

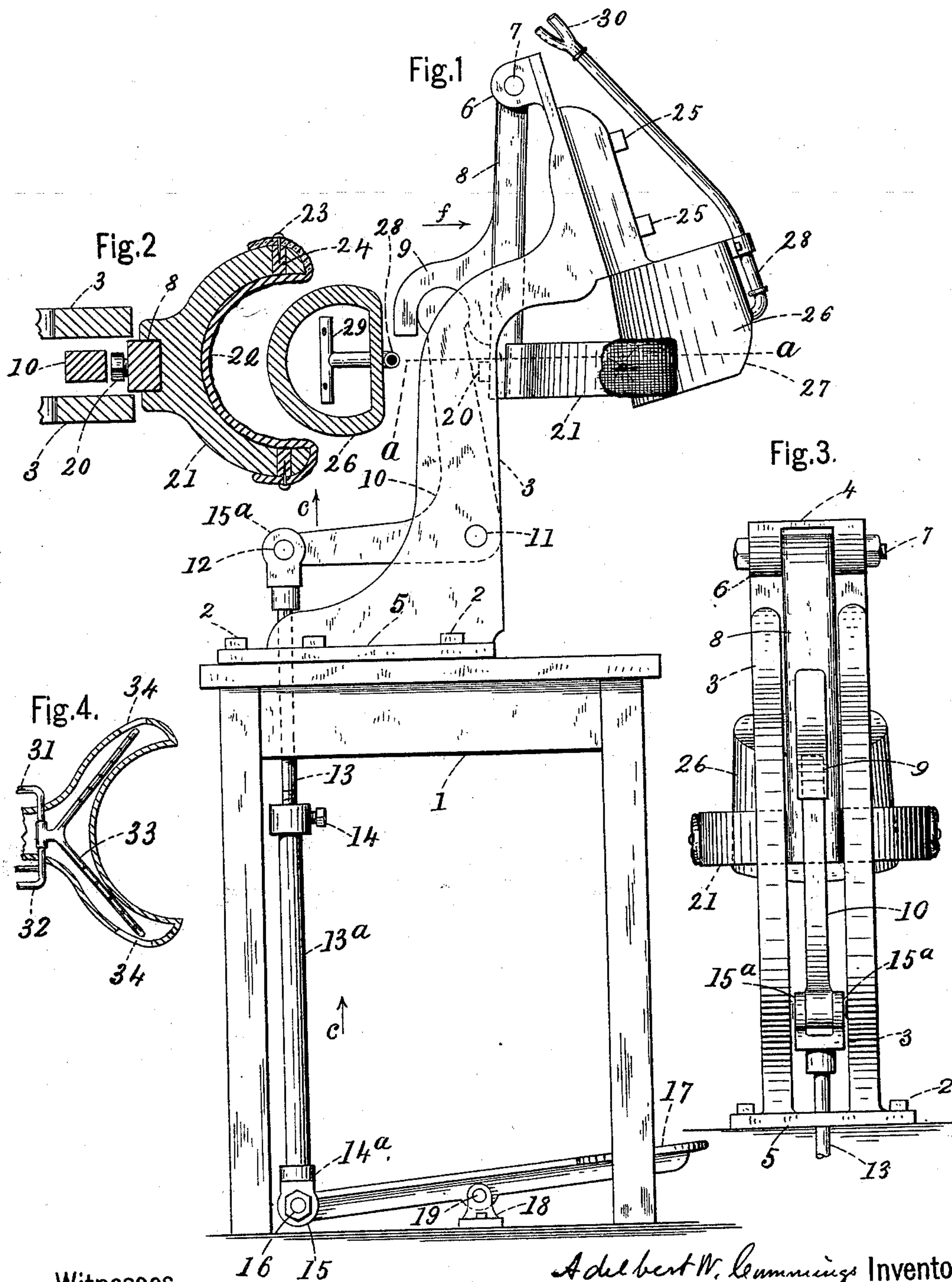
(No Model.)

A. W. CUMMINGS.

MACHINE FOR FORMING TURN DOWN LINEN COLLARS.

No. 509,514.

Patented Nov. 28, 1893.



**Witnesses.**

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# UNITED STATES PATENT OFFICE.

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## MACHINE FOR FORMING TURN-DOWN LINEN COLLARS.

SPECIFICATION forming part of Letters Patent No. 509,514, dated November 28, 1893.

Application filed April 3, 1893. Serial No. 468,828. (No model.)

*To all whom it may concern:*

Be it known that I, ADELBERT W. CUMMINGS, a citizen of the United States, residing in Dunkirk, in the county of Chautauqua and State of New York, have invented certain new and useful Improvements in Machines for Forming Turn-Down Linen Collars, of which the following is a specification.

My invention relates to machines for forming turn down linen collars to the required shape to fit nicely after having been laundered and passed through an ironing machine, all of which will be fully and clearly herein-after described and claimed, reference being had to the accompanying drawings, in which—

Figure 1 is a side elevation of the machine all complete. Fig. 2 is a horizontal section through line *a a*, Fig. 1, parts being omitted, also showing the position of the burner within the former. Fig. 3 is a rear elevation of the machine showing all except the table on which it stands. Fig. 4 is a sectional elevation showing a modified arrangement of the heating device.

