

No. 723,177.

PATENTED MAR. 17, 1903.

F. E. MORRIS, C. RUEMMLER & C. J. KENNEDY.

HEEL BUILDING MACHINE.

APPLICATION FILED APR. 1, 1902.

NO MODEL.

3 SHEETS—SHEET 1.

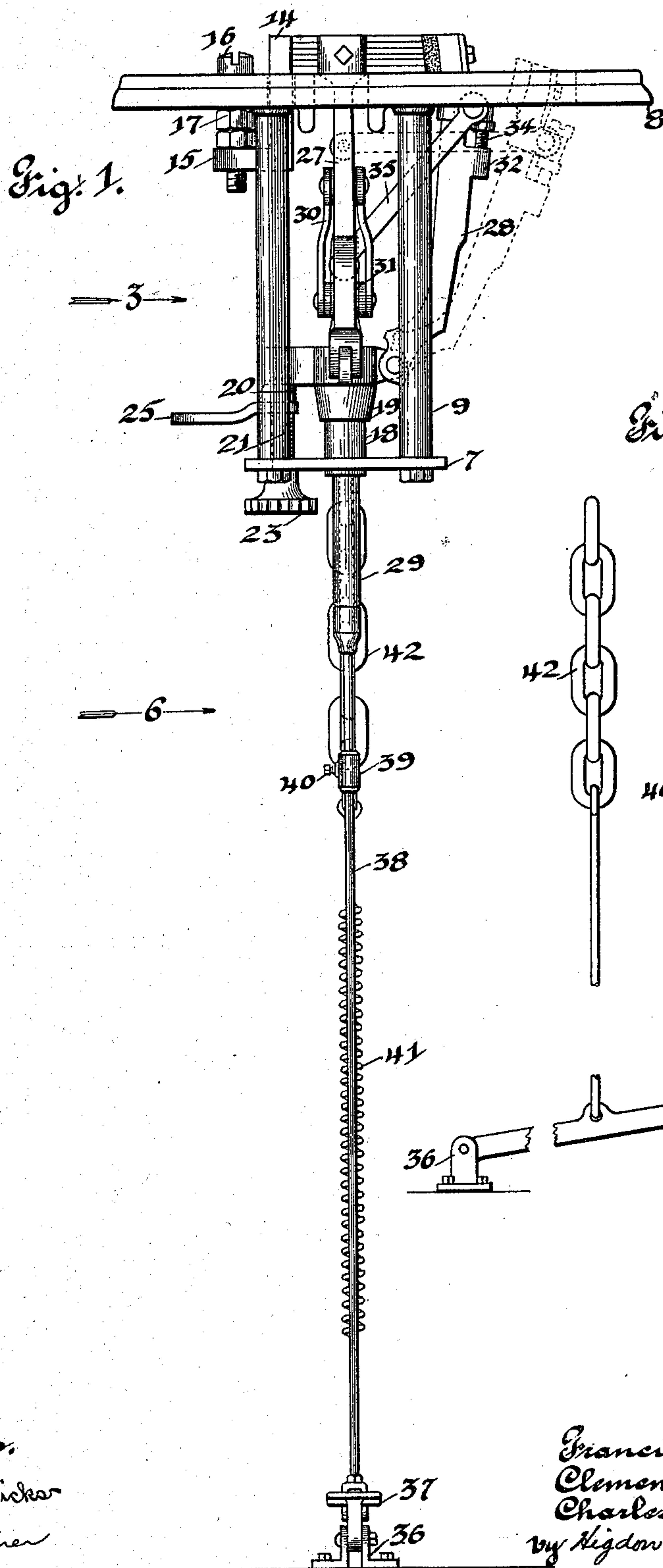
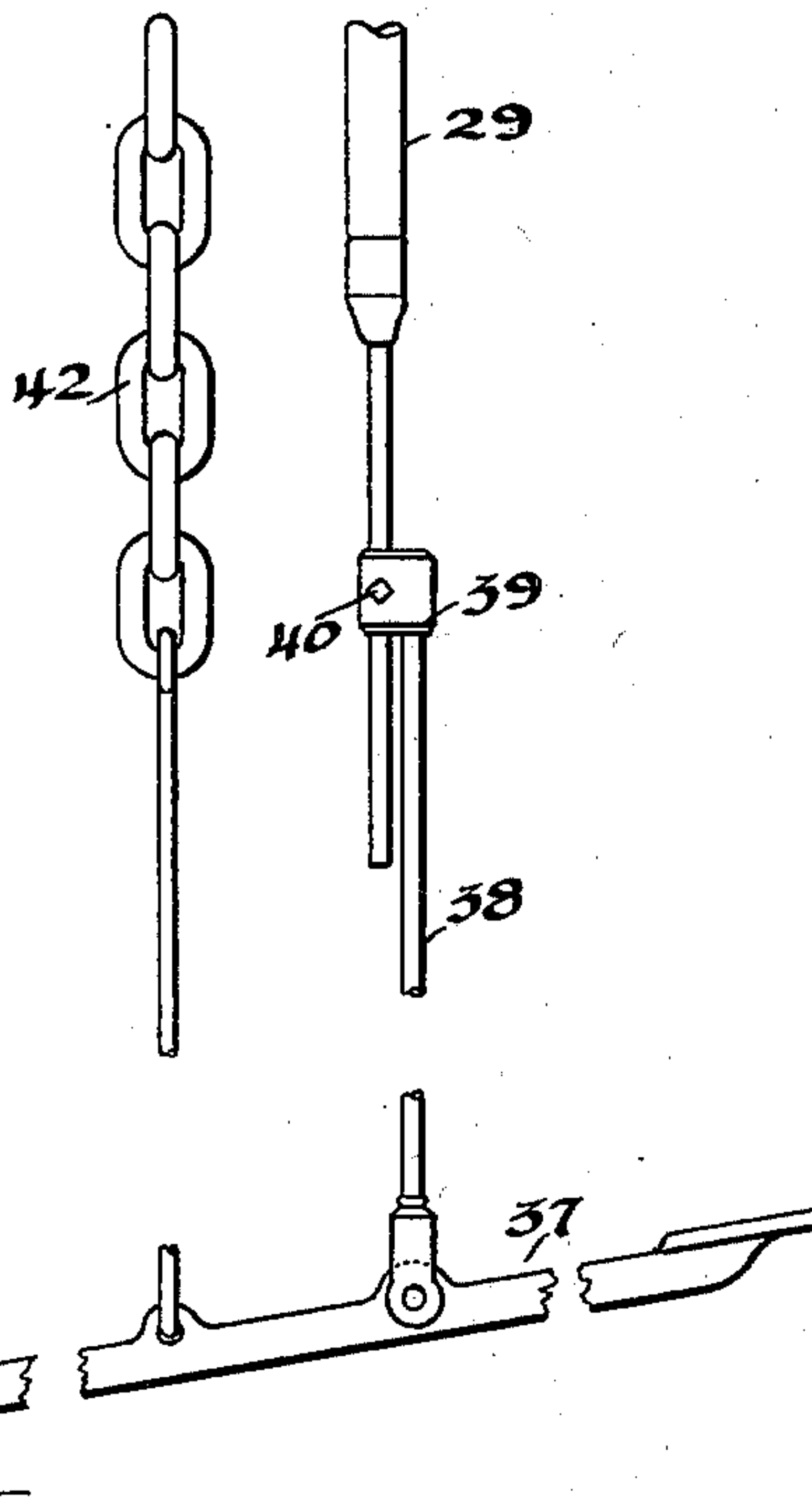


