(No Model.) 3 Sheets—Sheet 1.

M. ROENSPIESS & M. FLYNN.

MACHINE FOR CURVING AND STRAIGHTENING STEEL RAILS.

No. 418,229. Patented Dec. 31, 1889.

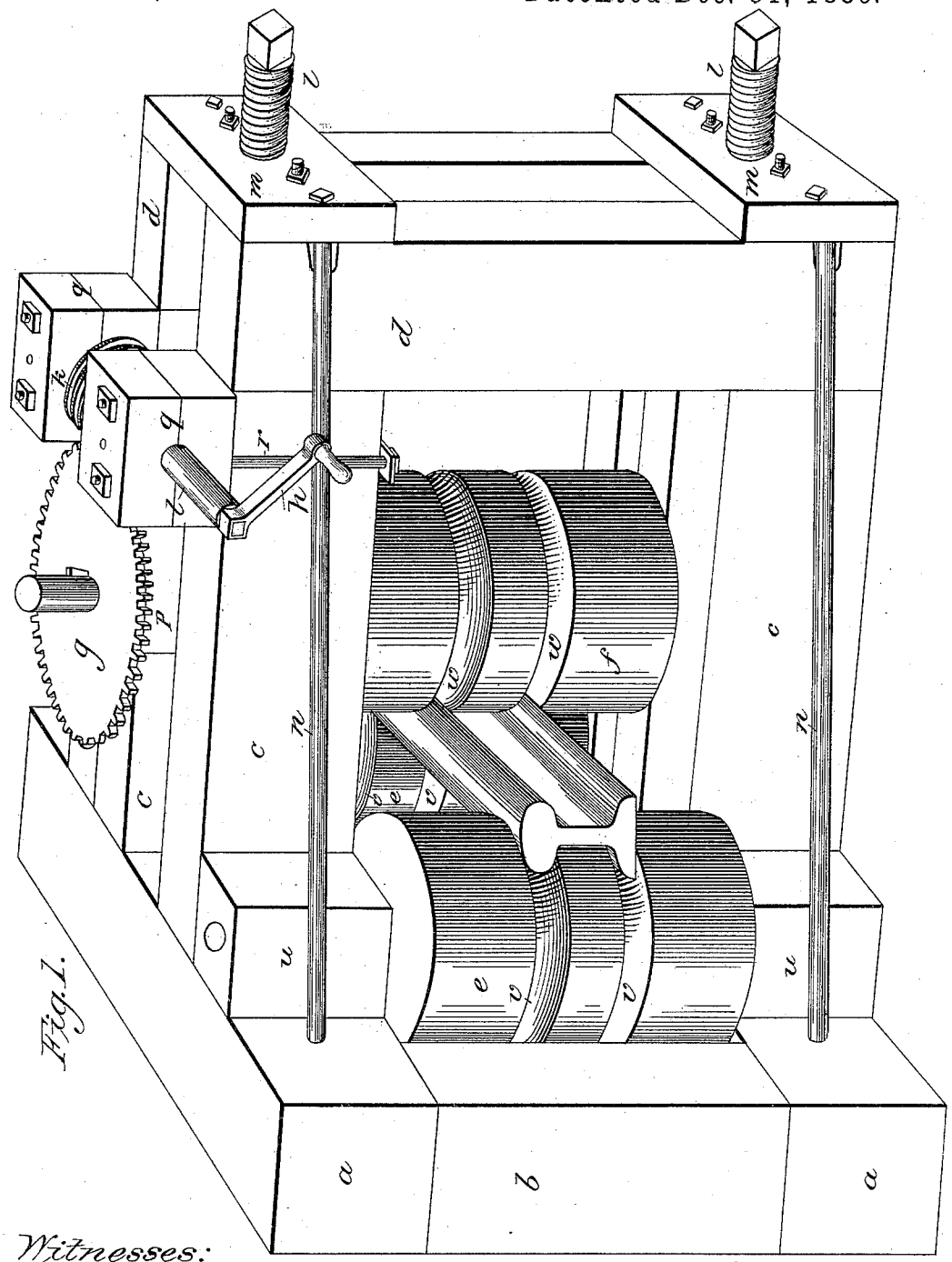


Fig. 1.

