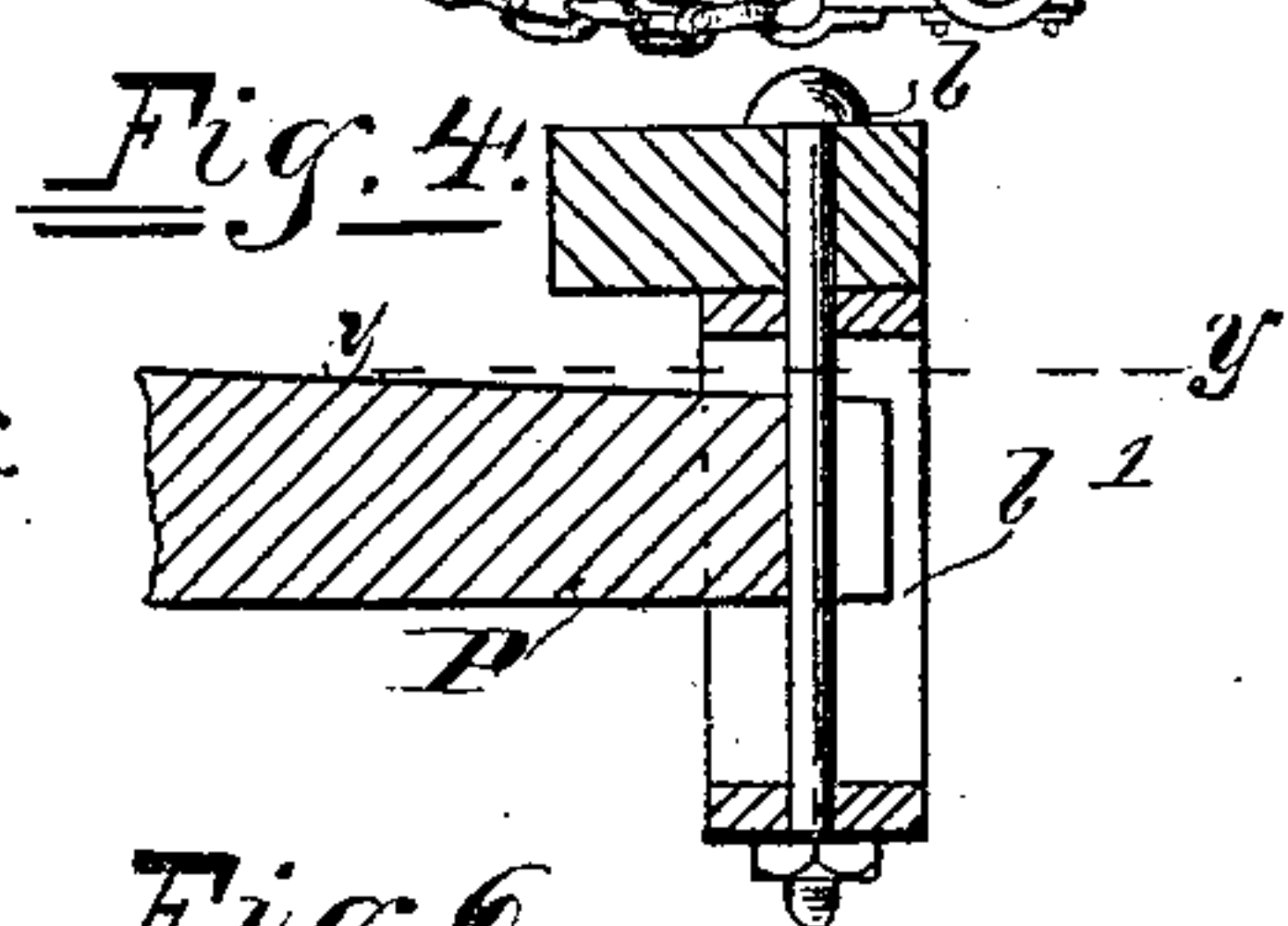
