

959,411.

M. E. WELLS.  
EXTENSIBLE CONNECTION.  
APPLICATION FILED JULY 27, 1909.

Patented May 24, 1910.

Fig. 1.

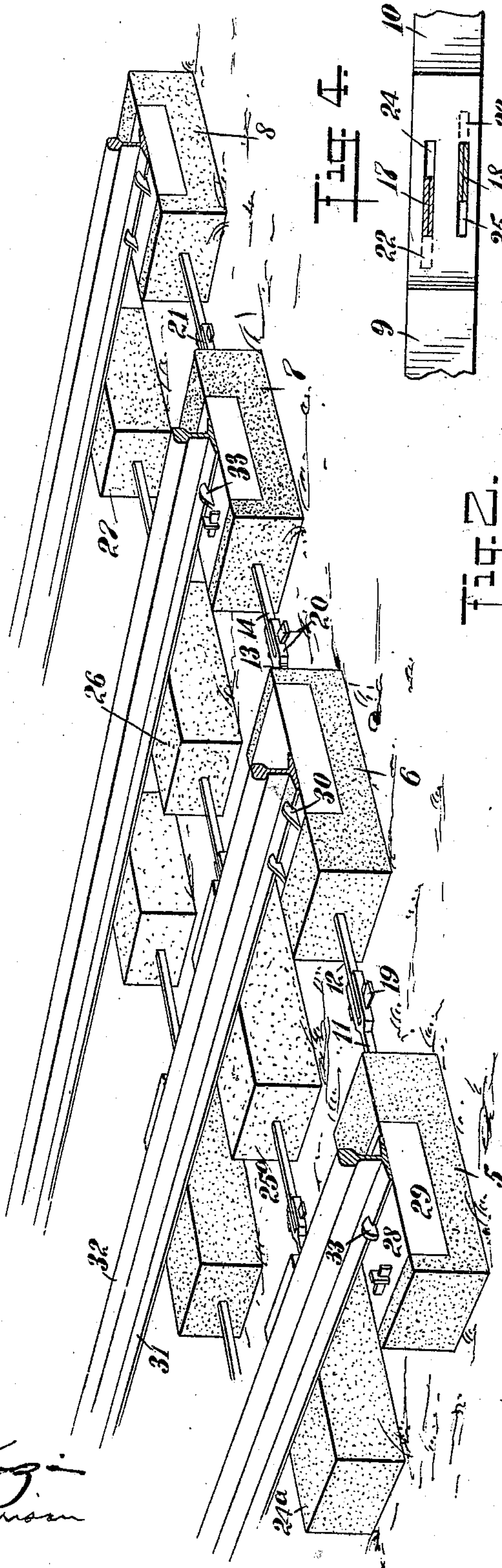


Fig. 4.

