

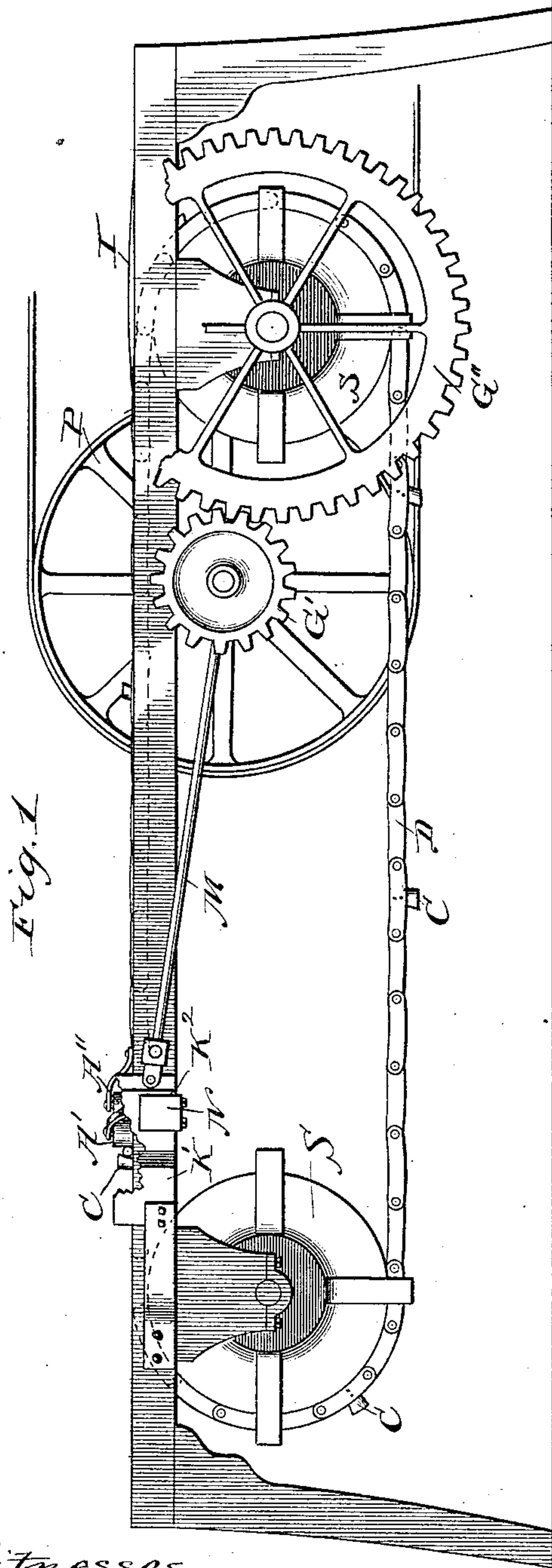
(No Model.)

T. A. GRIFFIN & C. ALKINS.

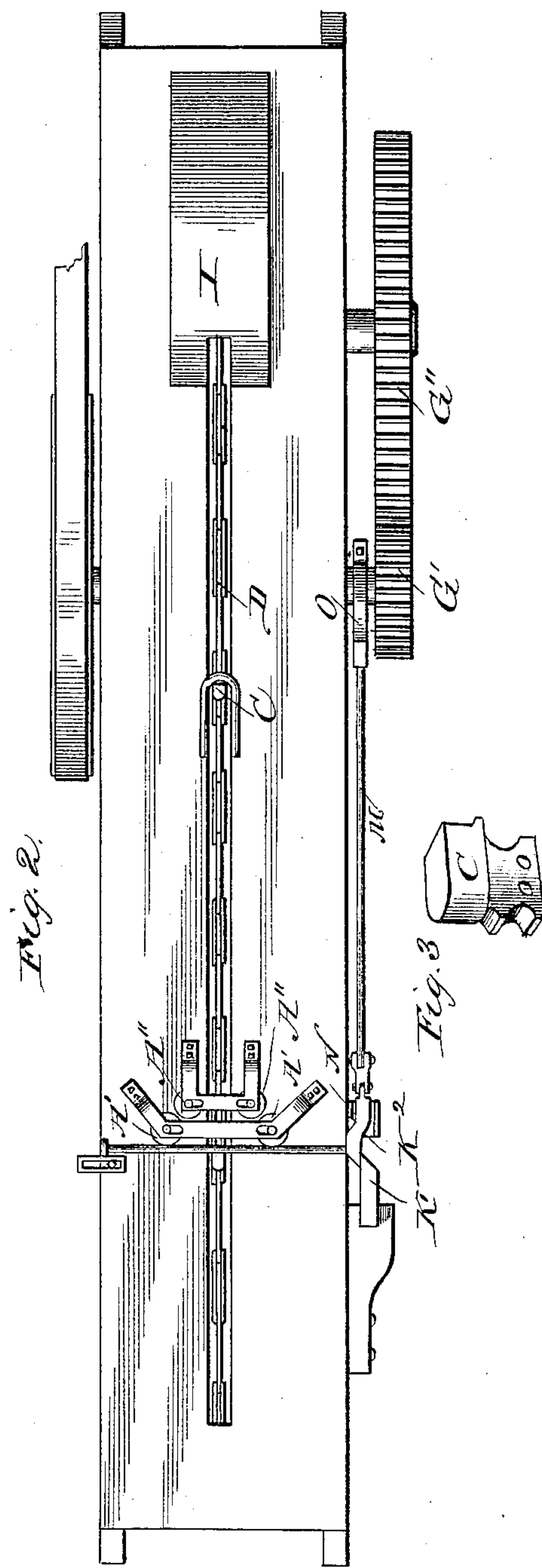
LINK MACHINE.