Fig. 6.



Witnesses,  
Alfred W. Eicher  
Frank Turner

Inventors  
Francis E. Morris  
Clemens Ruemmler  
Charles J. Kennedy.  
by Higdon & Longan Attys.

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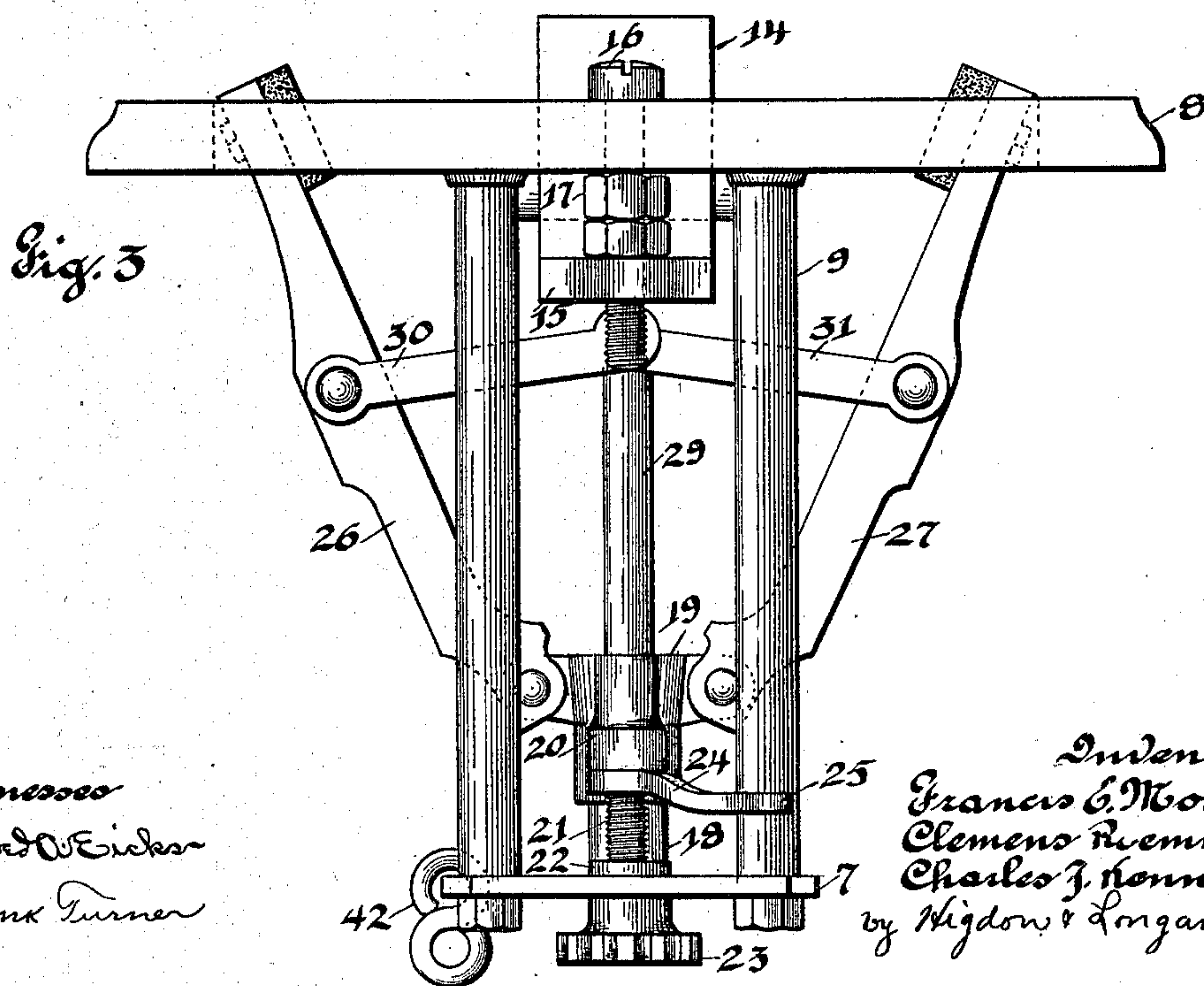
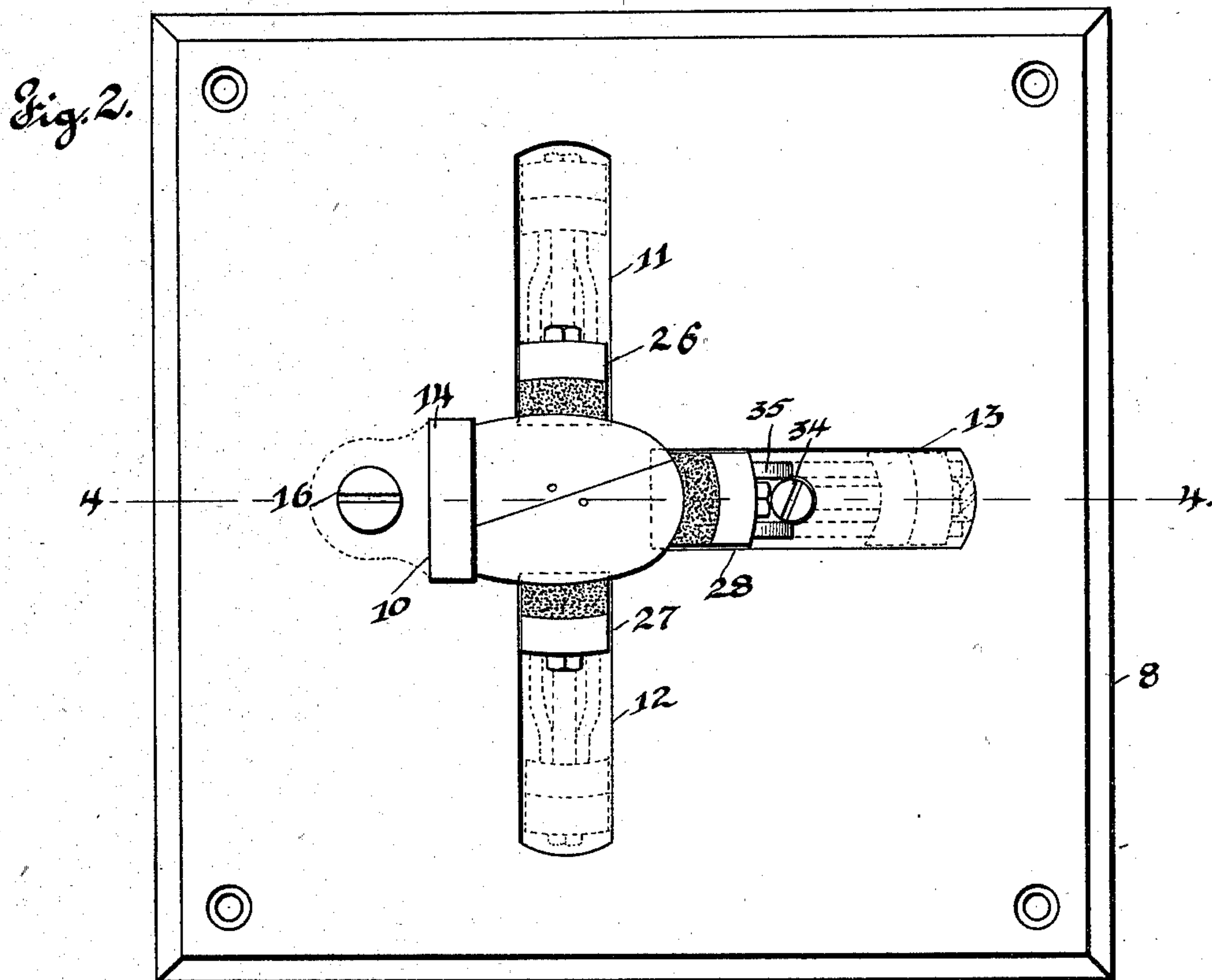
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3 SHEETS—SHEET 2.