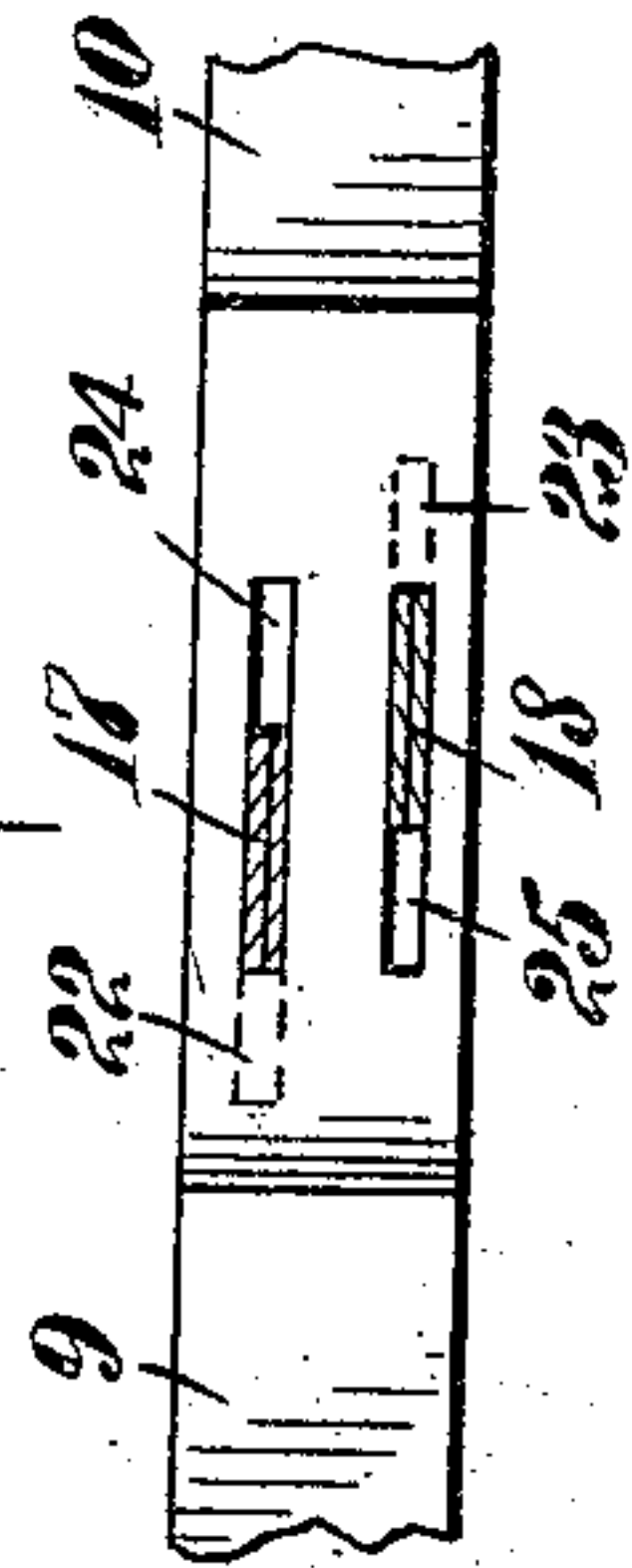


Fig. 2.

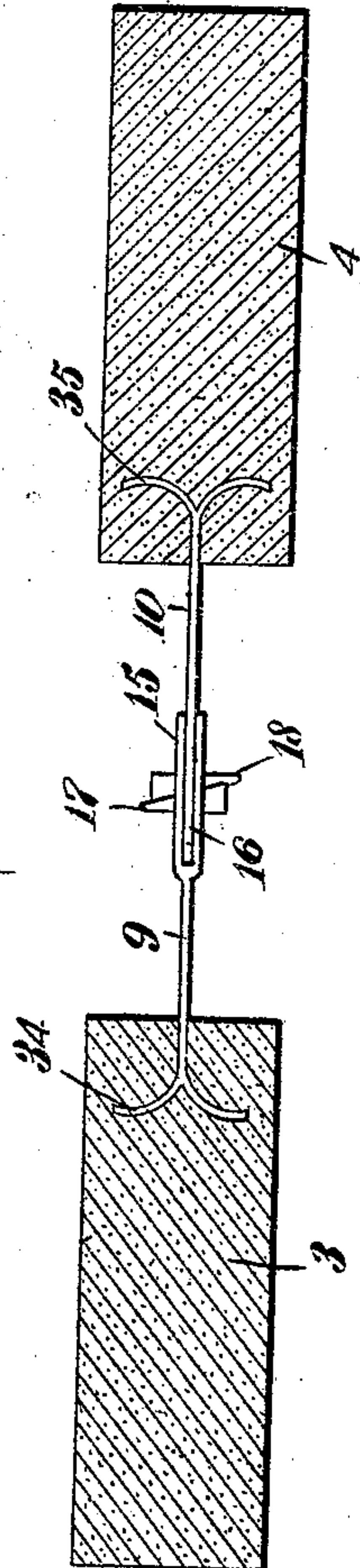
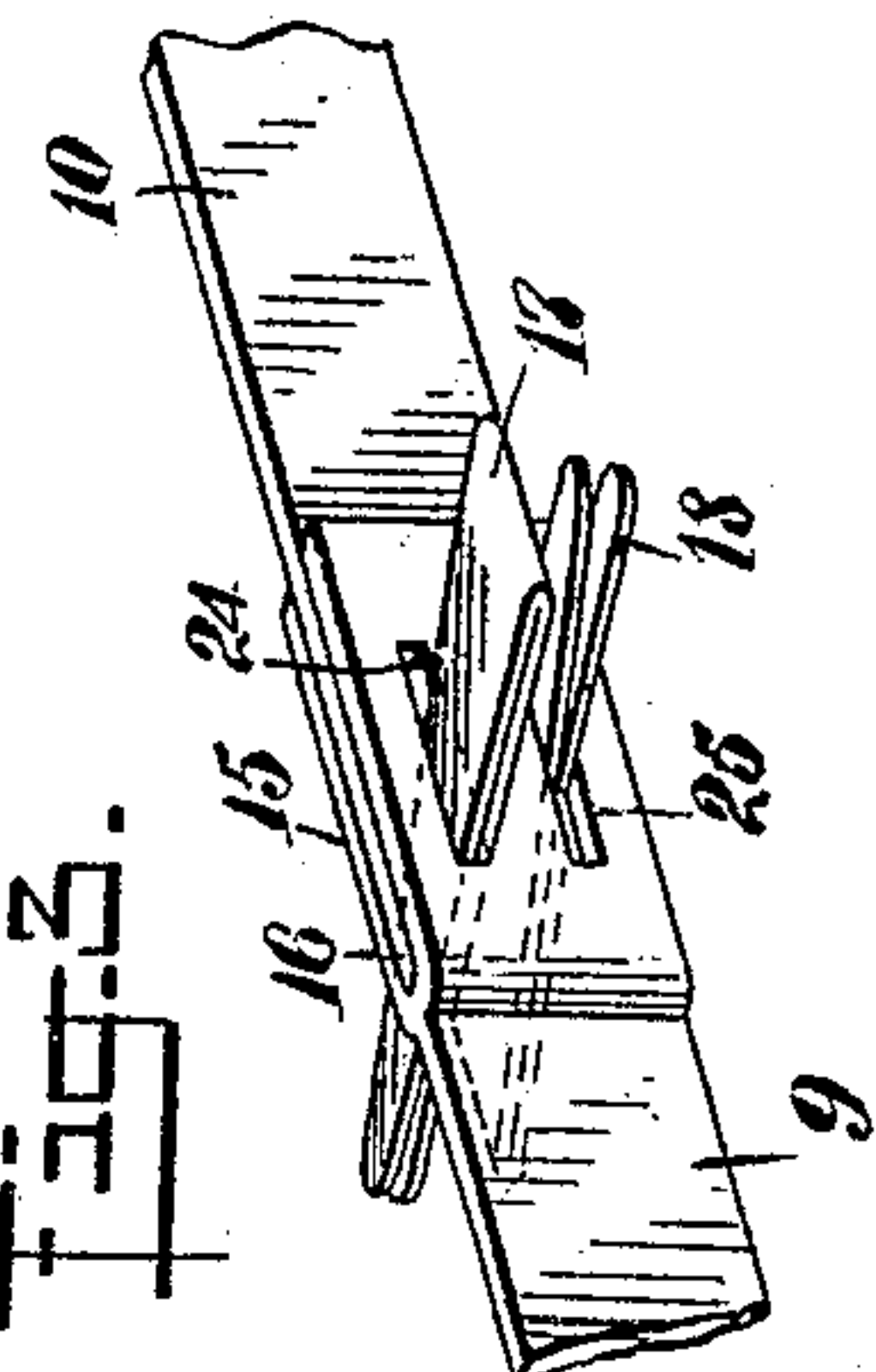