No. 326,973.

Patented Sept. 29, 1885.



Witnesses.
W. Rositer.
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Inventors
Thomas A. Griffin
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UNITED STATES PATENT OFFICE.

THOMAS A. GRIFFIN AND CHARLES ALKINS, OF CHICAGO, ILLINOIS,
ASSIGNORS TO THE AJAX FORGE COMPANY, OF SAME PLACE.

LINK-MACHINE.

SPECIFICATION forming part of Letters Patent No. 326,973, dated September 29, 1885.

Application filed June 1, 1885. (No model.)

To all whom it may concern:

Be it known that we, THOMAS A. GRIFFIN and CHARLES ALKINS, both of the city of Chicago, in the county of Cook and State of Illinois, have made certain new and useful Improvements in Link-Machines, of which the following is a sufficiently full, clear, and exact specification, reference being had to the drawings accompanying the same.

Our improvements are designed specially for gradually bending, without seams or splits, and with an even distribution of metal at the bend, of links for coupling railroad-cars, but are also adaptable to making chain-links of any size; and, further, are designed to combine in one machine an automatic arrangement of parts for cutting off the feed-rod at the proper length, bending the same, and delivering the bent rod or partially-completed links into a pile or basket; and our invention consists in the improvements and combinations hereinafter set forth and claimed.

In the drawings, Figure 1 shows a side elevation with the wheel G' partially broken away; Fig. 2, a plan of the machine, and Fig. 3 is a perspective of the form of carrier which we prefer.

P is the belt-wheel, connected by its axle and the cog-wheel G' to the wheel G'', upon the center of the axle of which is a sprocket-wheel, the sprockets of which may be forked or pointed and engage at any predetermined intervals with the links of the endless chain D, and impart motion to the latter.

Attached to the endless chain at convenient distances are carriers or benders C, which we prefer to be of the shape and construction shown in Fig. 3. The face of the bender which is presented to the rod or bar to be bent may be beveled to prevent the rod or bar from being raised from the table and wrongly presented to the mouth of the rollers; but by extending the endless chain back from the mouth of the rollers, and so placing the sprocket-wheel S as that the carrier C shall be presented horizontally to the rod or bar, the latter may be made, as shown in Fig. 3, with satisfactory results, as we have demonstrated by practical use of this machine.

I is an oval plate or apron, of any desired pitch and angle, which receives the partially-completed link from the carrier C, and deposits it at any desired point about the machine. Upon the shaft of the belt-wheel, at O, we put an eccentric, which, by means of the rod M, operates the movable knife K², the front face of which is beveled, as shown, so as that after the rod or bar has been cut off between the knives K' and K² at the proper length it will ride upon said bevel onto the table. The knives may be located at any point on the table by lengthening or shortening the rod M. The rod or bar is bent against and guided by the rollers A' A'', which are adjusted in the cast or wrought frames, between which and the bed-plate or table they are pivoted in any of the well-known methods.

Any number of pairs of rollers may be used and adjusted according to the size and weight of the rod or bar to be bent; but we prefer for the purpose named to use two pair, relatively arranged substantially as shown. Smooth posts may be substituted for said rollers.

We have invented and thus described a simple, effective, and automatic machine, requiring only the attendance of a feeder, for bending without seams or splits, and with an even distribution of metal at the bend, and for delivering sections of a bar or rod ready for welding into complete links, and also, in combination therewith, mechanism for cutting the rod into the requisite lengths; and the said mechanism is so combined and may be worked with so little lost motion and so rapidly as that it is possible to so cut the rod and afterward bend it without additional heat, as described.

We claim—

1. The combination, with mechanism for operating the same, of an endless chain provided with carriers which take the rod-section through guiding or forming rollers, and two pairs of said rollers so relatively arranged as to form a funnel-mouth, producing a gradual bending of the rod-section, all constructed and arranged substantially as and for the purpose set forth.

2. The combination, with mechanism for op-

erating the same, of an endless chain, carriers or benders thereon, guiding or forming rollers, and the beveled plate or apron I, substantially as and for the purpose set forth.

- 5 3. The combination, in a bending-machine, of the beveled knife K^2 , the knife K' , and mechanism for bending the rod-section, consisting of an endless chain carrying benders,

and two pairs of rollers arranged to form a funnel-mouth, substantially as shown and described. 10

THOMAS A. GRIFFIN.
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Witnesses:

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