

(No Model.)

L. M. BAUM.  
WIRE NAIL MACHINE FEED.

No. 593,977.

Patented Nov. 23, 1897.

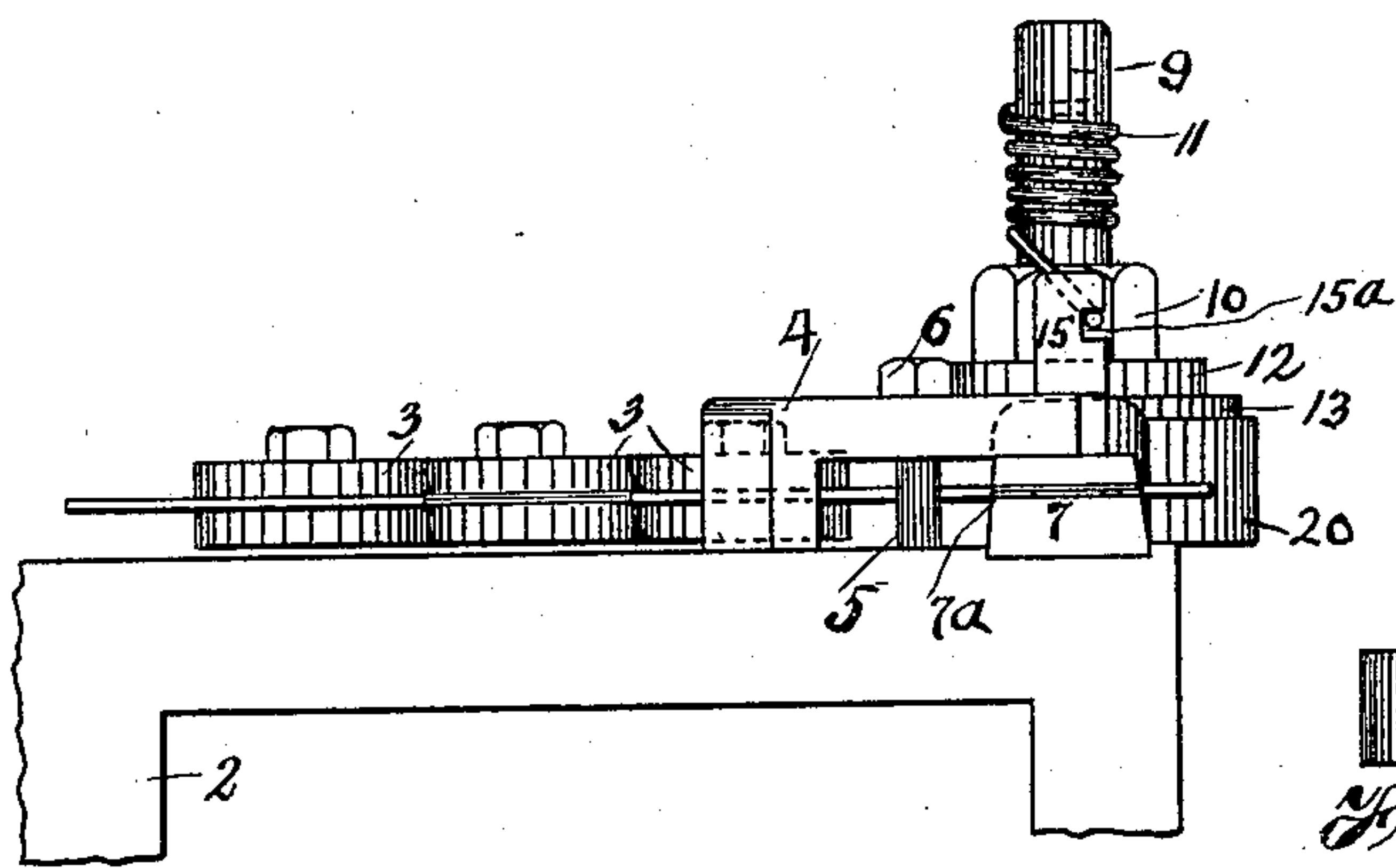


Fig. 1

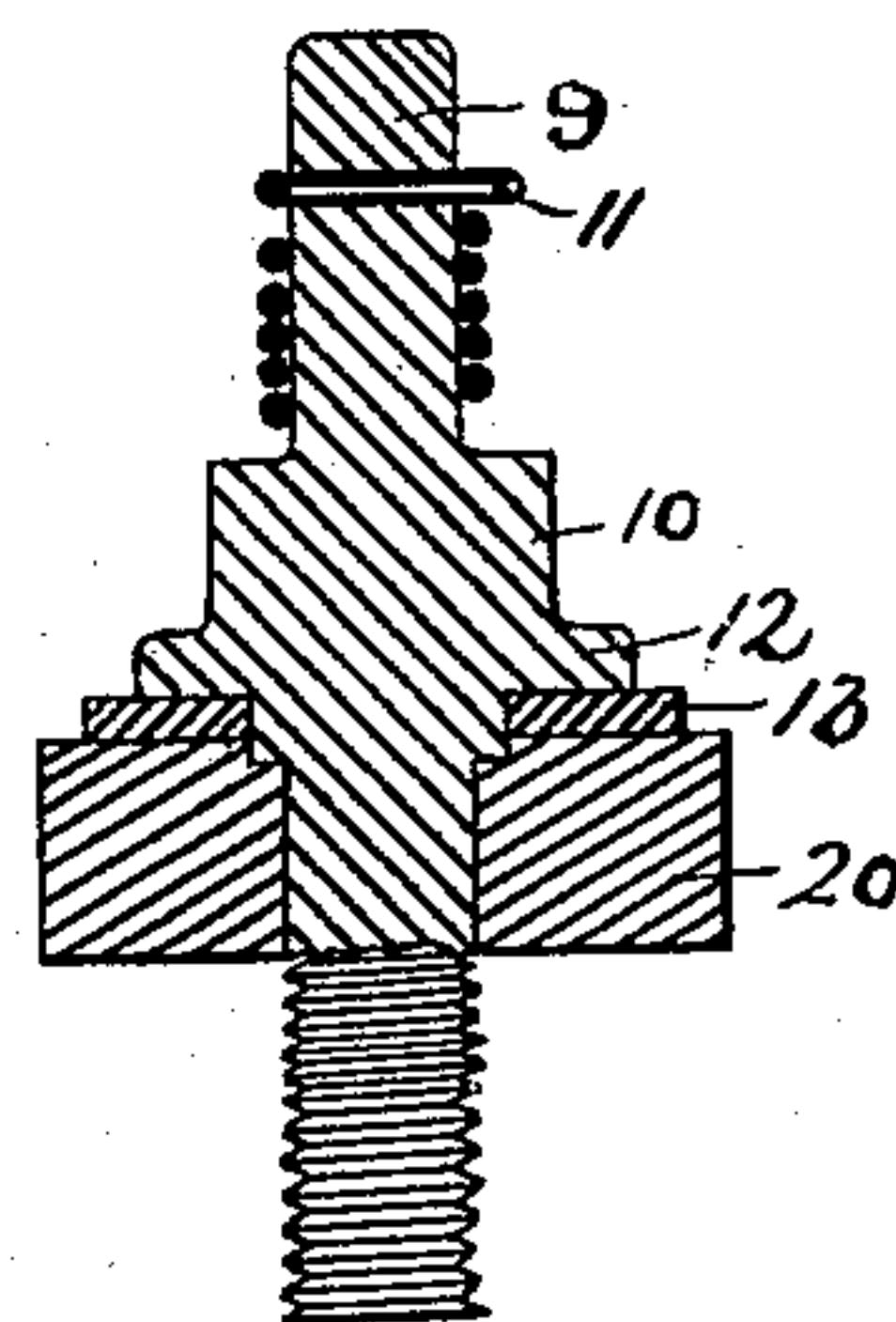


Fig. 6

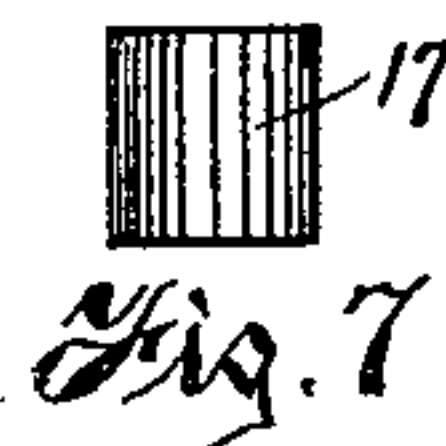


Fig. 7

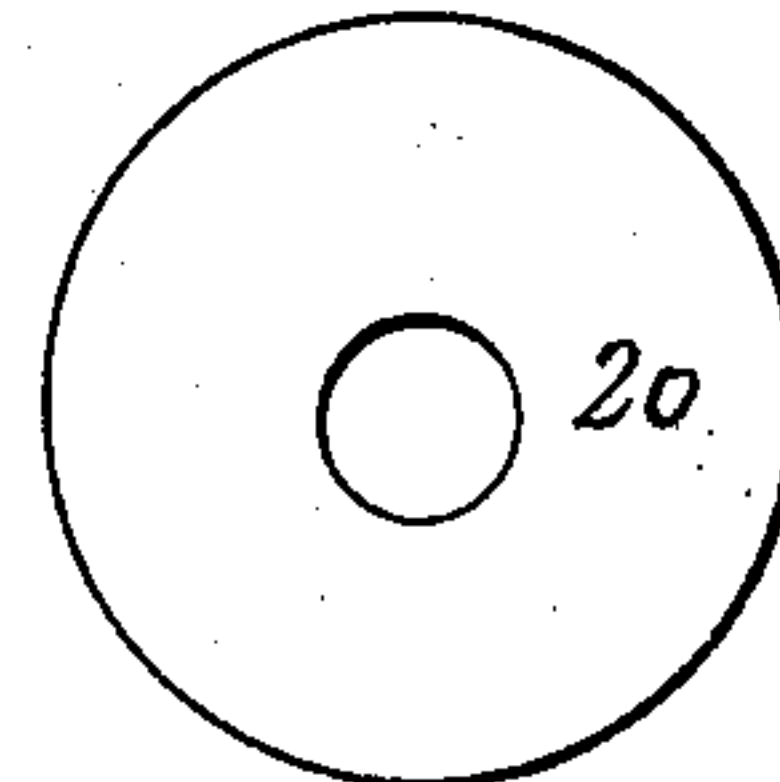


Fig. 8

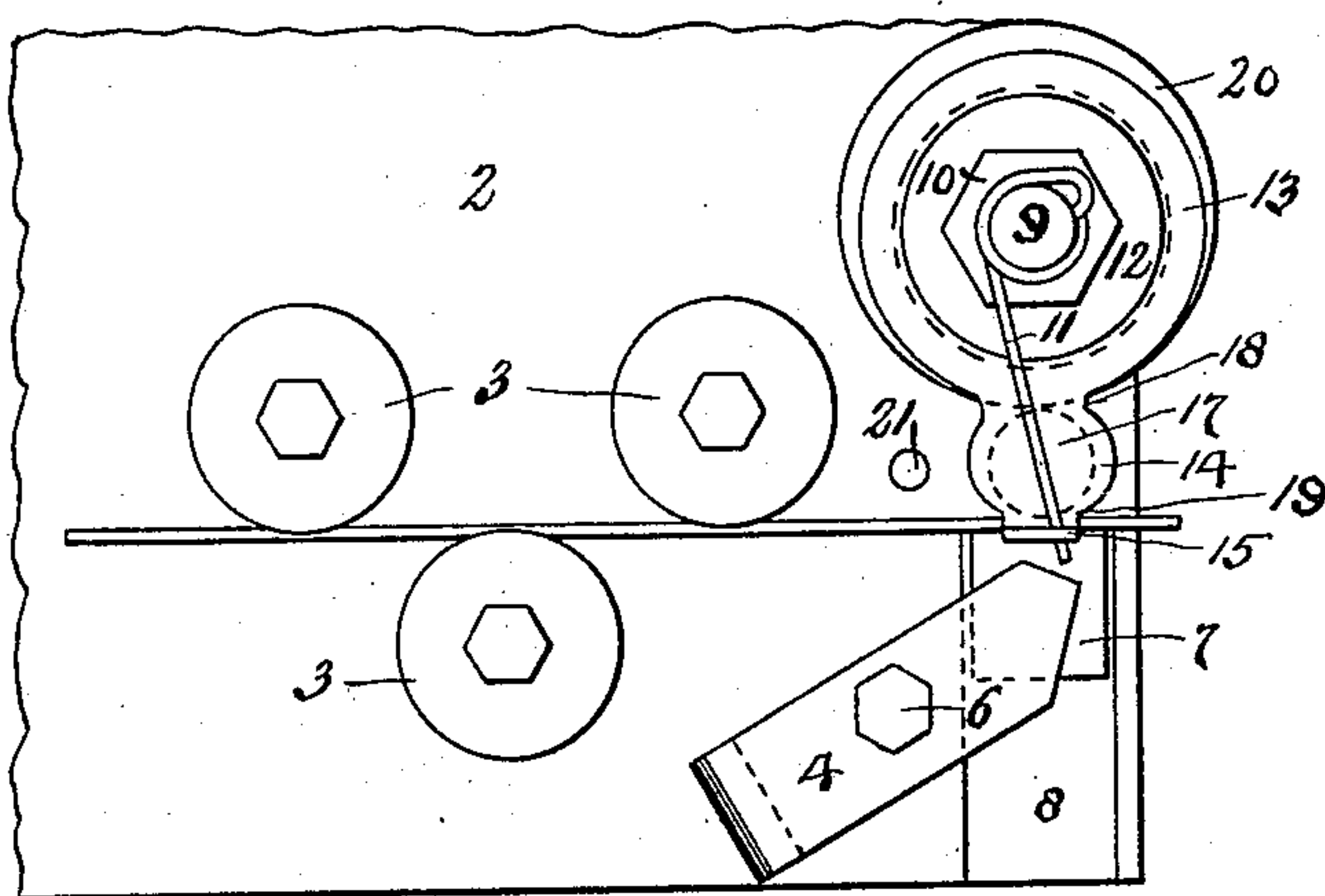


Fig. 2

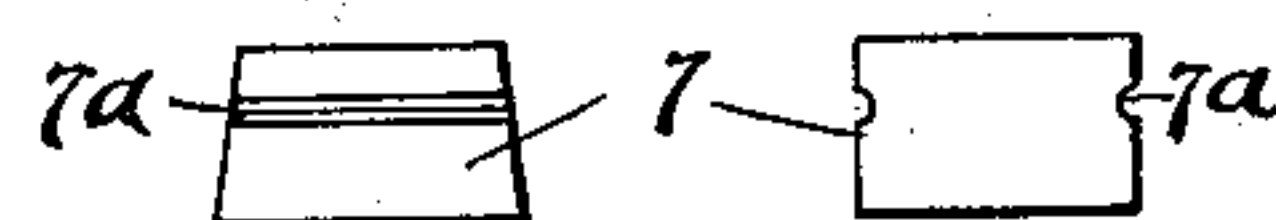


Fig. 9

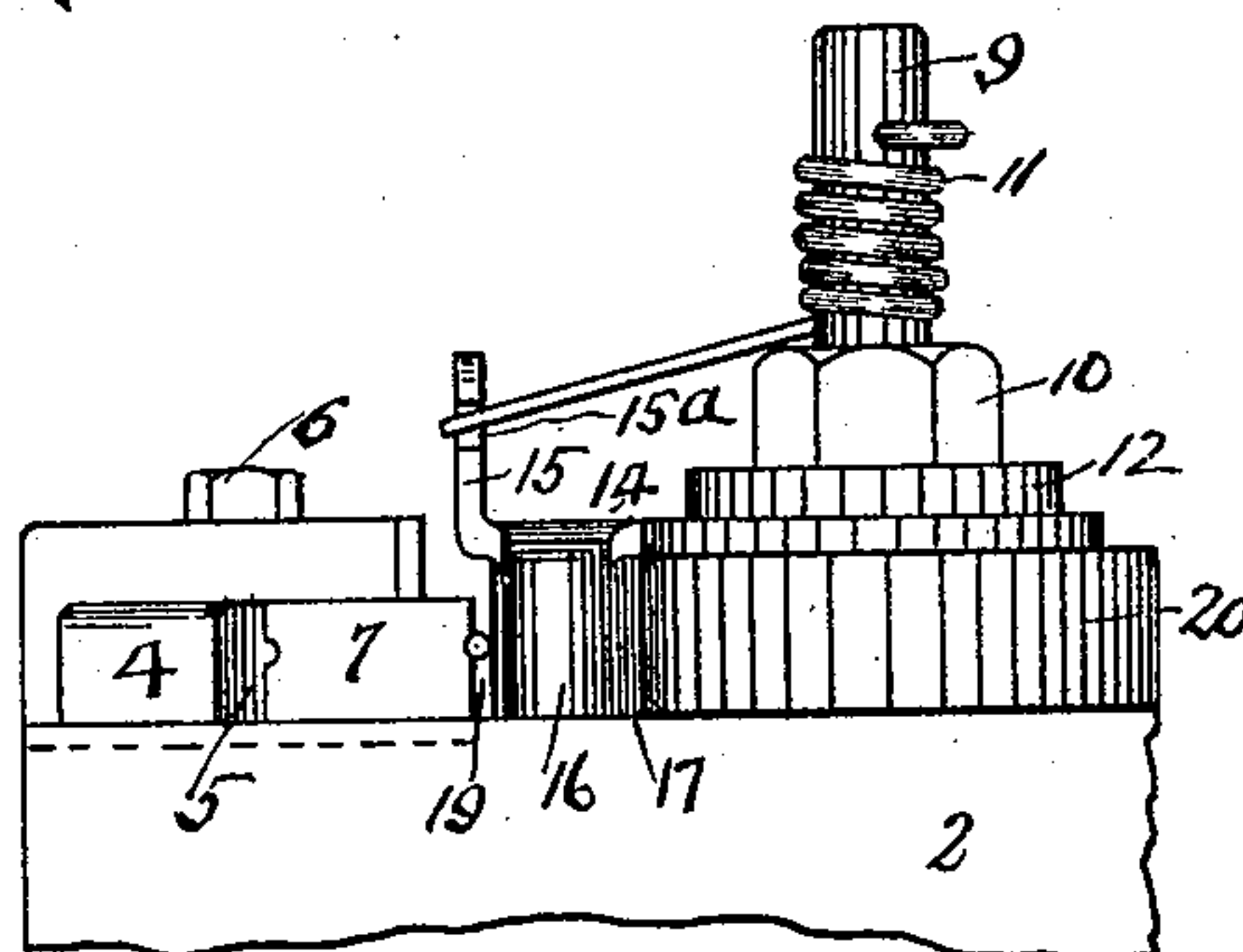


Fig. 10

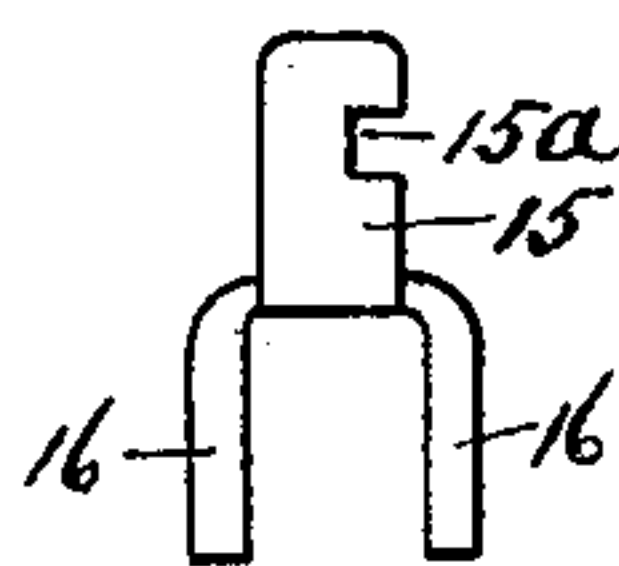


