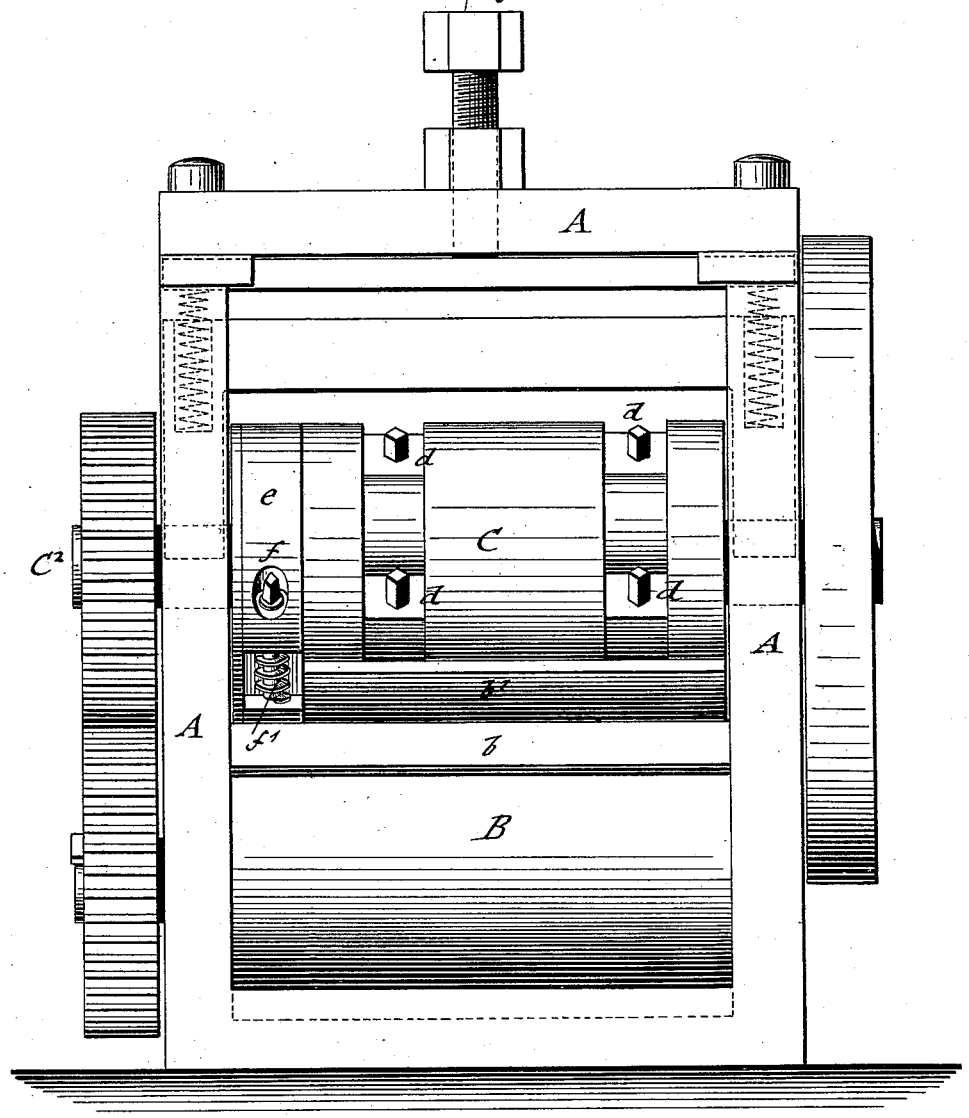
(No Model.) 2 Sheets—Sheet 1.

W. LANG.

METAL FEEDING ROLLS.

No. 345,386. Patented July 13, 1886.

Fig. 1.



WITNESSES:

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Carl Karp

INVENTOR

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BY

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(No Model.) 2 Sheets—Sheet 2.

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METAL FEEDING ROLLS.

No. 345,386. Patented July 13, 1886.

Fig. 2.