Witnesses:
L. L. Landon.
H. C. Fowler

Inventor:
Max Roenspiess
and Matt. Flynn
By Eugene Ayres
Attorney

N. PETERS, Photo-Lithographer, Washington, D. C.

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Fig. 2.

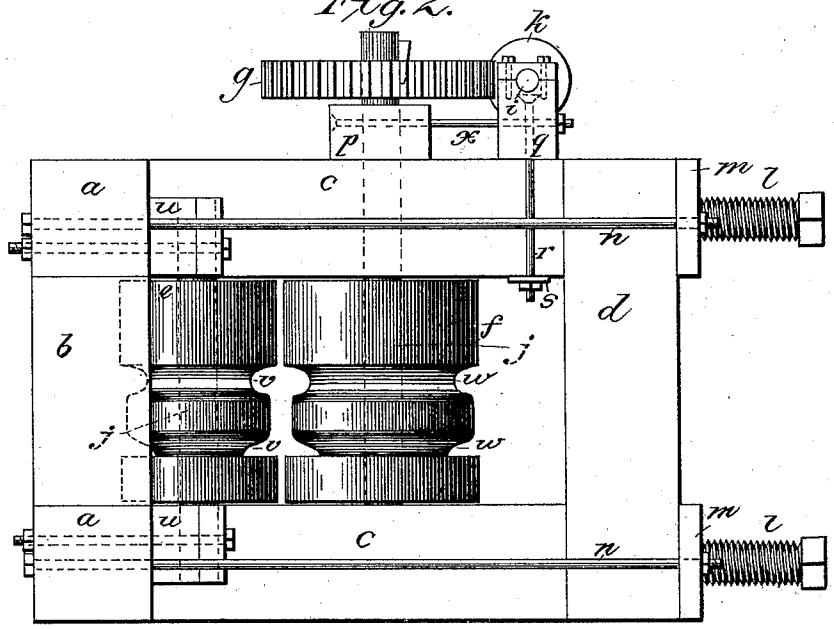
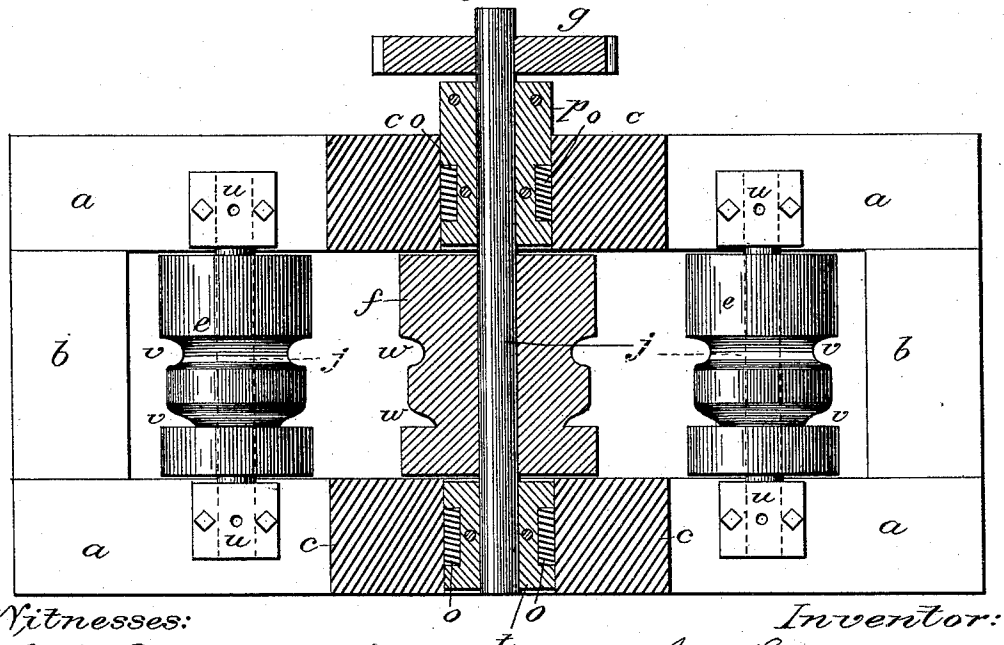


Fig. 3.



Witnesses:
L. L. Landon
H. C. Poole

Inventor:
Max Roenspiess
and Matt. Flynn
By Eugene Ayres
Attorney

N. PETERS. Photo-Lithographer. Washington, D. C.

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Fig. 4.

