A. G. LEGG.

CRIMPING MACHINE.

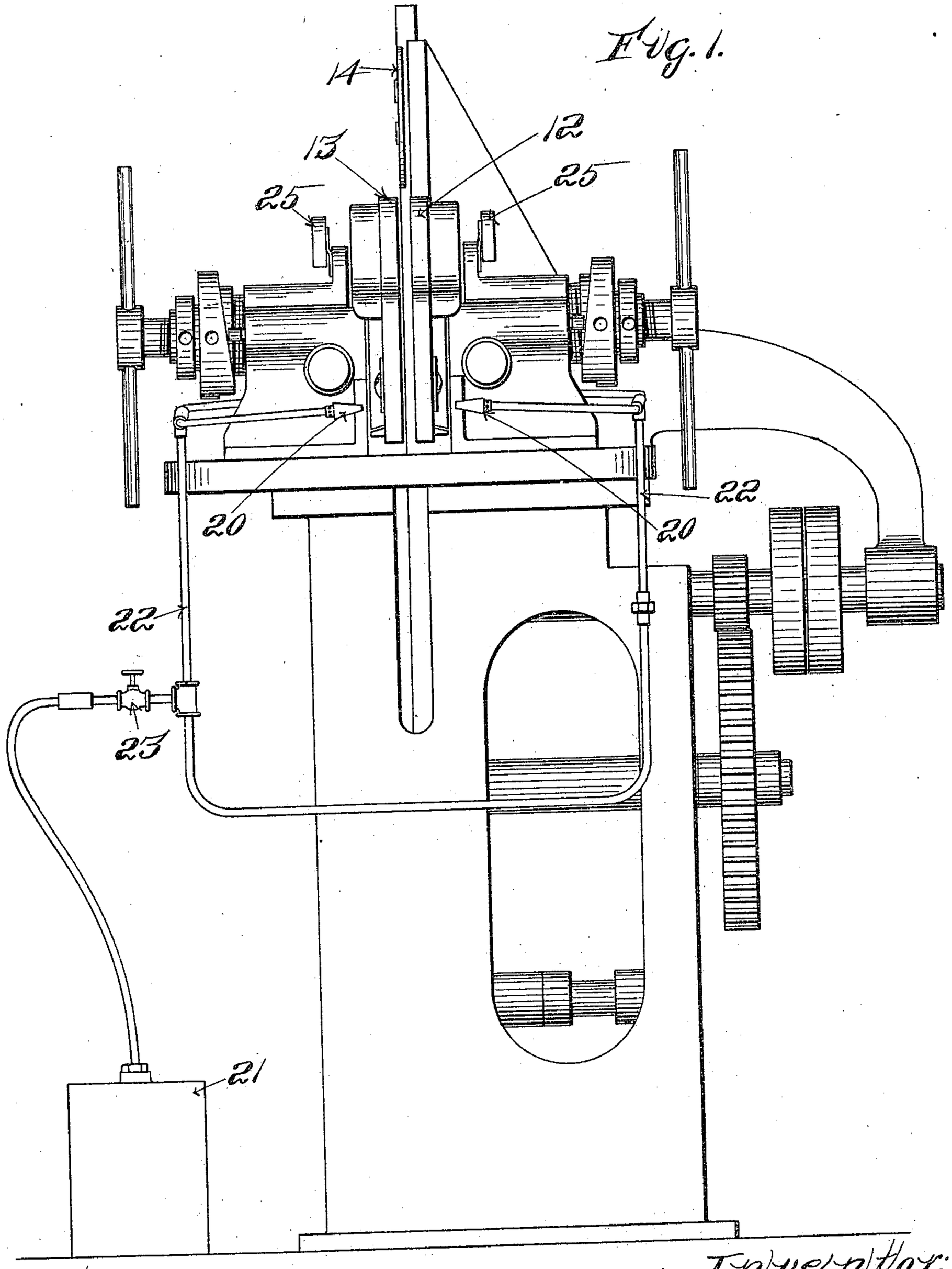
APPLICATION FILED JAN. 27, 1908.

944,337.

Patented Dec. 28, 1909.

2 SHEETS—SHEET 1.

Fig. 1.



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2 SHEETS—SHEET 2.

