

(No Model.)

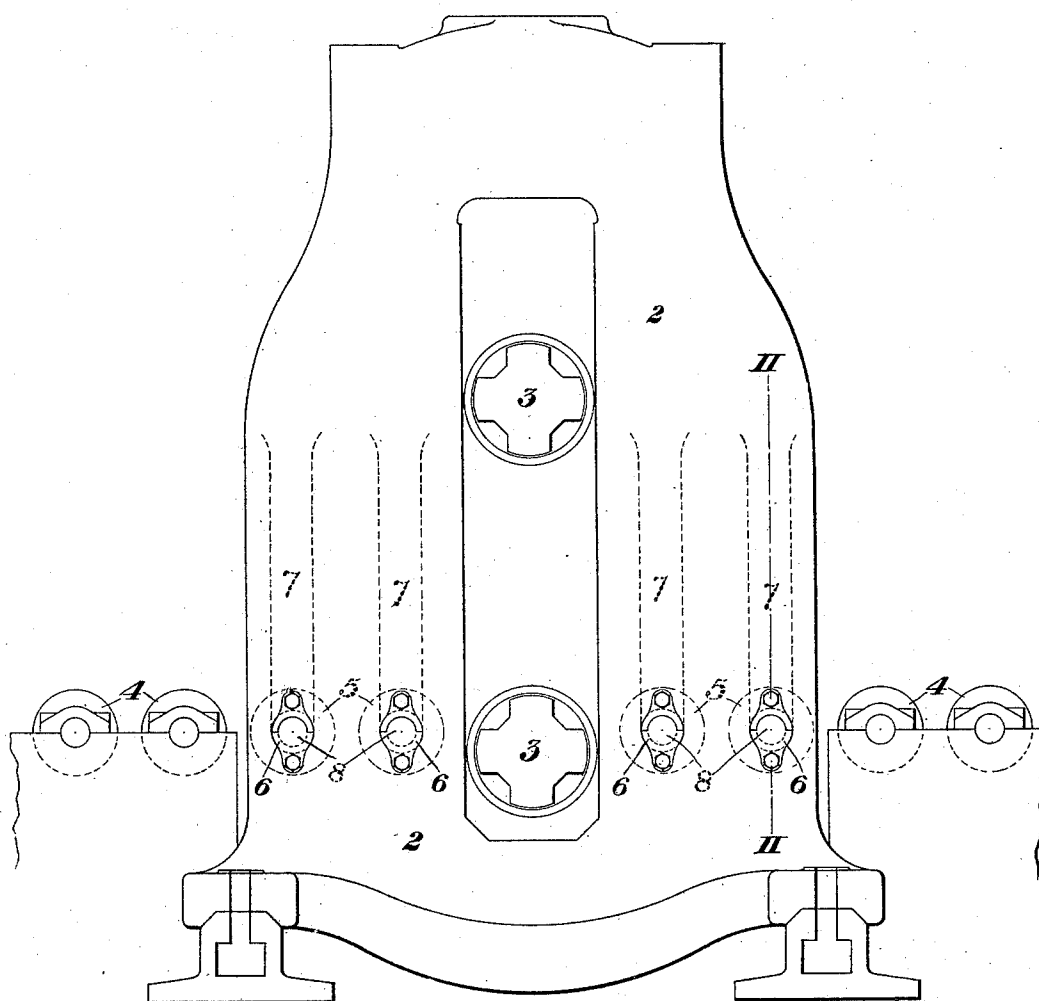
2 Sheets—Sheet 1.

J. A. BURNS.
HOUSING FOR ROLLS.

No. 469,397.

Patented Feb. 23, 1892.

Fig. 1.



WITNESSES

N. H. Conner

H. L. Gill

INVENTOR

James A. Burns

by his attorneys

H. B. Kewell & Sons

(No Model.)

