

(No Model.)

A. A. STROM.  
RAILWAY FROG.

No. 584,530.

Patented June 15, 1897.

Fig. 1.

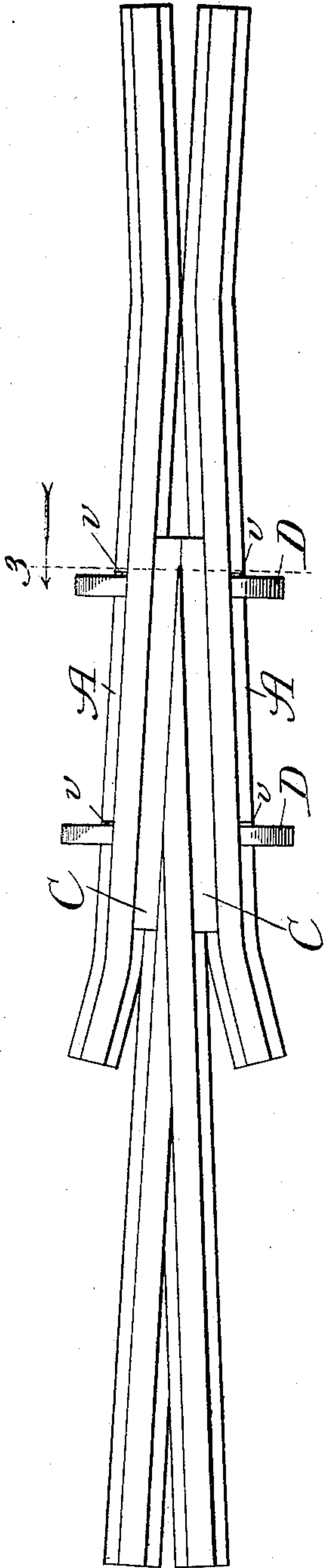


Fig. 2.

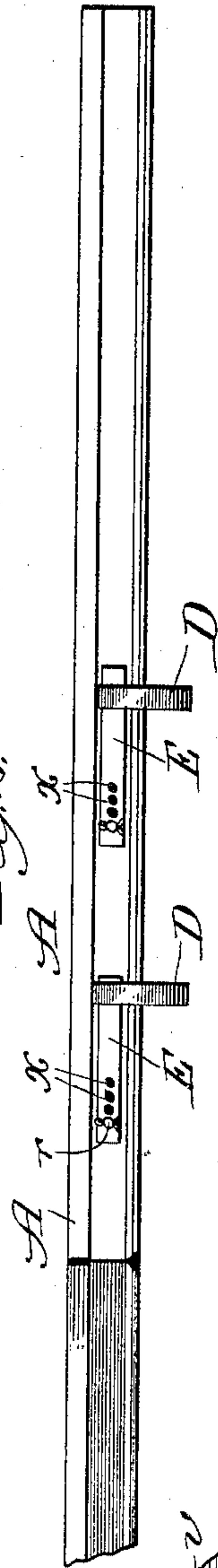


Fig. 3.