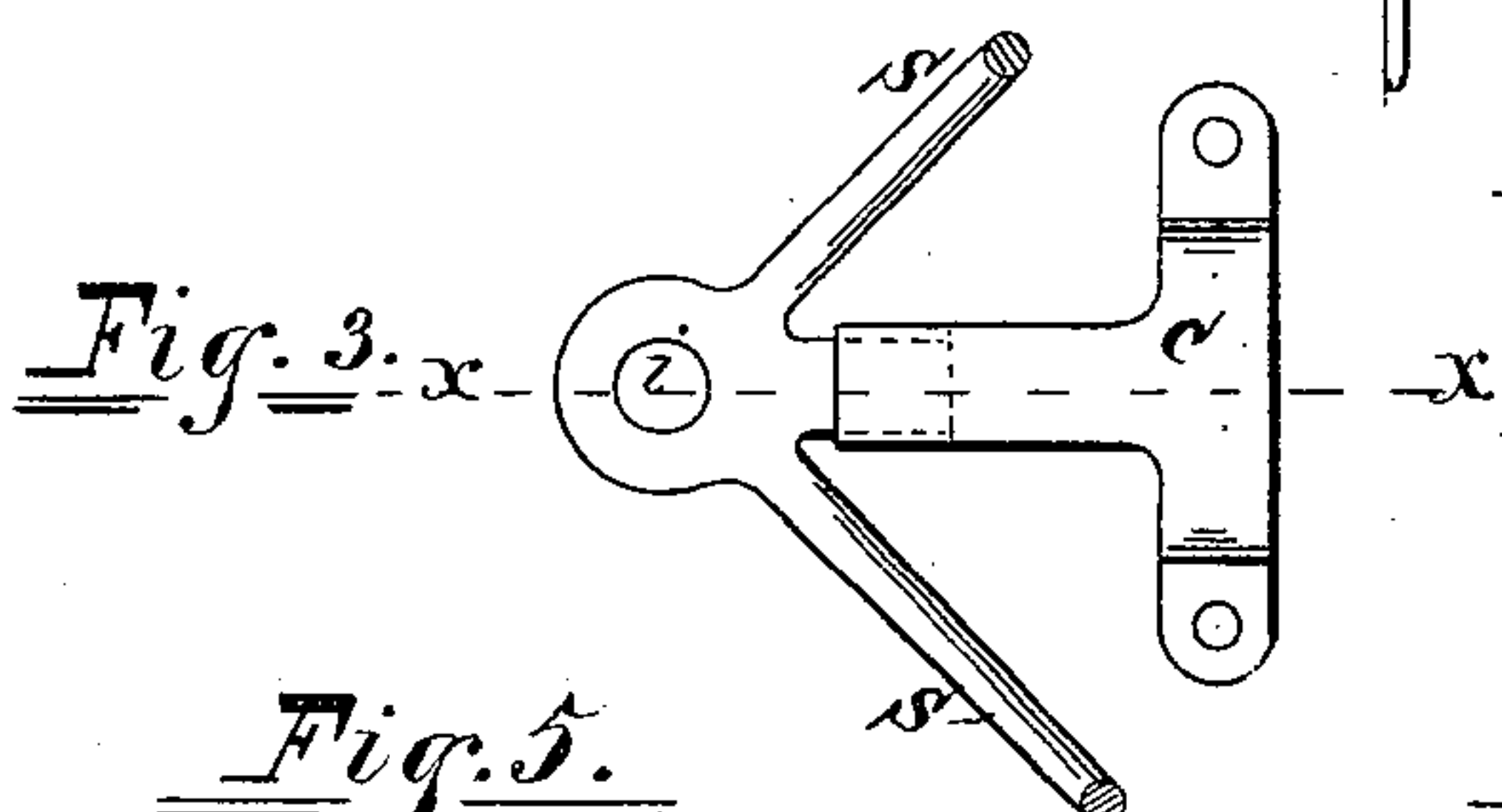
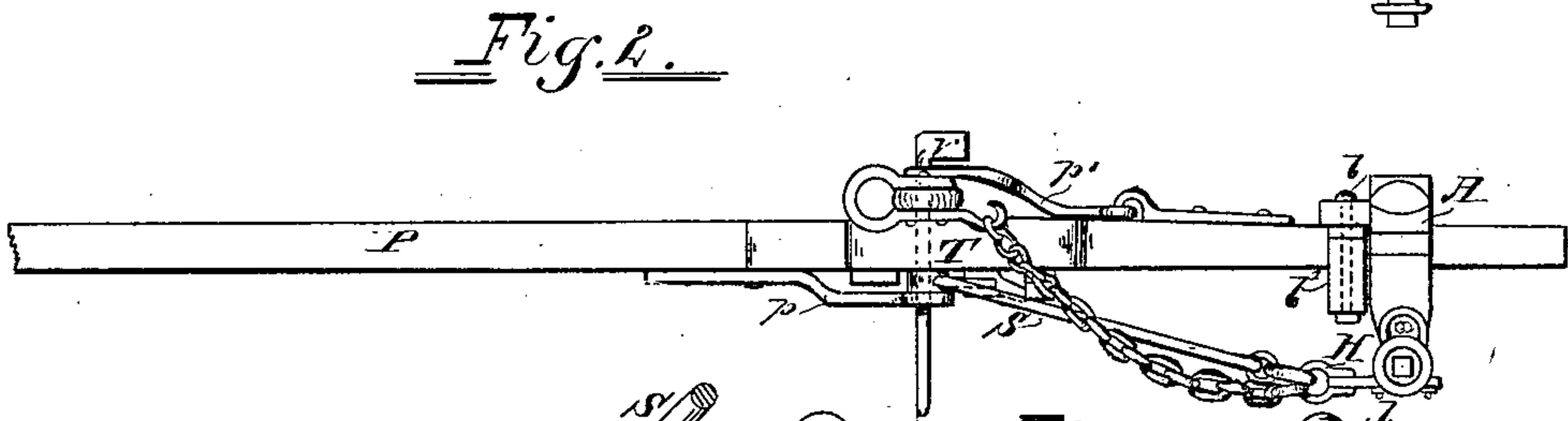