Witnesses  
Alfred A. Eicks  
Frank Turner

Inventors  
Francis E. Morris  
Clemens Riemmler  
Charles J. Kennedy.  
by Widdow & Logan Attys



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3 SHEETS—SHEET 3.

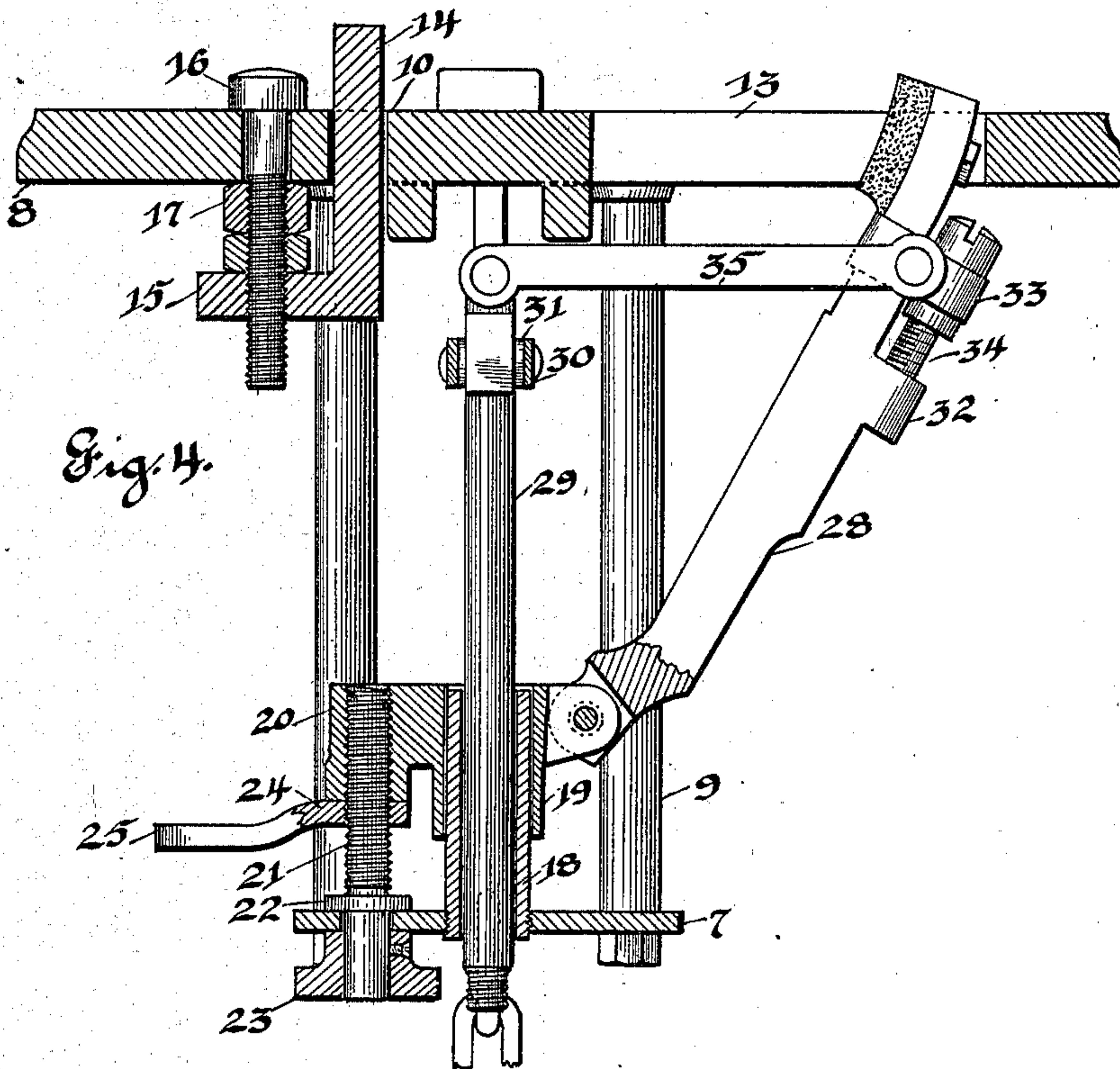


Fig. 4.