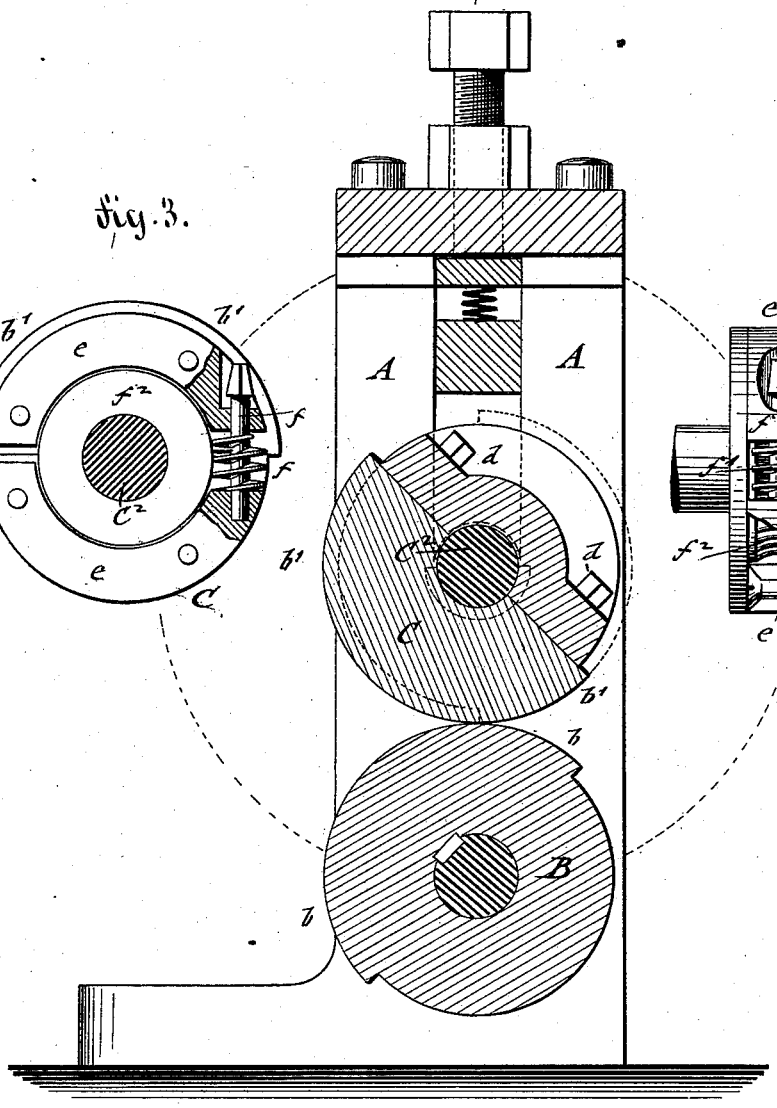


Fig. 3.

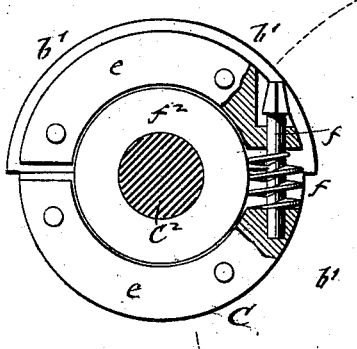
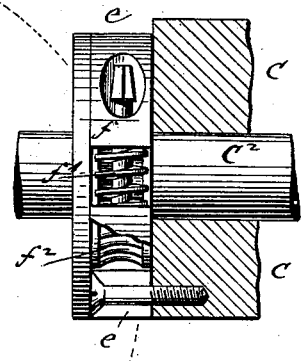


Fig. 4.



WITNESSES:

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UNITED STATES PATENT OFFICE.

WILLIAM LANG, OF BROOKLYN, NEW YORK.

METAL-FEEDING ROLL.

SPECIFICATION forming part of Letters Patent No. 345,336, dated July 13, 1886.

Application filed May 8, 1886. Serial No. 201,517. (No model.)

To all whom it may concern:

Be it known that I, WILLIAM LANG, of Brooklyn, in the county of Kings and State of New York, have invented certain new and useful Improvements in Rolls for Feeding Wire and Sheet Metal, of which the following is a specification.

This invention relates to an improved set of rolls for metal-working machines, said rolls being capable of adjustment, so as to feed longer and shorter pieces within certain limits; and the invention consists of the combination of a lower rotary feed-roll that is provided with a semicircular offset or shoulder, and of a second upper roll that rotates in contact with the offset of the lower roll, and is made of two semicircular sections, which are clamped together, one section being provided with an offset or shoulder that corresponds in shape and size with the semicircular offset of the other roll. The sections of the upper feed-roll can be axially adjusted to the shaft of the roll by a worm-wheel at one end of the shaft, which meshes with a worm-screw supported in bearings attached to the sections of the upper roll. The sections are tightly clamped after the shaft has been axially adjusted in the same by clamp-screws arranged in recesses of the smaller section of the roll.