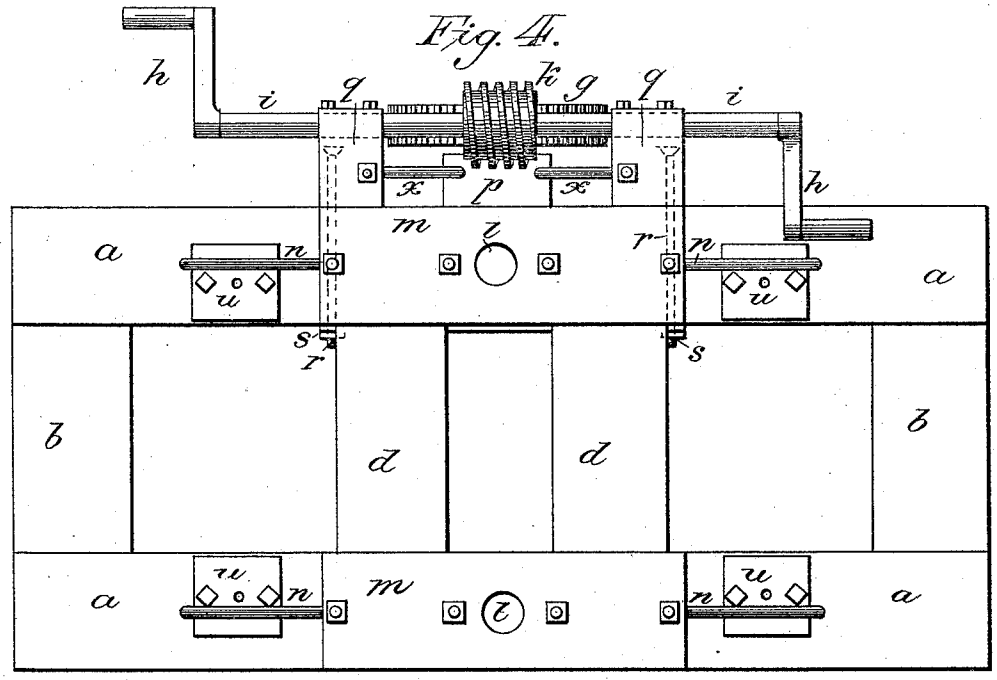


Fig. 5.

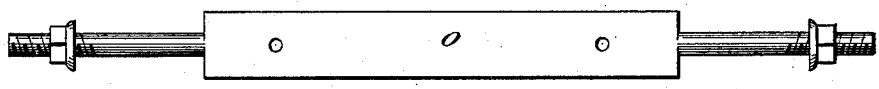


Fig. 6.

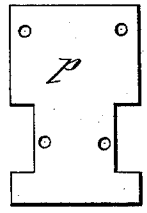


Fig. 7.

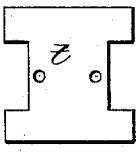
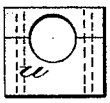


Fig. 8.



Witnesses:
E. G. Landon
H. C. Poole

Inventor:
Max Roenspiess
and Matt. Flynn
By Eugene Ayres
Attorney

N. PETERS. Photo-Lithographer, Washington, D. C.

UNITED STATES PATENT OFFICE.

MAX ROENSPIESS AND MATTHEW FLYNN, OF ST. JOSEPH, MISSOURI.

MACHINE FOR CURVING AND STRAIGHTENING STEEL RAILS.

SPECIFICATION forming part of Letters Patent No. 418,229, dated December 31, 1889.

Application filed June 24, 1889. Serial No. 315,432. (No model.)

To all whom it may concern:

Be it known that we, MAX ROENSPIESS and MATTHEW FLYNN, citizens of the United States, residing at St. Joseph, in the county of Buchanan and State of Missouri, have invented certain new and useful Improvements in Machines for Curving and Straightening the Cold Steel Rails ordinarily used by Railways; and we do declare the following to be a full, clear, and exact description of the invention, such as will enable others skilled in the art to which it appertains to make and use the same, reference being had to the accompanying drawings, and to the letters of reference marked thereon, which form a part of this specification.