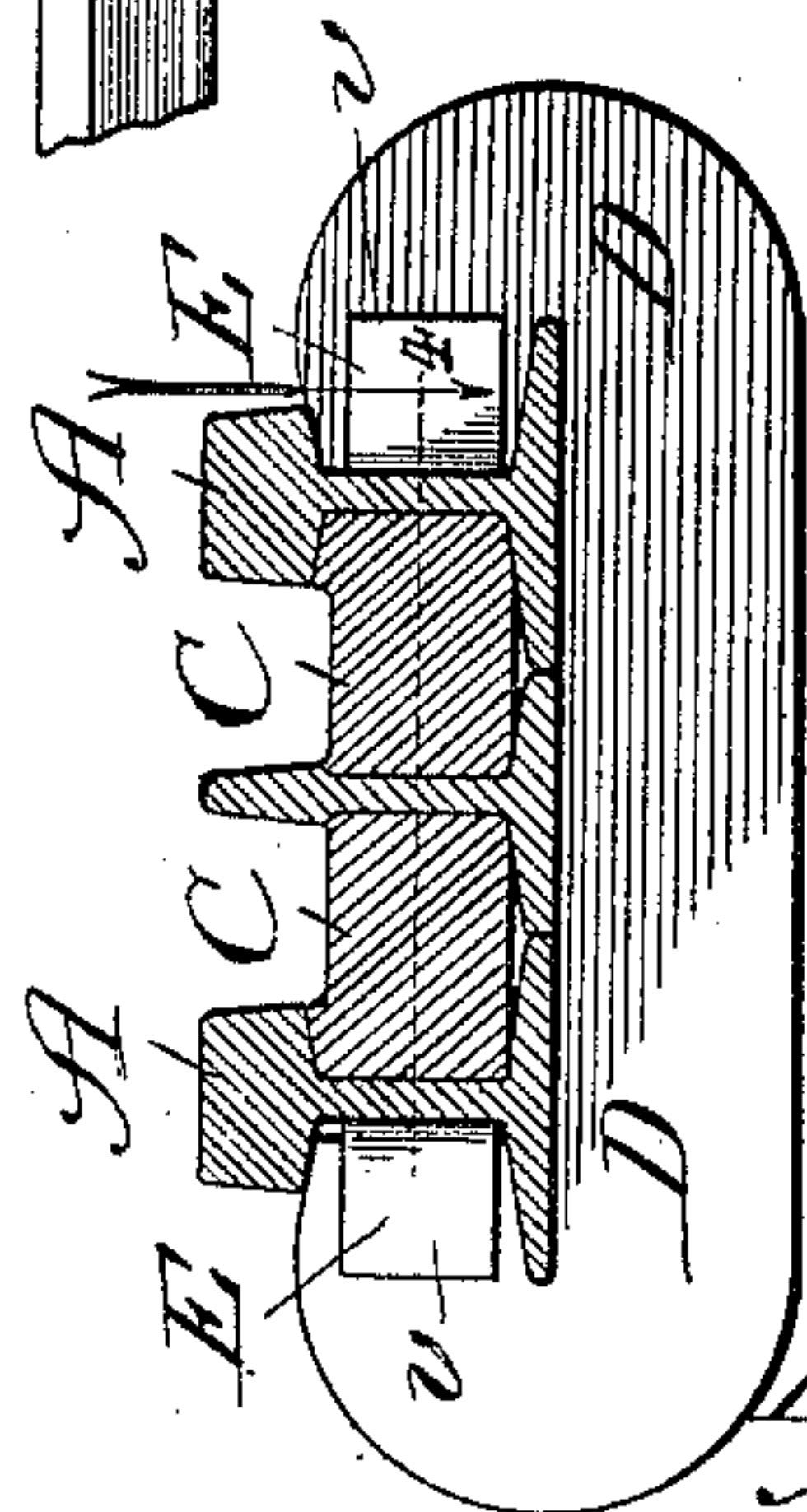
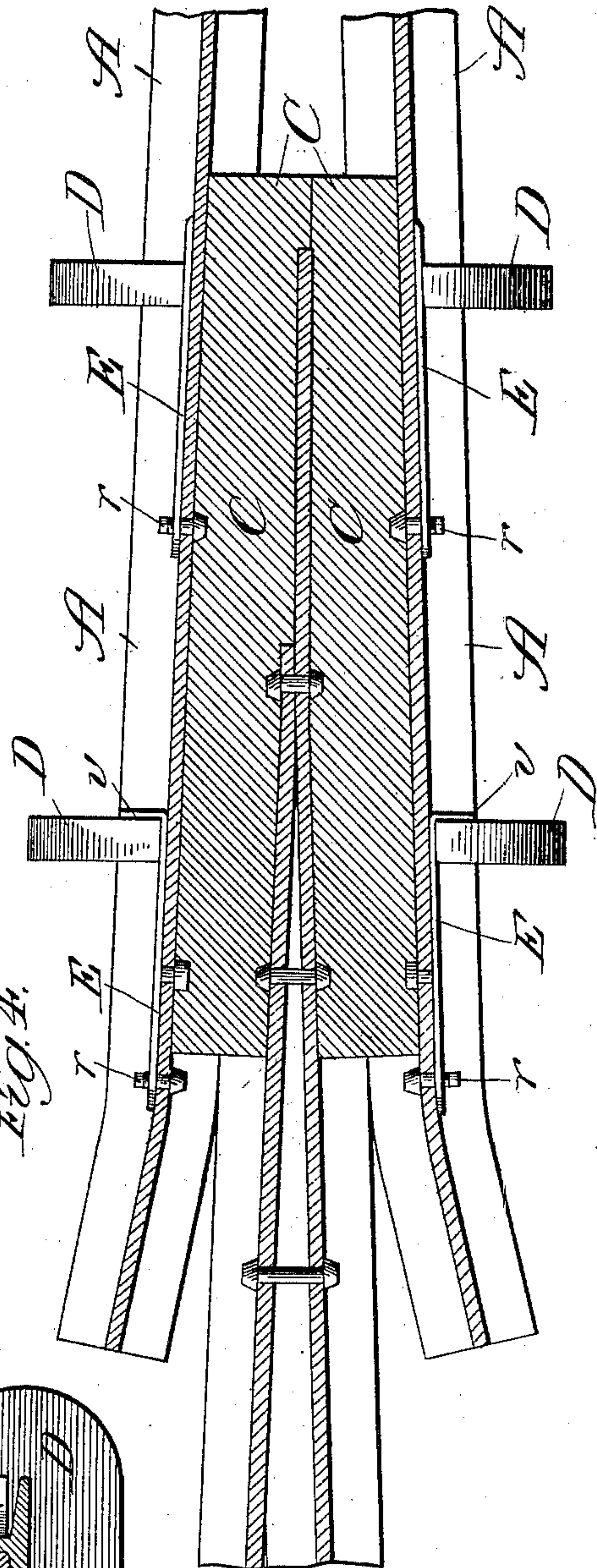