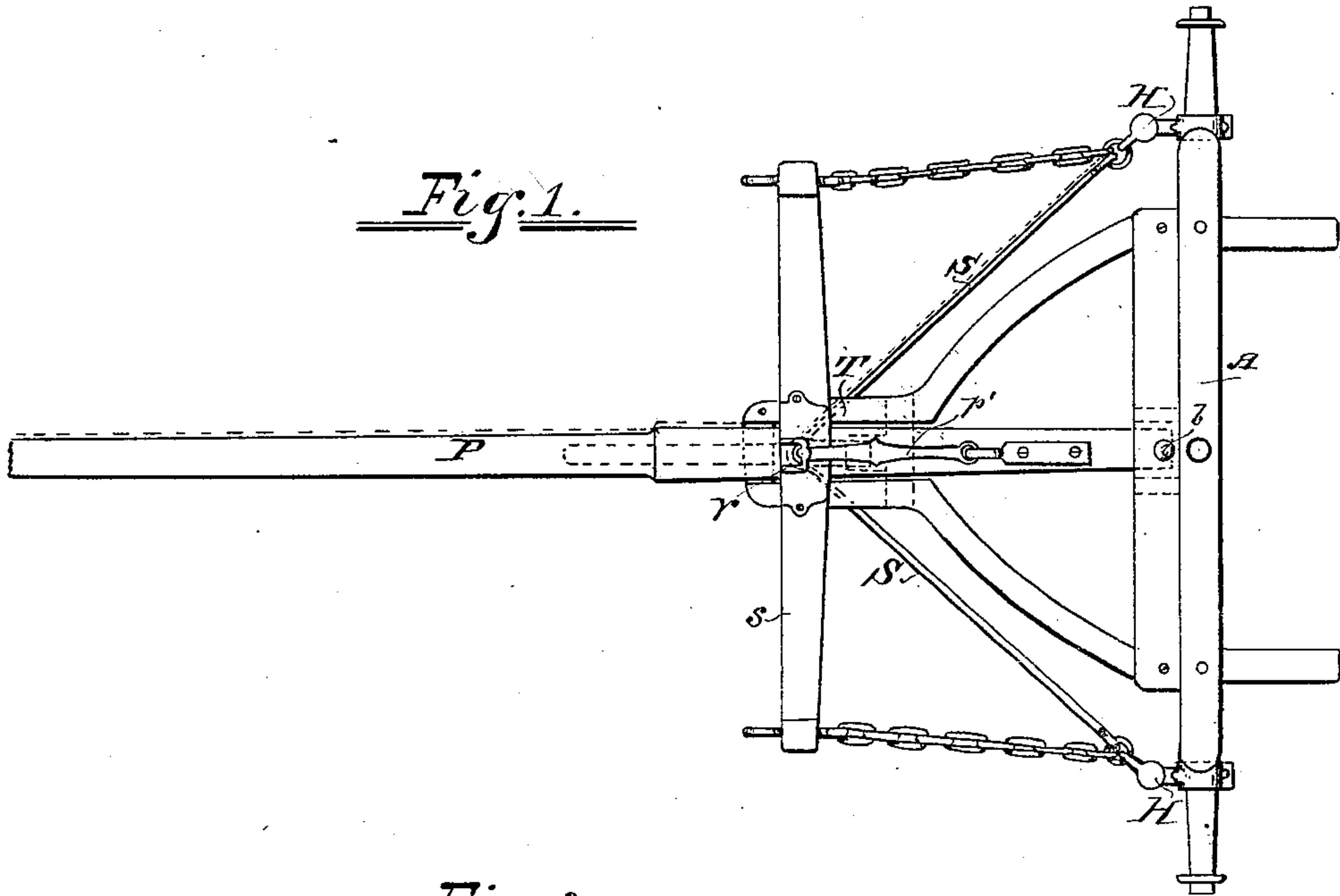