Fig. 3

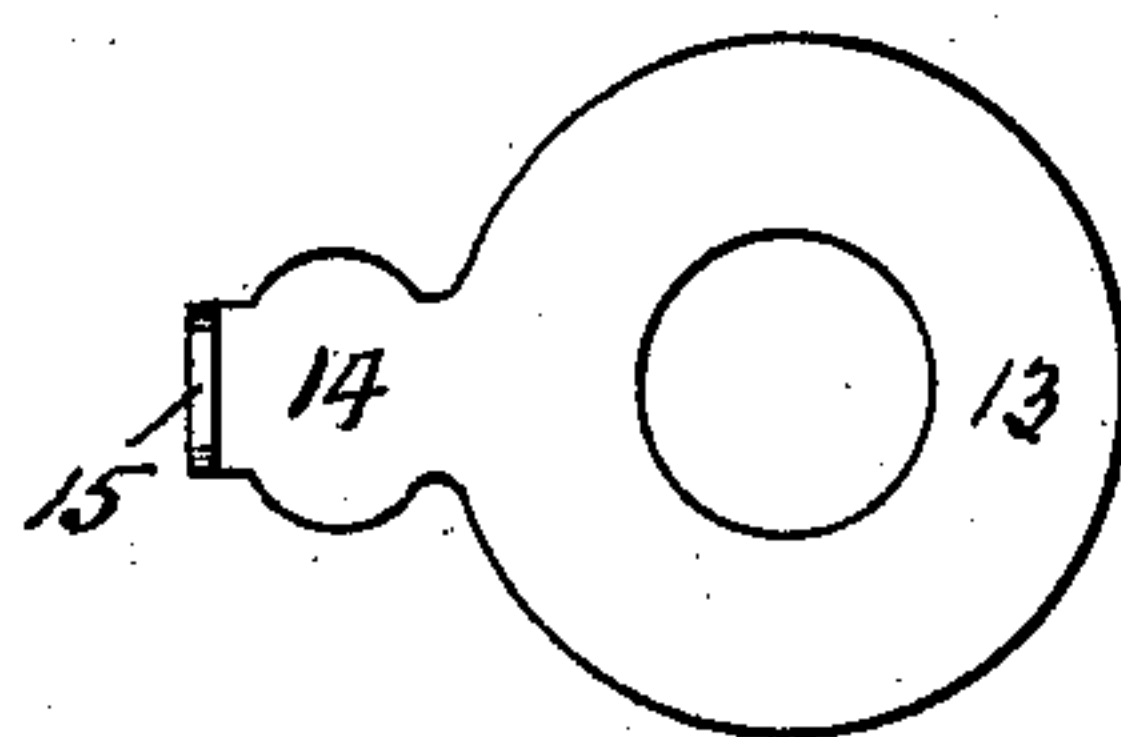


Fig. 4

Witnesses

M. H. Caskey.  
Edward A. Lawrence.

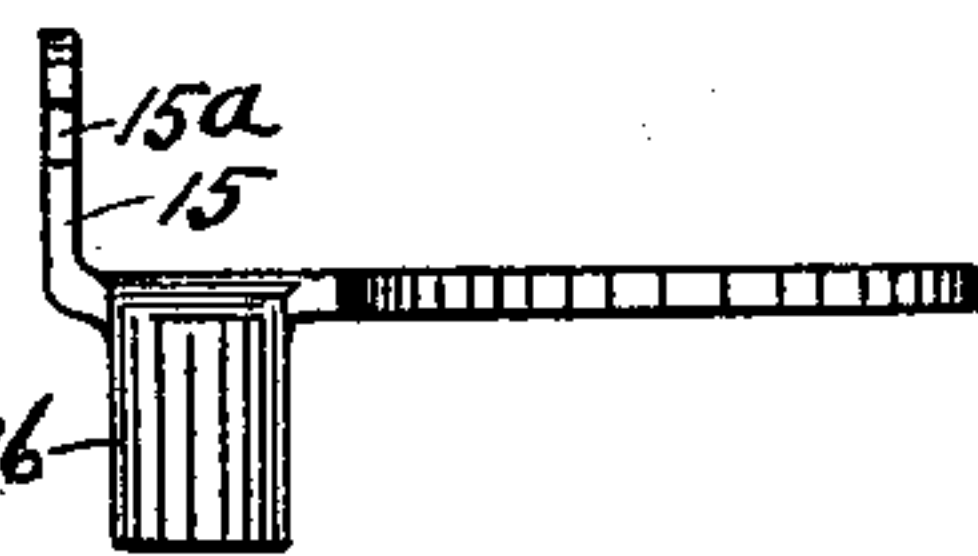


Fig. 5

Inventor  
Lowen M. Baum,  
by Wm L. Pierce,  
his Attorney.



# UNITED STATES PATENT OFFICE.

LOUREN M. BAUM, OF BRADDOCK, PENNSYLVANIA, ASSIGNOR TO JESSE M. BAUM, OF SAME PLACE.

## WIRE-NAIL-MACHINE FEED.

SPECIFICATION forming part of Letters Patent No. 593,977, dated November 23, 1897.