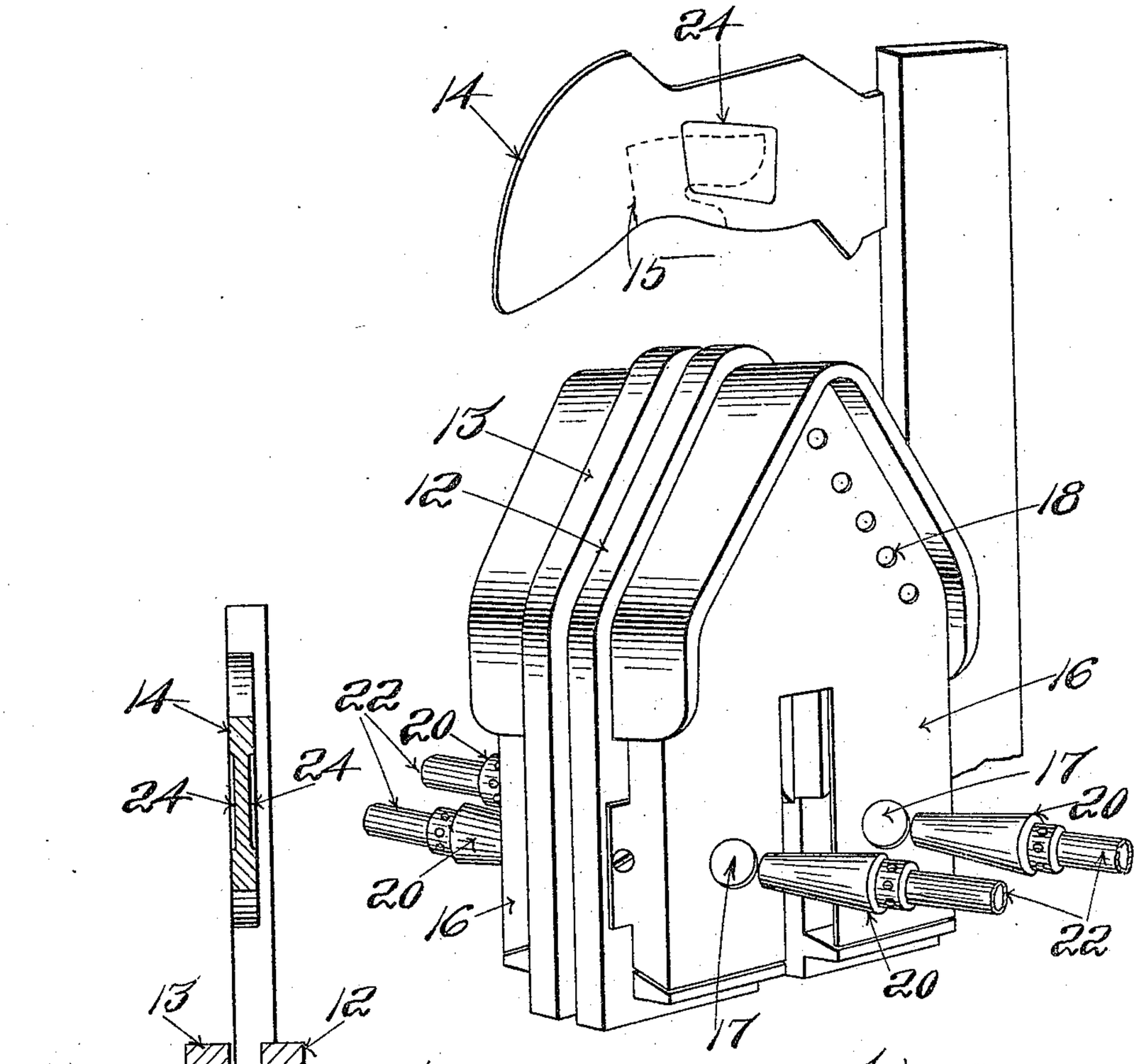

Fig. 2.

