

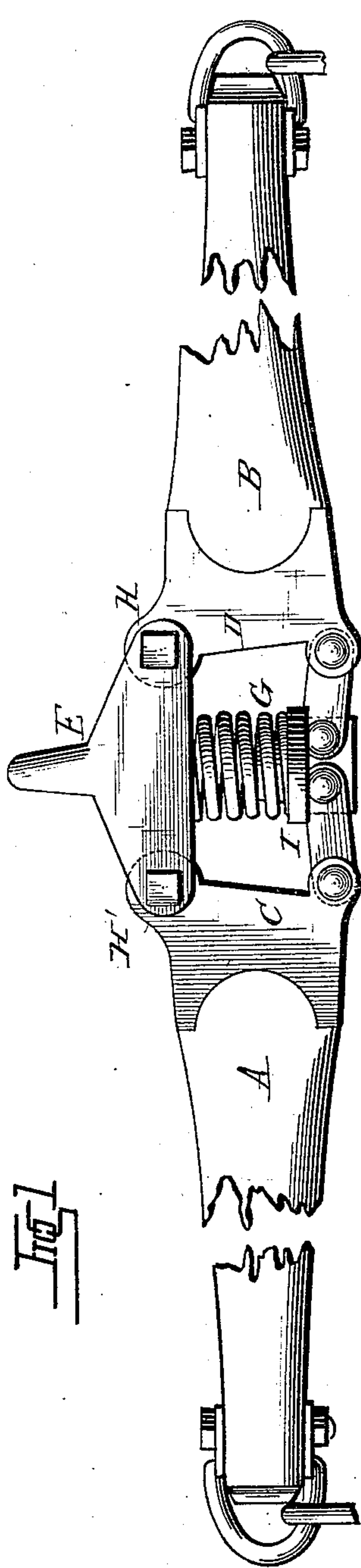
(No Model.)

S. M. FIREY.

DOUBLE TREE.

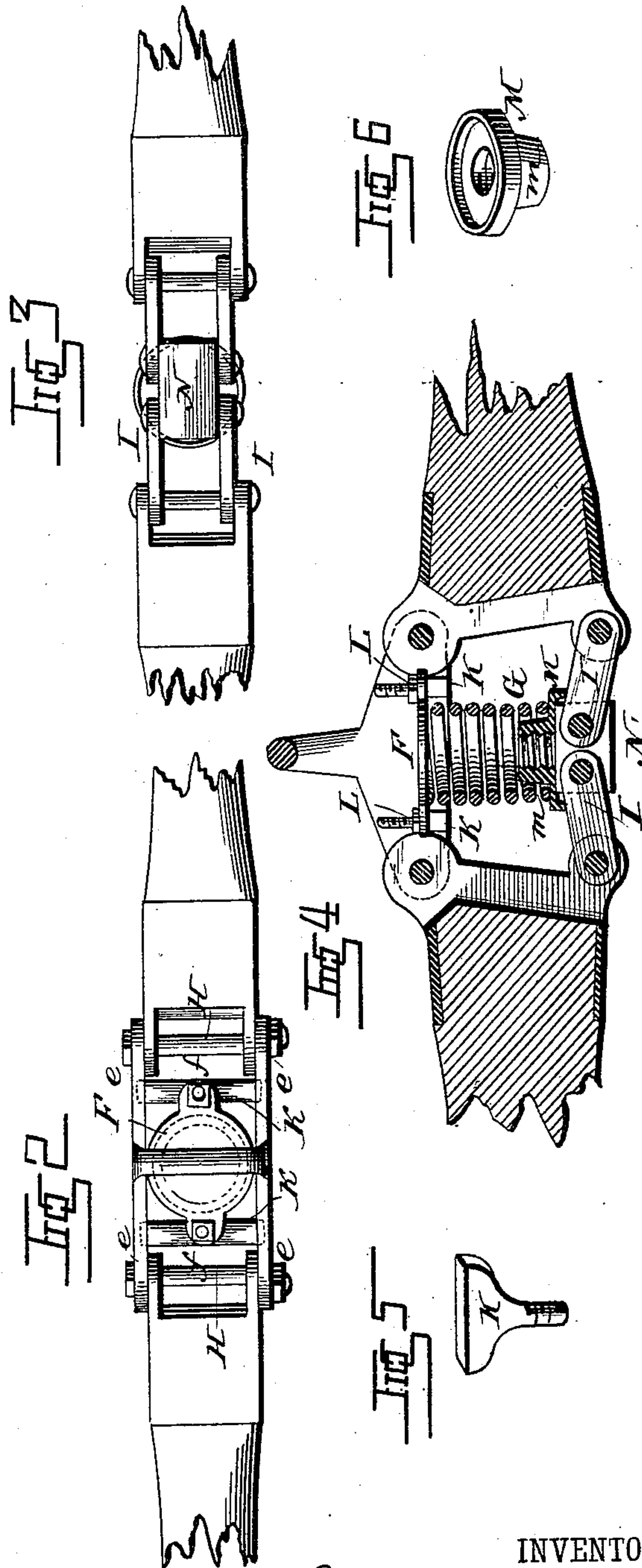
No. 297,512.