Fig. 3.



WITNESSES

*Henry J. King*  
Walton Harrison

INVENTOR

*Myron E. Wells*  
BY *Mumford*  
ATTORNEYS



# UNITED STATES PATENT OFFICE.

MYRON E. WELLS, OF MASSILLON, OHIO.

## EXTENSIBLE CONNECTION.

959,411.

Specification of Letters Patent.

Patented May 24, 1910.

Application filed July 27, 1909. Serial No. 509,876.

*To all whom it may concern:*

Be it known that I, MYRON E. WELLS, a citizen of the United States, and a resident of Massillon, in the county of Stark and State of Ohio, have invented a new and Improved Extensible Connection, of which the following is a full, clear, and exact description.

My invention relates to extensible connections, and admits of general use, my more particular purpose being to provide a member built up of rods movable relatively to each other and provided with means for shifting said rods in order to vary their total aggregate length.

More particularly stated, my invention comprehends a plurality of rods or bars movable relatively to each other and connected together by split keys of substantially wedge shape, and so arranged that by moving one of the keys inward and moving the other outward, the total aggregate length of the rods may be varied—the construction being used, for instance, in connecting together railway cross ties in order that the rails carried by said cross ties may be properly spaced at will.

While my invention admits of a variety of independent applications, I prefer for the sake of convenience to show it as applied merely to the different units making up a railway cross tie, it being obvious that variations in the shapes and purposes of the flat rods employed and of the wedges may be made, without departing from the spirit of my invention, and it being equally obvious that the device may be used in various relations other than that particularly shown and described herein.

My invention further relates to the means whereby the various rods to be adjusted relatively to each other are embedded in members of concrete or other artificial stone and used as cross ties.

Reference is to be had to the accompanying drawings forming a part of this specification, in which similar characters of reference indicate corresponding parts in all the figures.

Figure 1 is a perspective showing a number of railway cross ties, constructed of separate blocks of concrete or the like and connected up by aid of my improved extensible connection; Fig. 2 is a section showing simply a pair of blocks coupled together by aid of my device; Fig. 3 is a perspective

showing the flat rods and the keys extending through them, these parts together forming the improved coupling, and Fig. 4 is a view partly in elevation and partly in section, showing the relations of the rods, the slots through them, and the split keys extending through said slots.