In the accompanying drawings, Figure 1 represents a front elevation of my improved feed-rolls. Fig. 2 is a vertical transverse section of the same, and Figs. 3 and 4 are details of the worm-gear for adjusting the relative positions of the upper feed-roll and its shaft.

Similar letters of reference indicate corresponding parts.

In the drawings, A represents the supporting-frame of my improved feed-rolls, which frame is provided with stationary bearings for the shaft of the lower roll, B, and with adjustable spring-cushioned bearings for the shaft of the upper feed-roll, C. The lower feed-roll, B, is provided with an offset or shoulder, *b*, extending around one-half of its circumference, which offset forms contact with a similar offset, *b'*, on the feed-roll C, that is made of two semicircular sections, which are tightly clamped to the shaft C^2 of the feed-roll by screws *d d*, the heads of which are located in transverse recesses of the smaller section of the feed-roll C, as shown in Figs. 1 and 2. To the ends of the sections of the shell C are attached semicircular segments *e e*, which serve to support at one of their ends, on suitable bearings, the spindle *f* of a worm, *f'*, which worm meshes with a worm-wheel, f^2, that is keyed to the shaft of the feed-roll C. The end of the spindle *f* is provided with a square head, that is readily engaged by a key for the purpose of turning the spindle and worm, and changing thereby the relative position of the shaft and roll-sections by the axial shifting of the shaft C^2 in the roll C. The wire or sheet metal to be fed by the feed-rolls is engaged by the contact of the offsets or shoulders *b b'* of the rolls, which offsets can feed larger or smaller pieces, according to the length of contact of the offsets of the rolls. The largest pieces that can be fed by the rolls are equal to the circumference of the semicircular offsets, which are placed in contact with each other from one end to the other. When a smaller piece of wire or sheet metal is to be fed, the position of the upper roll, C, is changed by the adjusting worm-gear mechanism of the shaft C^2, so that only such a portion of the circumference of the offset *b'* of the upper roll as corresponds to the length of wire or metal to be fed is in contact with the offset *b* of the lower feed-roll, as shown in dotted lines in Fig. 2. Rotary motion is transmitted from one feed-roll to the other by proper gear-wheels. In this manner, by the axial adjustment of the shaft of the upper feed-roll in the roll any length of wire or sheet metal within the limits of the length of the entire circumference of the offset portions can be fed by the rolls from the longest contact between the semicircular offsets to the shortest contact that can be obtained between the offset portions of the feed-rolls. The same feed-rolls can consequently be used for feeding pieces of varying length, and can thus be used for different kinds of work without requiring a special set of feed-rolls for each different size of wire or metal to be fed.

Having thus described my invention, I claim as new and desire to secure by Letters Patent—

1. The combination, with a lower rotary feed-roll having an offset or shoulder extending along a part of its circumference, of an upper

rotary feed-roll consisting of two sections that are clamped to each other and the shaft, one section having also an offset, so as to form contact with the enlarged portion of the lower feed-roll, and a worm-gear mechanism by which the shaft of the upper roll may be adjusted axially in the roll, substantially as set forth.

2. The combination, with a lower rotary feed-roll having an offset or shoulder, of an upper rotary feed-roll formed of two sections clamped together by screws located in recesses of one section, the other section being provided with an offset or shoulder corresponding to the offset of the lower feed-roll, and segments attached to the ends of the sections of the upper roll, and a worm-gear by which the shaft of the upper roll can be axially adjusted in said roll, so as to change thereby the relative position of the offset of the upper feed-roll to the offset of the lower roll, substantially as set forth.

3. The combination of a feed-roll composed of a shaft and two semicircular sections, segments attached to the ends of said sections, a worm-screw supported in bearings of said segments, and a worm-wheel keyed to the shaft of the feed-roll, the worm-gear permitting the axial adjustment of the shaft to the roll, substantially as set forth.

In testimony that I claim the foregoing as my invention I have signed my name in presence of two subscribing witnesses.

WILLIAM LANG.

Witnesses:
PAUL GOEPEL,
CARL KARP.