Patented Apr. 22, 1884.



WITNESSES:

Med. S. Dieterich
Wm. J. Davis



INVENTOR.

Samuel M. Firey
By *Daniel Breed* ATTORNEY.

UNITED STATES PATENT OFFICE.

SAMUEL M. FIREY, OF CLEAR SPRING, MARYLAND.

DOUBLE-TREE.

SPECIFICATION forming part of Letters Patent No. 297,512, dated April 22, 1884.

Application filed August 1, 1883. (No model.)

To all whom it may concern:

Be it known that I, SAMUEL M. FIREY, of Clear Spring, in the county of Washington and State of Maryland, have invented certain new and useful Improvements in Double-Trees, of which the following is a specification, reference being had to the accompanying drawings.

My invention consists of certain new and useful improvements in double-trees, which will be understood by the following description and claims.

In the accompanying drawings, Figure 1 is a top view of my improved double-tree. Fig. 2 is a rear view of the joint. Fig. 3 is a front view of the joint. Fig. 4 is a section of the joint. Figs. 5 and 6 are detached views.

My improved double-tree is made with two arms connected by means of a flexible joint provided with a coiled or rubber spring of sufficient tension to resist the ordinary draft, and capable of yielding to an excessive strain, as when the plow strikes a rock. These two are seen at A and B, Fig. 1, the same being provided with clips C and D, and being connected, as will now be described. In the clevis E is fastened the seat F for the coiled spring G, and this clevis is pivoted to the clips at four points, *e e*, by means of bolts H, passing across the clevis and through holes on both sides, as seen in Fig. 2, thus preventing the arms from lateral motion while turning on the double hinges. The seat F of the spring G is provided with two adjusting screws or guides, K, having nuts L, for adjusting the tension of

the spring G. These guides are inserted into grooves in the clevis E, as seen in Fig. 2. The screw-cap is made in two parts. The main part M is cast with a central tube, which enters into the hollow of the coil of spring G, as seen in Fig. 4, and the adjusting-screw or coupling-piece N is connected with the piece M by means of a screw-thread, as shown in Fig. 4, so as to adjust the cap and regulate the tension of the spring.

Having described my invention, what I claim is—

1. The combination of the hinged arms A and B with the toggle-links and the central spring, substantially as and for the purposes set forth.

2. The arms A and B, provided with clips C and D, in combination with toggle-links I, clevis E, and spring G, all arranged to operate substantially as and for the purposes set forth.

3. The arms A and B, hinged to clevis E, provided with a seat for the spring G, in combination with toggle-links I, substantially as set forth.

4. The combination of the spring-cap M and adjusting-screw N, for regulating the tension of the spring, and thus giving the arms of the double-tree more or less stiffness, as set forth.

SAMUEL M. FIREY.

Witnesses:

DANIEL BREED,
W. J. NEWTON.