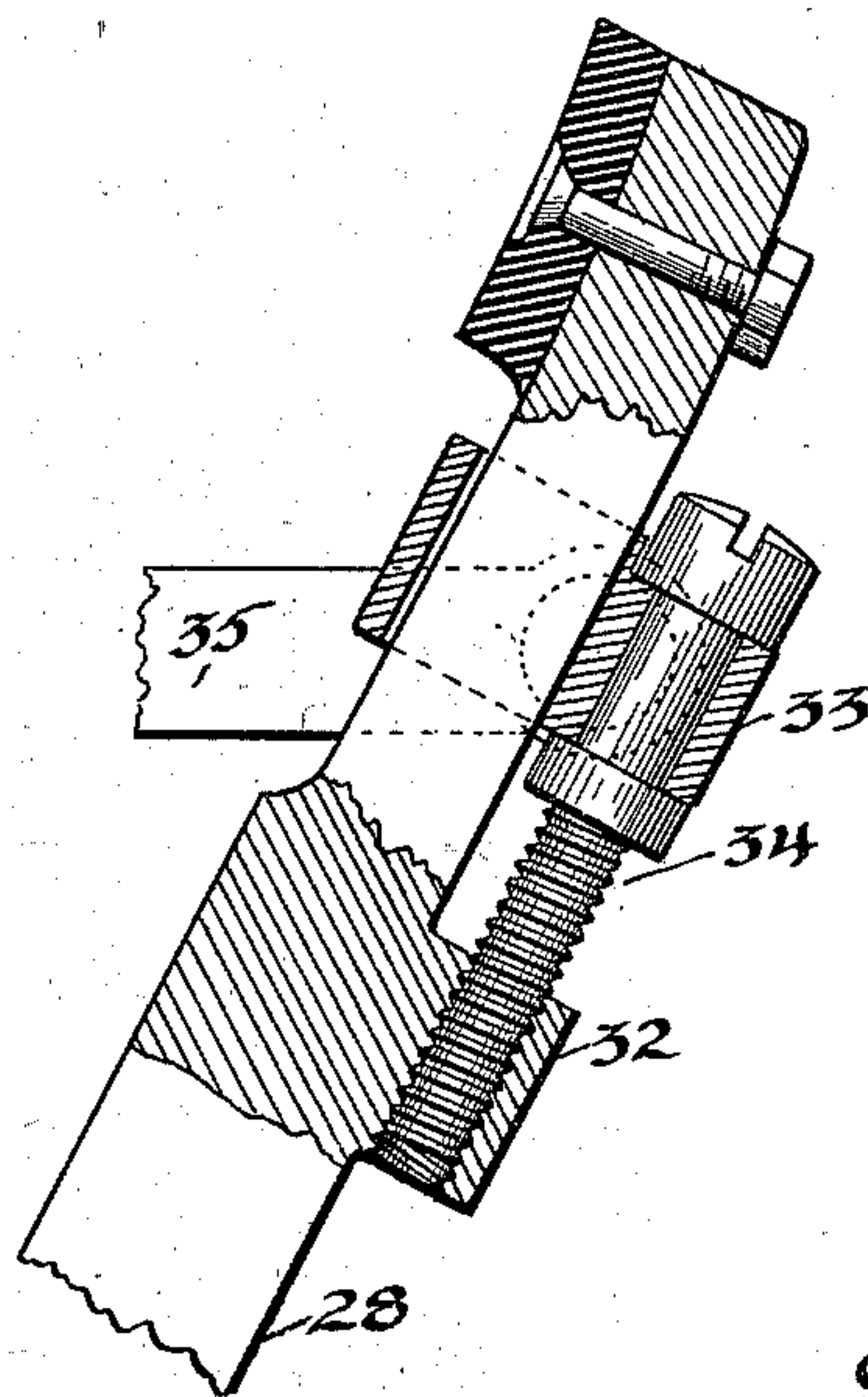


Fig. 5.

Witnesses

Alfred A. Eicher

Frank Turner

Inventors  
Francis E. Morris  
Clemens Ruemmler  
Charles J. Kennedy  
by Higdon & Longaw Attys



# UNITED STATES PATENT OFFICE.

FRANCIS E. MORRIS, CLEMENS RUEMMLER, AND CHARLES J. KENNEDY, OF ST. LOUIS, MISSOURI, ASSIGNORS OF FOUR-SEVENTHS TO CHARLES I. MORRIS, R. M. MORRIS, W. J. MORRIS, AND MARGARET MORRIS, OF ST. LOUIS, MISSOURI.

## HEEL-BUILDING MACHINE.

SPECIFICATION forming part of Letters Patent No. 723,177, dated March 17, 1903.

Application filed April 1, 1902. Serial No. 100,993. (No model.)