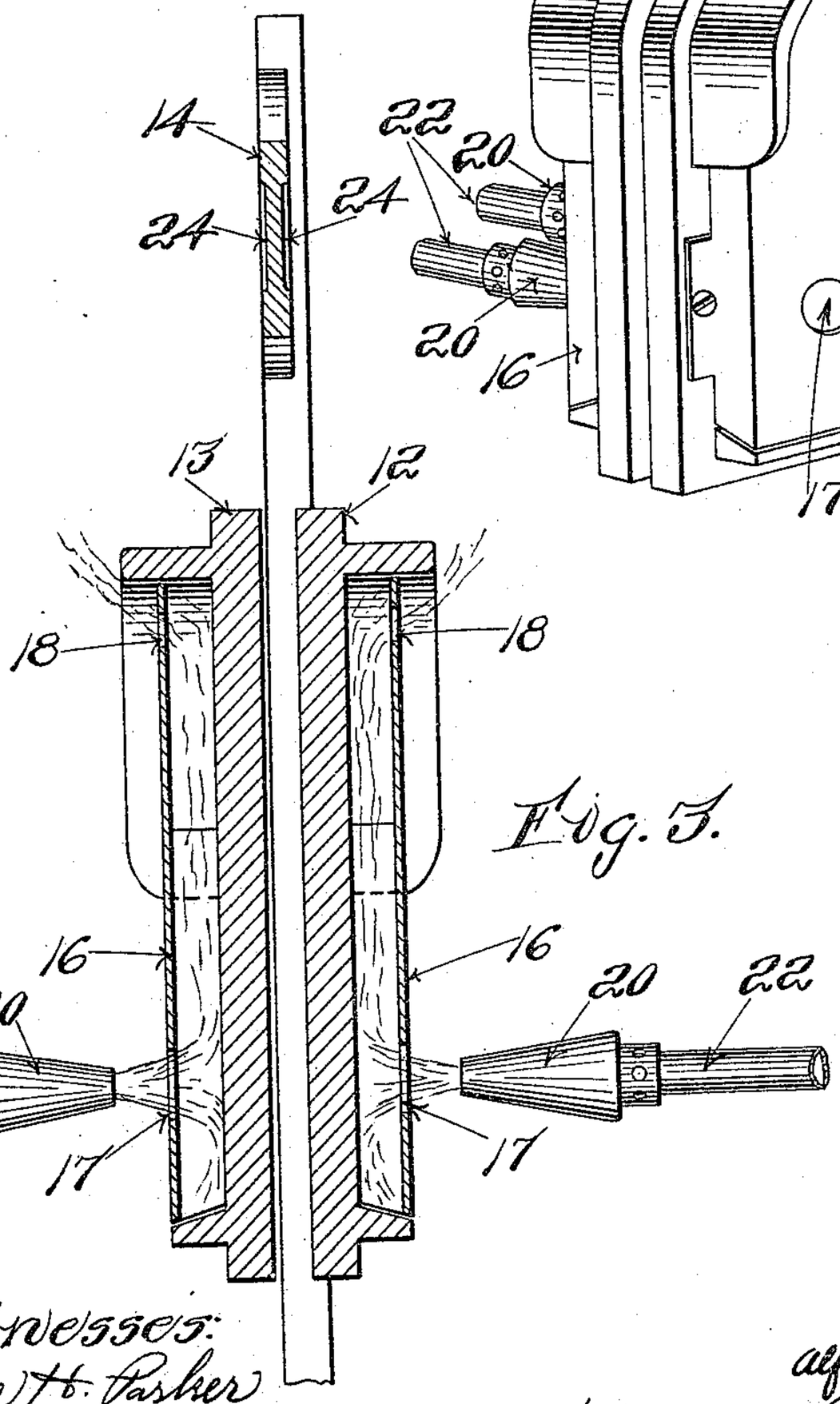

Fig. 3.

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UNITED STATES PATENT OFFICE.

ALFRED G. LEGG, OF BROCKTON, MASSACHUSETTS, ASSIGNOR TO LOCKETT CRIMPING MACHINE COMPANY, OF BROCKTON, MASSACHUSETTS, A FIRM.

CRIMPING-MACHINE.

944,337. Specification of Letters Patent. Patented Dec. 28, 1909.

Application filed January 27, 1908. Serial No. 412,720.

To all whom it may concern:

Be it known that I, ALFRED G. LEGG, citizen of the United States, residing at Brockton, county of Plymouth, State of Massachusetts, have invented a certain new and useful Improvement in Crimping-Machines, of which the following is a specification, reference being had therein to the accompanying drawings.

My invention has for its object certain improvements in crimping machines such for instance as are shown in my Patent No. 804,482, dated November 14, 1905, for the purpose of giving to the article operated upon more perfect and permanent treatment with less danger of injury to the stock. Machines like those described in my patent heretofore referred to have been effective to crimp stock, but there has been a tendency on the part of the stock to resume its original condition after it has been crimped, and to lose the crimp.

The machine embodying my present invention sets the crimp so that the article crimped has no tendency to lose its crimp. The machine embodying my invention also crimps the successive pieces more uniformly than has heretofore been possible without straining the leather unduly.

Another particular object is to provide means whereby the crimping or stretching effect upon the leather shall be distributed only through such portions of the article to be crimped as may be desired, certain other portions being free from the crimping action. As a consequence, the articles produced on machines embodying my invention are more convenient to use, and fit better.

The invention will be fully understood from the following description taken in connection with the accompanying drawings, and the novel features thereof are pointed out and clearly defined in the claim at the close of the specification.