Application filed April 13, 1897. Serial No. 631,894. (No model.)

*To all whom it may concern:*

Be it known that I, LOUREN M. BAUM, a citizen of the United States, residing at Braddock, in the county of Allegheny and State of Pennsylvania, have invented or discovered new and useful Improvements in Wire-Nail-Machine Feeds, of which the following is a specification.

In the accompanying drawings, which make part of this specification, Figure 1 is a side elevation of my improvement mounted on a feed-table. Fig. 2 is a plan view of same. Figs. 3, 4, and 5 are end, plan, and edge views of the feed-roll holder. Fig. 6 is a vertical section through the stud of the spring-actuated member of the feed. Fig. 7 is the feed-roll. Fig. 8 is a plan of the clamping-roll. Fig. 9 is two views of the stationary block constituting the other member of the feed. Fig. 10 is an end view of my device on the feed-table.

The ordinary wire-nail feed is what is known as the "chisel" feed, although there are spring-actuated roller feeds used to some extent. In the chisel feed the wire is gripped between a spring-actuated chisel, of Mushet steel, on one edge and a stationary grooved block, of Mushet steel, on the other edge. The chisel is held by a set-screw in a spring-actuated arm called the "feed-carrier," while the opposing block, of Mushet steel, is also screwed by a set-screw to its feed-carrier. The objections to this construction are that when the wire is drawn backward the chisel is still held hard against it by its spring-pressure and takes a shaving off the nail on this backward movement of from one sixty-fourth to one thirty-second of an inch. These shavings drop into the machine and interfere with its operation, while the appearance of the nail is marred by the mark of the chisel. Again the set-screws which hold the chisel and the opposing piece of Mushet steel, which makes the other part of the feed, are liable to be broken off in the feed-table. When this happens, they must be tapped out, and as they are made of case-hardened steel this is troublesome and tedious. Also the chisels must be taken out five or six times a day to be re-ground, for when the chisels are dull the wire is unequally gripped and the length of the nails will vary. Of course this regrinding in-

volves expense and loss of time. In the practice of my invention I overcome these difficulties by the mechanism described hereinafter.