*To all whom it may concern:*

Be it known that we, FRANCIS E. MORRIS, CLEMENS RUEMMLER, and CHARLES J. KENNEDY, of the city of St. Louis, State of Missouri, have invented certain new and useful Improvements in Heel-Building Machines, of which the following is a full, clear, and exact description, reference being had to the accompanying drawings, forming a part hereof.

Our invention relates to heel-building machines; and it consists of the novel construction, combination, and arrangement of parts hereinafter shown, described, and claimed.

Our object is to construct a heel-building machine in which heels may be built up to a desired height out of scrap material; and our invention consists of a suitable frame, a table rigidly mounted on the frame and having slots, a stop extending through one of the slots, means for adjusting the vertical position of the stop to regulate the height of the heel, a head slidingly mounted below the table, means for adjusting the height of the head relative to the table, a pair of oppositely-arranged jaws extending upwardly from the head through slots in the table, said jaws operating at right angles to said stop, a third jaw extending upwardly from the head through a slot in the table and operating in opposition to said stop, a sliding bolt operating through said head, links connecting said sliding bolt to said jaws as required to open and close the jaws, means for adjusting the link connected to the third jaw as required to adjust the position of the third jaw relative to the first two and relative to said stop, a foot-lever connected to said sliding bolt for reciprocating the same, the connection between said foot-lever and said sliding bolt being adjustable, a retractile coil-spring connected to said lever and to said frame as required to hold the foot-lever normally elevated, thus holding the said jaws normally open, and means for adjusting the tension of said spring.

Figure 1 is a front elevation of a heel-building machine embodying the principles of our invention. Fig. 2 is a top plan view of the machine and showing a heel in position in the

machine. Fig. 3 is a side elevation of the upper part of the machine, taken looking in the direction indicated by the arrow 3 in Fig. 1. Fig. 4 is a sectional elevation of the upper part of the machine, taken on the line 4 4 of Fig. 2 and on a plane parallel with Fig. 1. Fig. 5 is a sectional detail of one of the jaws and showing the means of adjusting the position of that jaw relative to the others. Fig. 6 is a side elevation of the adjustable connections between the frame and the foot-lever as seen looking in the direction indicated by the arrow 6 in Fig. 1.

Referring to the drawings in detail, the plate 7 is suspended below the table 8 by means of the posts or standards 9, and slots 10, 11, 12, and 13 are formed vertically through the table 8. A stop 14 is slidingly mounted in the slot 10. A screw-threaded bearing 15 is preferably formed integral with and extends laterally from the lower end of said stop. An adjusting-screw 16 is inserted loosely downwardly through the table and screw-seated in said bearing 15 as required to raise and lower the stop 14 by the operation of the screw. Lock-nuts 17 are placed upon the screw to hold it in a desired position. A sleeve 18 is rigidly secured at the center of the plate 7 and extends upwardly, the head 19 is slidingly mounted upon the sleeve 18, a screw-threaded bearing 20 extends laterally from the head 19, and an adjusting-screw 21 is inserted through the plate 7 and screw-seated in the bearing 20 for the purpose of raising and lowering the head 19. A flange or shoulder 22 is rigidly fixed upon the screw 21 to rest upon the plate 7 and support the screw, and an operating head or wheel 23 is removably fixed upon the lower end of the screw 21 below the plate 7. A lock-nut 24 is mounted upon the screw 21 below the bearing 20 for the purpose of holding the screw in a desired position, and a handle 25 extends outwardly from the lock-nut for operating same. The pair of oppositely-arranged jaws 26 and 27 are pivotally connected to the head 19 and extend upwardly through the slots 11 and 12, said jaws being arranged at right angles to the stop 14. The



jaw 28 is pivotally connected to the head 19 and extends upwardly through the slot 13, said jaw 28 operating in opposition to the stop 14. The sliding bolt 29 is mounted in the sleeve 18, and the links 30 and 31 connect the upper end of the sliding bolt to the jaws 26 and 27, respectively. A screw-threaded bearing 32 extends outwardly from the jaw 28. A sliding block 33 is mounted upon the upper end of the jaw 28 and has a bearing in which the screw 34 is mounted, said screw being held against reciprocation in said bearing and said screw being screw-seated in the bearing 32 as required to raise and lower the block 33 upon the jaw 28 by the operation of the screw 34. A link 35 connects the sliding block 33 to the upper end of the sliding bolt 29.