Referring to the drawings,—Figure 1 is a side elevation of a machine embodying my invention. Fig. 2 is a perspective view of the crimping jaws, blade or plate, and the heating apparatus. Fig. 3 is a vertical section through the jaws, blade and heating apparatus.

As a large part of the apparatus composing my improved crimping machine is exactly like that shown and described in my previous patent heretofore referred to, I have thought it necessary in the following description to describe only so much of the machine as relates to my present improvement.

At 12 and 13 are shown jaws and at 14 the blade or plate by means of which the crimping operation is performed. The said blade or plate 14 is given a vertical reciprocatory movement by means of a slide and suitable mechanism in the well known manner, and forces the material to be crimped between the two jaws 12 and 13, each of which has the possibility of slight lateral yielding. The article to be crimped occupies the position upon the plate or blade 14 shown by dotted lines at 15 in Fig. 2. The jaws 12 and 13 are provided with smooth faces which come in contact with the leather to be crimped in place of the corrugated faces such as were shown in my patent heretofore referred to.

In order that the leather may be given a permanent set so that it will not tend to resume its original form after having been crimped, I provide a casing or housing 16 on each jaw, and provide means for heating the interior thereof. This is accomplished by making holes 17 near the bottom of the casing through which a gas flame or other suitable source of heat may be introduced. The casing 16 is also provided with a second series of holes 18 near the top, so as to permit a circulation of air through the interior of the casing.

Opposite the holes 17 I provide gas burners 20 which receive their fuel supply from suitable source of fuel supply 21 through the pipes 22, a valve 23 in the said pipes being provided to control the supply of gas to the burners. The said burners 20 are preferably what are known as atmospheric burners in which the gas is mixed with air so that the burners burn with a blue flame. The slight force of the gas projects the flame through the holes 17 into the interior of the casing 16, and tends to carry in with it a certain amount of air, so that the interior of the casing is filled with hot air mingled with the products of combustion, and an equal circulation of the heated air and products of combustion is maintained throughout the said casing. The products of combustion and hot air escape from the casing through the holes 18 heretofore referred to. By this means the jaws 12 and 13 are heated suffi-

ciently so that a set is given to the leather after it has been crimped, but the said jaws are not heated sufficiently to injure the leather. In fact as the machine operates with great rapidity and the pieces of leather do not remain in contact with the heated jaws, the said jaws may be heated to a high degree of temperature without injury to the stock. It will be seen that this means gives to the leather a set which tends to retain the piece of leather in the form given it by the jaws and has little or no tendency to resume its original shape. This makes the articles produced on this machine more easily available for use in the manufacture of shoes and makes it possible to produce better fitting shoes than heretofore and with no increase in labor. I also find that heating the said jaws causes the leather to be acted upon more uniformly than would otherwise be the case; also that a greater amount of crimp may be given the leather without injuring it; and that the successive pieces of leather crimped by the machine are more uniform.

In order that certain portions of the stock shall not be subjected to the stretching action of the jaws, I cut away that portion of the plate or blade which comes in contact with the portion of the leather which it is not desired shall be stretched. By so doing, it will be seen that the portion of the leather which comes in contact with the cut away portion of the blade is not gripped by the jaws and consequently is not subjected to any stretching action. If desired a hole may be cut all the way through the blade, but I prefer that a portion of the blade be cut away without making a hole through the blade as a hole in the blade is likely to endanger the fingers of the operator. This construction does not weaken the plate or blade as much as if it were entirely cut through. This construction is shown at 24 in Fig. 3.

In order that the operator may more conveniently feed the blanks of leather to the machine and may not accidentally rest his hand upon the jaws thus severely burning himself, I provide two rests 25 upon which he may conveniently support and steady his hands as he feeds the machine.

I claim as my invention:

In a leather crimping machine, a pair of crimping jaws having their operative faces parallel with each other, a reciprocable blade which is adapted to engage a sheet of leather intermediate its ends and carry it folded upon the blade between the said jaws, said blade being formed with recesses in its opposite faces to receive portions of the sheet, means for reciprocating said blade so as to carry the sheet folded thereon between said jaws, whereby the outer sides of the folded sheet, except the portions opposite said recesses, have rubbing contact with the operative faces of the jaws to stretch the sheet, said recesses being of sufficient depth whereby the said jaws are prevented from having crimping action upon the portions of the sheet which are opposite said recesses.

In testimony whereof I affix my signature, in presence of two witnesses.

ALFRED G. LEGG.

Witnesses:
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ALINE TARR.