Referring to the drawings—1 represents the stand or bench upon which the machine is placed and secured by bolts 2. The supporting side frame pieces 3, the top cross plate 4, and bottom base plate 5, are all formed in one piece but they may be made in separate parts of cast iron or of any suitable material and secured together by transverse binding rods, and bolts, in any well known way. At the rear portion of the upper part are two backwardly projecting ears, 6, between which is pivoted by a pin 7, a swinging bar, 8, having a curved backward projecting portion 9. The underpart of the projecting portion 9, is curved so as to form a hook into which the upper end of the angular arm 10, is fitted so as to turn easily therein. The arm, 10, is pivoted between the side frame pieces, 3, by a pin, 11. The lower end of the arm, 10, is pivoted by a pin, 12, to the connecting-rod, the arm 10, being pivoted between the ears 15<sup>a</sup>. This connecting-rod is made up in two parts, the part, 13, being adapted to screw into the part, 13<sup>a</sup>, and when adjusted to the point desired the two are rigidly fastened together by a set screw, 14, thereby making the length of the connecting-rod adjustable.

To the lower end of the rod, 13<sup>a</sup>, (which is

made of gas pipe) is rigidly secured an end piece, 14<sup>a</sup>, having downwardly projecting ears, 15, and between the ears 15, is pivoted by a pin, 16, the rear end of a foot step or treadle, 17. This treadle is pivoted near the center to the usual holding piece, 18, by a pin, 19.

To the lower end of the arm, 8, is rigidly secured by a bolt, 20, a semicircular portion or forming jaws, 21. This semicircular portion, 21, is covered on the inside with cloth secured by small tacks, 23, which are driven into wooden pieces, 24, secured to the iron portion, 21, in the usual way.

At the front of the frame piece, 3, is secured by bolts 25, a former, 26, upon which the collars are formed. This former is a stationary device and is formed so as to be very nearly the shape of the neck of a person so that a collar formed upon it, will fit and wear easily.

The lower portion of the stationary collar formed at the front is cut away at or about the point, 27, so as to leave sufficient room for the fingers while holding the collar to be formed. The object of this is, that the former is hot while being used and it is necessary to leave room for the fingers to operate without touching it.

Connected to the former, 26, which is hollow as shown in Fig. 2, is a gas pipe, 28, which passes into it and is connected with the gas burner, 29. The gas pipe, 28, is provided at the top with the usual forked end, 30, to receive the flexible tubing for conducting the gas and air which goes to the burner, in the usual proportions for producing the proper combustion. This is the well known construction for heating purposes. Consequently a further description of this portion of the machine is unnecessary.

The semicircular portions or forming jaws, 21, may be made hollow if desired, and the heat applied to them instead of the former 26, the gas and air being admitted through the pipes 31 and 32, and from thence to the burner 33, see Fig. 4, but it is preferred to have the heat conducted to the former, 26, as hereinbefore described. When the heat is applied to the forming jaws as in Fig. 4, an opening, or openings, 34, would be required to supply air for the necessary com-



bustion, and to permit the products of combustion to escape.

The operation of this machine is as follows:—The pressure downward on the foot-step, 17, will cause the connecting rod and the end of the horizontal portion of the arm, 10, to which it is connected, to move upward in the direction of the arrows, *c*, thereby causing the upper end of the arm, 10, within the hook portion, 9, to move forward in the direction of the arrow, *f*, which operation causes the forming jaws to move forward against the former, 26. A collar having been interposed between the forming jaws and the former, 26, and then drawn around said former and held there until the forming jaws give it the necessary pressure, by the operation above described, will be pressed into the shape required. It is easily released by the removal of the foot from the foot-step, 17, thereby allowing the weight of the several parts to instantly remove the forming jaws, 21, away from the former.

I claim as my invention—

1. In a machine for forming collars, the combination with a supporting frame, of a hollow stationary former rigidly secured to the upper front portion of the frame, a means substantially as above described for heating it, a bar pivoted to the top at the rear of the supporting frame and carrying at its lower end the forming jaws, and at its rear side a curved downwardly projecting hook portion,

an angular arm pivoted between the two side frame pieces and having its upper end project into the hook portion, and its lower end pivoted to a substantially vertical rod connected with a pivoted foot-step for operating it, as set forth.

2. In a machine for forming collars, the combination with the supporting frame, of a hollow former rigidly secured to the upper front portion of the same, a swinging arm pivoted to the upper rear portion of the frame, collar forming jaws secured to the lower end of the swinging arm, a backwardly and downwardly projecting hook portion secured to the back of the swinging arm, an angular arm pivoted to the frame of the machine and having its rounded upper end fitted into said hook portion, and its rearwardly projecting lower end pivoted to a connecting rod, said connecting rod having its lower end pivoted to the lower end of the pivoted foot-step, whereby the required forward movement of the forming jaws to form a collar is given by a pressure downward at the front end of the foot-step, and the weight of the several parts causes the forming jaws to move away from a collar former when the pressure on a foot-step is removed, substantially as described.

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