(No Model.)

B. C. SHAW.
DRAFT EQUALIZER.

No. 282,575.

Patented Aug. 7, 1883.



WITNESSES.
Jacob W. Looper.
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UNITED STATES PATENT OFFICE.

BENJAMIN C. SHAW, OF TOLEDO, OHIO.

DRAFT-EQUALIZER.

SPECIFICATION forming part of Letters Patent No. 282,575, dated August 7, 1883.

Application filed February 14, 1883. (No model.)

To all whom it may concern:

Be it known that I, BENJAMIN C. SHAW, of Toledo, Ohio, have invented a new and useful Improvement in Shifting-Tongues and Draft-Equalizers, of which the following is a description, reference being made to the accompanying drawings, in the several figures of which like letters indicate like parts.

My invention is designed to provide a ready means of shifting or detaching the tongue from an ordinary farm-wagon and without dropping any of the metal supports upon the ground, and at the same time to supply a means of equalizing the draft, which I do by my connected brace-rods.

In the drawings, Figure 1 is a plan view of my invention and the parts of the wagon to which it is attached. Fig. 2 is a side view of the same. Fig. 3 is an enlarged view of the head of the brace-rods and the cross-bar which supports it. Fig. 5 is a longitudinal section on the line *x x*, Fig. 3. Fig. 4 is an end enlarged longitudinal section of the rear end of the tongue and a cross-section of the recessed frame-work in which it rests, showing also the pin or stop against which the recessed end of the tongue abuts; and Fig. 6 is a cross-section on the line *y y*, Fig. 4.