At 3, 4, 5, 6, 7, 8 are shown blocks of concrete, and partially embedded in these blocks are connecting rods 9, 10, 11, 12, 13, 14. If only two blocks are to be coupled, they are arranged as indicated in Fig. 2, the connecting rod 9 having a forked end 15 and extending into the latter is a portion 16 of the connecting rod 10. By aid of split keys 17, 18, each of substantially wedge shape, the connecting rods shown in Fig. 2 are secured together. Similarly the connecting rods shown in Fig. 1 are secured together by aid of couplings 19, 20 and 21. In this manner a coupling of any desired length, and comprising any desired number of the blocks, may be built.

The rod 10 is provided with slots 22, 23, one of which overlaps the other as indicated in Fig. 4. The forked end 15 of the rod 9 is provided with slots 24, 25, which are in direct alinement with each other—that is to say, one is directly over the other. When, therefore, the end of the rod 10 is inserted into the forked end 15 of the rod 9, the slots in the forked end 15 do not quite register with the slots in the rod 10. The split keys 17, 18, each having substantially a wedge shape, are inserted from opposite sides, as will be understood from Fig. 3, and the relative positions occupied by these keys determine, within proper limits, the aggregate length of the connection made by the rods 9, 10.

When the parts are properly fitted together, as indicated in Fig. 3, neither key can be driven in any farther without the opposite key being drawn out a little. By driving in key 17 and driving out the key 18, or by driving in the key 18 and driving out the key 17, the aggregate length of the rods is adjusted at will.

Some of the concrete blocks are plain, as shown at 24<sup>a</sup>, 25<sup>a</sup>, 26 and 27. Others of them are provided with bed plates 28 having flanges 29 extending downwardly therefrom, and are further provided with hooks 30 integral with the bed plates and adapted to engage the feet 31 of the rails 32. Removable fastenings 33 coact with the hooks 30



in holding the rails 32 firmly in position upon the bed plates. The bed plates are each embedded in the blocks upon which they rest, as will be understood from Fig. 1. The  
5 connecting rods 9, 10 are provided with swallow-tail anchorages 34, 35, which are embedded in the block while the latter is in a plastic state, as will be understood from Fig. 2. This holds the connecting rods  
10 rigidly in relation to the blocks in which they are partially embedded.

At 33 is a clamp for holding the rail in position. As this clamp forms no part of my application now under discussion, I do  
15 not describe it in detail.

Having thus described my invention, I claim as new and desire to secure by Letters Patent:

1. An extensible connection, comprising a  
20 forked member provided with slots, a second member having a portion extending into said forked member and provided with slots, the slots in said forked member partially registering with the slots in said member  
25 extending into said forked member, a substantially wedge-shaped key extending through one of said slots in said forked member and through one of said slots in the other member, and another key also  
30 of substantially wedge-shape, inserted in the opposite direction through another of said slots in said forked member and through another of said slots in said member inserted in said forked member.

35 2. An extensible connection, comprising a plurality of members movable relatively to each other, a key engaging both of said members and adapted to move them relatively to each other in one direction, and an-  
40 other key engaging both of said members and adapted to move them relatively to each other in the opposite direction.

3. An extensible connection, comprising a plurality of members movable relatively to each other, a key for moving said members  
45 relatively to each other in one direction, another key for moving said members relatively to each other in the opposite direction, so that one key can be advanced only as the other key is withdrawn.

50 4. An extensible connection, comprising a plurality of members movable relatively to each other, one of said members being provided with a plurality of slots, each of which, throughout its entire length, is par-  
55 allel to another of said slots in the same member, the other of said members having a plurality of slots staggered relatively to each other so that one overlaps another, and a plurality of tapered keys each extending  
60 through a slot in one member and a slot in the other member.

5. An extensible connection, comprising a plurality of members movable relatively to each other, one of said members being pro-  
65 vided with a plurality of slots, each of which, throughout its entire length, is parallel to another of said slots in the same member, the other of said members having a plu-  
70 rality of slots staggered relatively to each other so that one overlaps another, and a plurality of tapered keys inserted through said members from opposite sides thereof, each key extending through a slot in one  
75 member and a slot in the other member, so that a movement of one key necessitates a reverse movement of the other key.

In testimony whereof I have signed my name to this specification in the presence of two subscribing witnesses.

MYRON E. WELLS.

Witnesses:

GOLDEN S. LOEW,  
D. F. REINOEHL.