Figure 1 is a perspective view of the machine. Fig. 2 is an end elevation of the machine. Fig. 3 is a cross-section of Fig. 2. Fig. 4 is a side elevation of the machine. Fig. 5 is an enlarged detail view of the channel-iron with nuts on. Fig. 6 is an enlarged detail view of one of the boxes through which the journal of the main roller passes. Fig. 7 is an enlarged detail view of the lower box of the main roller, and Fig. 8 is an enlarged detail view of one of the boxes for the small rollers.

Similar letters refer to similar parts throughout the several views.

Our invention consists of the following-described two principal parts: first, a frame constructed out of six-by-six-inch oak or other suitable timber, consisting of two sills *a a*, two uprights *b b*, four horizontal posts *c c c c*, and two caps *d d*; second, two iron rollers *e e*, turned out at *v v v v*, so as to admit a steel rail, and one iron roller *f*, also turned out so as to admit a rail at *w w*. Each roller has a journal of suitable dimensions to run in iron boxes.

On the upper end of the journal of roller *f* is a cog-wheel *g*, propelled by two cranks *h h*, Fig. 4, which are fastened to journal *i*, and to which is fastened an endless screw *k*. After a steel rail is placed between the rollers enough pressure to bend the rail to the required curve, or to straighten a rail, is applied by means of two jack-screws *l l*, Fig. 2, which work in iron plates *m m*. These plates are each held in place by two rods *n n*, which go through the plates and frame, and also by channel-irons *o o*, Fig. 3, which are bolted to the horizontal posts *c c c c*, the ends of the channel-irons to be rounded, with thread and nuts. Rods *n n n n* and channel-irons *o o o o* also serve as truss-rods to the frame. The endless screw *k* is held in position and gear by two iron rods *x x*, which go through the box *p* and boxes *q q*. The boxes *q q* are held down by two bolts *r r*, which pass through the lower part of the boxes *q q*, just outside of the upper horizontal posts *c c*, nuts being on the ends of the bolts *r r*, and a plate of iron *s*, which reaches across the bottoms of the upper horizontal posts *c c*. Boxes *u u u u* are of iron, constructed of suitable size for journals.

t represents the lower box of the main roller *f*, and *j j j* represent the journals of the rollers.

Bolts *y y* in each box *u*, as shown in Fig. 8, are for the purpose of holding *u* in place on sill *a*. Bolts *z z*, Fig. 2, are for the purpose of holding upper and lower halves of box *q* together. Jack-screws *l l* bear against the journal-boxes *t* and *p*, and these journal-boxes slide along channel-irons *o o*.

The amount of pressure to be applied to secure the degree of curvature of rail desired will be shown by an indicator to be attached to one of the boxes *q*. After a rail is placed between the rollers at *v* and *w* and the necessary pressure is applied, the rail is drawn through the machine by the revolving of endless screw *k* by cranks *h h*.

For convenience the machine may be put upon a rubble-car, which should be supplied with a three-inch roller on each end to help carry the weight of rail.

From the foregoing description it will be seen that our invention does not accomplish the purpose for which it is intended by "kinking" a rail, but in its operation curves or straightens a rail of any weight truer, faster, and cheaper than any machine constructed for a similar purpose.

What we claim as our invention, and desire to secure by Letters Patent, is—

1. The combination of frame consisting of sills *a a*, uprights *b b*, horizontal posts *c c c c*, caps *d d*, with rollers *e e* and *f*, channel-irons *o o o o*, cog-wheel *g*, endless screw *k*, jack-screws *l l*, journals *i* and *j j j*, boxes *p t q q u u u u*, plates *m m* and *s*, rods *x x* and *n n n n*,

bolts *r r*, *y y*, and *z z*, and cranks *h h*, for the purpose specified, substantially as described.

2. The combination of rollers *e e*, turned out at *v v v v*, and roller *f*, turned out at *w w*, cog-wheel *g*, cranks *h h*, endless screw *k*, journals *i* and *j j j*, plates *m m*, rods *n n n n*, channel-irons *o o o o*, boxes *p*, *t*, *q q*, and *u u u u*, bolts *r r*, *z z*, and *y y*, horizontal posts *c c c c*, rods *x x*, plate *s*, jack-screws *l l*, sills *a a*, uprights *b b*, and caps *d d*, substantially as described, for the purpose specified.

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

MAX ROENSPIESS.
MATTHEW FLYNN.

Witnesses:
WM. B. CHURCHILL,
E. D. SHRYOCK.