In the several views which make part of this specification, 2 is the feed-table, having the usual straightening-rolls 3 3. One member of the feed is made in the following manner: 4 is a clamp mounted upon the feed-table and held by the bolt 5 and nut 6. 7 is a block, of Mushet steel or other suitable material, set in the groove 8 and held down by the clamp 4. This block has a score 7<sup>a</sup> in its forward face to receive the wire. The other member of the feed is made up of the following parts:

9 is a stud threaded through the feed-table. Preferably made integrally with said stud is the hexagon nut 10. The upper part of the stud is utilized to coil the spring 11. Below the nut 10 is a collar 12, also preferably made integrally with the stud. Below said collar 12 is the feed-roll holder. This consists of a ring 13, which loosely encircles the stud. Projecting from said ring is the arm 14, which has an upwardly-extending lug 15, notched at 15<sup>a</sup> to receive one end of the spring 11.

16 16 are two downwardly-projecting lugs from the arm 14, curved on their inner sides to engage loosely and retain the feed-roll 17. There is an opening 19 between the lugs 16 16 at the front to permit the wire always to be in contact with the feed-roll, and a like opening 18 at the back to permit the feed-roll to bear against the clamping-roll 20, which turns in stud 9, beneath the ring 13. Preferably, but not essentially, this clamping-roll is made eccentric to take up for wear.

21 is a stop to limit the throw of the feed-roll holder when the wire is withdrawn.

The operation of the feed is as follows: While the machine is still, the operator swings the feed-holder back against the pressure of the spring and locks the wire between the score 7<sup>a</sup> and the feed-roll. The feed-table is then advanced and the wire with it held stationary in the feed. At the proper time the feed-table is drawn back. The feed-roll is set at such an angle with the wire that on the backward movement its grip on the wire is slightly loosened and the wire partially rotates the feed-roll. This partial rotation presents different parts of the roll to the wire



for wear and lengthens the life of the feed-roll. When the action is reversed and the table advanced, the feed-roll again bites the wire and holds the same firmly. When the  
 5 last end of the wire is run out, the feed-roll holder strikes against stop 21 and prevents the feed-roll holder from flying around under the action of the spring and losing the loose feed-roll. Whenever it is desirable to take  
 o out the feed-roll, the feed-roll holder is swung around by the fingers until it comes over the edge of the table or some opening in the same, when the loose feed-roll will drop out without using a wrench or any tool and another  
 5 roll may be inserted. It will be noticed that my feed-roll, moving in contact with the periphery of the clamping-roll, gets its gripping action on the wire by moving it up on said periphery toward a center line struck through  
 o said roll and at right angles to the face of block 7. This motion on the periphery of the clamping-roll gives it a very powerful grip.

Having described my invention, I claim—

1. In wire-nail feeds, the combination of a  
 5 rigid grip on one side, a spring-actuated roller or grip on the other and a clamping-roller on whose periphery said gripping-roller travels.

2. In a wire-nail feed the combination of a yielding feed-roller and a clamping-roller on  
 o whose periphery said feed-roll travels.

3. In a wire-nail feed the combination of a stud; a clamping-roller turning on said stud;

a feed-roll holder and a feed-roll loose in said holder and in peripheral contact with the clamping-roll. 35

4. In a wire-nail feed, the combination of a stud; a clamping-roller turning on said stud; a feed-roll holder on said stud; a feed-roll in said holder and means for clamping together the feed-roll holder and the clamping-roller. 40

5. In a wire-nail feed, the combination of a stud; a clamping-roller turning on said stud; a feed-roll holder encircling said stud and provided with lugs to partially encircle a feed-roll, and said feed-roll. 45

6. In a wire-nail feed, the combination of a stud threaded in the feed-table; a nut on said stud; a collar on said stud; a feed-roll holder on said stud and a clamping-roller on said stud, whereby by turning the stud the collar  
 50 will lock the feed-roll holder and the clamping-roller to the table.

7. In a wire-nail feed, the combination of a feed-table; a clamping-roller supported upon said table; a bolt passing through said clamping-roller and through said table and a feed-roller held in peripheral contact with said  
 55 clamping-roller.

In testimony whereof I have hereunto set my hand this 5th day of March, A. D. 1897. 60

LOUREN M. BAUM.

Witnesses:

WM. L. PIERCE,

WM. H. FARRELL.