The brackets 36 are secured to the floor and a foot-lever 37 is pivotally connected to the bracket. The connecting-rod 38 extends upwardly from the center of the lever and has a bearing-block 39 at its upper end, said bearing-block having a bearing to receive the lower end of the sliding bolt 29, and a set-screw 40 engages the lower end of the sliding bolt 29 and is fixed in the bearing-block 39 as required to adjust the length of the connecting-rod. A retractile coil-spring 41 extends upwardly from the foot-lever 37 and is hooked into one of the links of the chain 42, said hook and links providing a means of adjusting the tension of the spring as required to hold the foot-lever normally elevated, thereby holding the head 19 normally elevated and the jaws 26, 27, and 28 normally open.

In operation the position of the stop 14 is adjusted by manipulating the screw 16, so that the distance between the upper face of the table 8 and the upper face of the stop will be equal to the height of heel desired. Then the position of the sliding head 19 is adjusted by manipulating the screw 21 until the upper ends of the jaws 26 and 27 in their closed position are on a level with the upper end of the stop. Then the relative position of the jaw 28 is adjusted by manipulating the screw 34, so that when the jaws are in their closed positions the upper ends will all be level. Then a rough pattern of the heel desired is placed upon the table against the stop 14 and between the jaws, as shown in Fig. 2, and the heel is built up from pieces of scrap material to the desired height. Then a couple of nails driven into the central part of the heel will secure all the pieces together, and said pieces should be glued as they are placed in position. This produces a rough heel of the desired height, which may afterward be trimmed and polished, as desired.

We claim—

1. A heel-building machine, comprising a table having vertical slots, a stop mounted upon the table, a sliding head below said ta-

ble, jaws pivoted at their lower ends to said sliding head so as to swing thereon and extending upwardly through said slots, means for adjusting the relative position of one of said jaws and said stop, and means for opening and closing the jaws by sliding said head, substantially as specified.

2. A heel-building machine, comprising a suitable frame, a table mounted upon the frame, said table having vertical slots, a stop slidably mounted in one of said slots, means for adjusting said stop up and down and locking same after adjustment, a head slidably mounted below said table, jaws pivoted at their lower ends to said sliding head and extending from said head upwardly through the slots in said table, one of said jaws operating in opposition to said stop, and means for opening and closing the jaws, substantially as specified.

3. A heel-building machine, comprising a suitable frame, a table fixed upon the frame and having vertical slots, a stop mounted upon the table, a head slidably mounted in the frame, means for adjusting said head, jaws extending upwardly through slots in the table, one of said jaws operating in opposition to said stop, means for adjusting the relative position of the last-mentioned jaw and said stop, and means for operating said jaws, substantially as specified.

4. A heel-building machine, comprising a suitable frame, a table mounted upon the frame, a stop mounted upon the table, a head slidably mounted on the frame, means for adjusting the position of the head, jaws extending upwardly from the head through slots in the table, a sliding bolt, links connecting said jaws to said sliding bolt, a foot-lever, a connecting-rod connecting said foot-lever to said sliding bolt, and a spring connecting said foot-lever to said frame as required to hold the foot-lever normally elevated and hold the jaws normally open, substantially as specified.

5. A heel-building machine, comprising a frame, a table fixed upon the frame, a sliding head mounted upon the frame, jaws extending from the sliding head upwardly through the table, a sliding bolt, links connecting the sliding bolt to the jaws as required to open and close the jaws by reciprocating the sliding bolt, a foot-lever, a connecting-rod connecting the foot-lever to the sliding bolt, means for adjusting the length of the connecting-rod, and a spring connecting the foot-lever to the frame, substantially as specified.

In testimony whereof we affix our signatures in presence of two witnesses.

FRANCIS E. MORRIS.  
CLEMENS RUEMMLER.  
CHARLES J. KENNEDY.

Witnesses:

ALFRED A. EICKS,  
FRANK TURNER.