Fig. 4.



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# UNITED STATES PATENT OFFICE.

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## RAILWAY-FROG.

SPECIFICATION forming part of Letters Patent No. 584,530, dated June 15, 1897.

Application filed August 10, 1896. Serial No. 602,338. (No model.)

*To all whom it may concern:*

Be it known that I, AXEL A. STROM, a citizen of the United States, residing at Austin, in the county of Cook and State of Illinois, have invented a new and useful Improvement in Railway-Frogs, of which the following is a specification.

My invention relates to an improvement in the class of railway-frogs in which the rails and their interposed filling are held together by clamps extending transversely across the frog under its base and engaging at their jaws the outer flanges of the outer converging rails.

With use the parts of the frog wear to an extent which loosens them in the clamps and requires that they be tightened by wedging. The simplest method of tightening is that of employing the converging wing-rails as the wedge upon which to drive the clamp when it becomes loosened; but this method is not satisfactory. Various other means for the same purpose have been employed; but they either involve constructions which are undesirably complicated and expensive, or they are unsatisfactory for other reasons.

My object is to provide a construction of frog-clamp fastening which shall involve simplicity and perfect effectiveness in its purpose and which may be manufactured at comparatively small cost. To this end I provide a shim comprising a strip of thin metal of substantially uniform thickness throughout interposed between the neck of the wing-rail and the adjacent jaw of the clamp.

Referring to the accompanying drawings, Figure 1 is a plan view of a railway-frog provided with my improvement; Fig. 2, a broken view of the same in side elevation; Fig. 3, a section taken at the line 3 on Fig. 1, viewed in the direction of the arrow and enlarged; and Fig. 4, a section taken at the line 4 on Fig. 3 and viewed in the direction of the arrow.

A A are the wing-rails; B B the point-rails, C C the interposed blocks of filling, and D D the clamps for holding the parts of the frog

together, all constructed in a usual or any suitable manner.

E E are shims formed, preferably, of flexible metal of substantially uniform thickness throughout and one interposed between each jaw of a clamp and an adjacent wing-rail, and the shim is by preference fastened near one end, as by a bolt and a cotter-pin, as shown at *r*, to the web of a rail A.

To tighten the clamps in place, they are driven against the wedge afforded by the sides of the frog, an operation which may be repeated as often as required, and when tightened the projecting ends of the shims are bent outward, as shown at *v*, or to a less angle, if preferred, to afford stops against starting the clamps.

If desired, each shim E may be provided at intervals with holes (shown at *x* in Fig. 2) to receive the bolt *r*, which should then be withdrawn preparatory to driving a clamp to tighten it, when the shim moves with the clamp until another of its holes *x* is brought coincident with the bolt-hole in the respective wing-rail to enable the shim to be fastened by passing the bolt through it.

The simplicity of my improved clamp-fastener adapts it to be readily replaced with little expense, so that when in the use of the frog the amount of tightening to which the clamps have been subjected has carried them throughout the length of the shims they may conveniently be removed and replaced by other and thicker ones.

What I claim as new, and desire to secure by Letters Patent, is—

1. In a railway-frog, the combination with a clamp D, of a shim consisting of a plate of thin metal of substantially uniform thickness throughout adapted to be adjustably secured at one end to a wing-rail and to be interposed between the surface of the web of said rail and the clamp, whereby said shim and rails are subjected to the wedging action of the clamp, substantially as described.

2. In a railway-frog, the combination with a clamp D, of a shim consisting of a plate of

thin metal of substantially uniform thickness  
throughout provided at one end with a  
plurality of perforations for adjustable con-  
nection with a wing-rail, and adapted to be  
5 interposed between the surface of the web of  
said rail and the clamp, and to be bent out-  
ward at its free end to form a stop for the  
latter, whereby said shim and rails are sub-

jected to the wedging action of the clamp  
and the latter is stopped against starting, 10  
substantially as described.

AXEL A. STROM.

In presence of—

J. N. HANSON,  
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