Referring to the parts in detail, A is the front axle of the wagon, to which are attached an ordinary pair of hounds, T, as shown in Fig. 1. On either end of the axle is a saddle-clip having closed draw-hooks H attached. Connected with these, by single links, are rigid iron brace-rods *s s*, which are united in a head, through which is an eye, *i*, as shown in Fig. 3. Back of the head, and integral with it, is a short arm, which is fitted to a socket in the T-brace C, Fig. 3. This arm enters the socket a short distance and is stopped by abutting against the end of the socket, as indicated by the dotted lines in Fig. 3. This arm, being in its socket, prevents the braces *s s* from falling down to the ground when the bolt V is drawn out. (See also Fig. 5.)

P is the pole or tongue of the wagon, and passes between the ends of the hounds and back into the recessed frame *b'*, the end of the tongue being recessed to fit against a bolt or king-pin *b*, as shown in Fig. 6.

p is an iron strap bolted rigidly to the under

side of the tongue, bent down at its rear end to allow the brace-rod head to come between it and the under side of the tongue, and having an eye for the bolt V to pass through; and *p'* is an ordinary hinged strap, having an eye at the end for the bolt V to pass through also.

Ordinary draw-chains are connected from the link in the brace-rods *s s* to the double-tree S.

My tongue is so constructed as to allow a lateral movement of it between the jaws of the hounds, as shown in Fig. 1. This is important, for it allows the horses, by crowding the tongue over to one side, to take up the slack created by the link in the brace-rods, and thus equalize the draft on both wheels. The rigid connection of the brace-rods by their head helps to accomplish the same result. Thus, if one of the forward wheels strike an obstruction, or fall into a rut, the lateral movement of the tongue straightens out the draw or brace rod on the side, takes up the slack of the link, and the whole force of the team is applied to a direct pull from the shoulder of the axle on the side of the obstructed wheel, and maintains the tongue in the proper line of travel; and in all cases where any considerable draft is applied to the vehicle when traveling over uneven surfaces the draft-equalizer prevents any considerable oscillation of the tongue on account of the obstructions alternately met by the wheels of the wagon. This consequently increases the power of the team, and relieves the tongue and hound from strain, and often from breaking, as the wagon is turned by means of the draft at the rear, instead of being pulled around by the breast-yoke or tongue-chains, as in the ordinary way.

The recess *b'* is made deeper than the thickness of the tongue, so as to allow an upward and downward adjustment, which is often desirable. The pin *b* furnishes a brace when the team is backing the wagon.

It will be seen from Fig. 2 that the draft-equalizing or brace rods *s s* are connected by the bolt V to the tongue on the under side, and are held up by the arm entering the socket of the T-bar or under draw-bar, C. The coupling or hammer pin V thus connects the hammer-strap *p'*, the double-tree S, the tongue P,

the draft-equalizing rods *s s*, and the under strap, *p*, all together.

What I claim and desire to secure by Letters Patent is the following:

- 5 1. The combination of the shifting-tongue P, the hounds T, allowing the lateral movement of the tongue in their jaws, the forked solid draft-rods *s s*, having head, with eye *i*, and rear arm, the T-brace C, recessed to admit said rear arm, the hinged hooks H, the
10 axle A, and the hammer-strap and coupling-pin, substantially as described.
2. The combination of the shifting-tongue

P, the hounds T, allowing the lateral movement of the tongue in their jaws, the draw- 15 equalizing rods *s s*, the recessed block *b'*, pin *b*, the hinged hooks H, the recessed draft-bar C, the coupling-pin V, and the running-gear of a wagon, substantially as described.

In witness whereof I have hereunto set my hand this 20th day of January, 1883.

BENJAMIN C. SHAW.

Witnesses:

C. P. JACOBS,

J. W. WALKER.