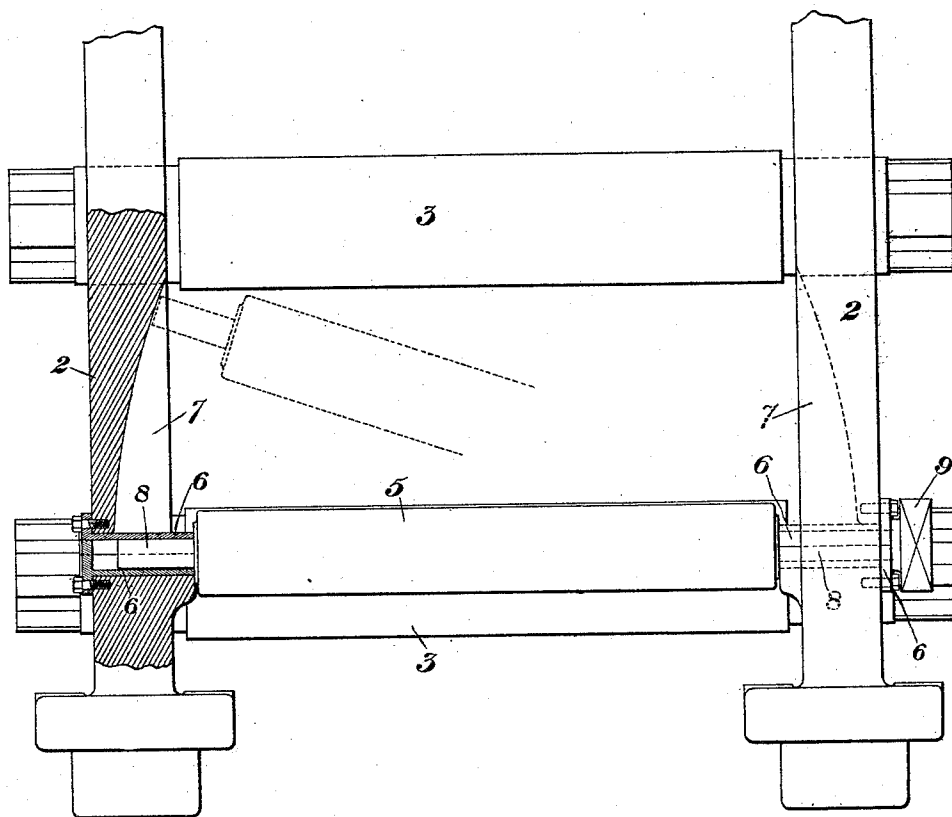
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Fig. 2



WITNESSES

W. B. Cowan
H. L. Gill

INVENTOR

James A. Burns
by his attorneys
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UNITED STATES PATENT OFFICE.

JAMES A. BURNS, OF HOMESTEAD, PENNSYLVANIA.

HOUSING FOR ROLLS.

SPECIFICATION forming part of Letters Patent No. 469,397, dated February 23, 1892.

Application filed July 28, 1891. Serial No. 400,959. (No model.)

To all whom it may concern:

Be it known that I, JAMES A. BURNS, of Homestead, in the county of Allegheny and State of Pennsylvania, have invented a new and useful Improvement in Housings for Rolls, of which the following is a full, clear, and exact description.

The object of my invention is to provide means for setting rollers in the housings of metal rolls in such manner that they can be removed and reset without that difficulty which has been incident to constructions of housings heretofore known and used, in which the rollers have been made necessarily hollow and have been set on axial spindles journaled in bearings in the housings. To remove such roller the spindle is first drawn out lengthwise from the roller and housings and the roller then lifted vertically; but when the roller is broken or cracked this can be done only with difficulty.

By means of my invention the roller can be lifted directly from the housing, whether it be made separate from its spindle or integral therewith.

Figure 1 of the accompanying drawings shows in end elevation roll-housings embodying my invention. Fig. 2 is a front elevation, one of the housings being partly in vertical section on the line II II of Fig. 1.

2 represents the roll-housings, which may be of the general form in common use, and 3 3 are the rolls contained therein. 4 4 are rollers of the feed-tables which lead up to the rolls on opposite sides, and 5 5 are rollers which form continuations of the feed-tables and are journaled in the housings. It is to the setting of the last-named rollers that my invention especially relates. Each of said rollers has at its ends neck portions 8, reduced in diameter, which rest in journal bearings or brasses 6, set in recesses on opposite sides of the housing, and immediately above said bearings the housings are formed with inner vertical grooves 7, which may be curved in outline, as shown. The brasses 6 are flanged at their outer ends, and they (or at least the upper brasses) are of such form that they can be withdrawn longitudinally from the roller-necks. One of the necks of each roller is

prolonged, so as to extend beyond the outside of the housing, in order that it may be adapted to receive a pinion 9, and each of the adjacent rollers is connected by gearing, enabling the rollers 5 to be driven in unison with the other rollers of the feed-table.

The figures of the drawings show by full lines the rollers set in operative position in the housings. If one of the rollers should break, or if for any reason it should be desired to remove it, I unkey and remove the pinion from its longer neck, draw off the upper brasses, and then raise in the groove the end of the roller having the shorter neck, as indicated by dotted lines in Fig. 2. This end having been freed from the housing, the entire roller may be lifted out freely and without difficulty. The replacing of the roller is performed in the same way, but in reverse order.

The form of the parts of the apparatus may be varied by the skilled mechanic. Thus the rollers may be cast integral with their spindles or set loosely thereon, though it is one of the advantages of my invention that it makes it possible to construct the rollers rigidly secured to the spindles or cast integrally therewith.

I claim—

1. Roll-housings having suitable recesses for the bearings of the working rolls and having also recesses adapted to receive the bearings of feed-rollers and grooves extending from said recesses and arranged to permit removal and setting of the feed-rollers, substantially as and for the purposes described.

2. Roll-housings having suitable recesses for the bearings of the working rolls and having also recesses adapted to receive the bearings of feed-rollers and grooves extending upwardly from said recesses and arranged to permit removal and setting of the feed-rollers, substantially as and for the purposes described.

In testimony whereof I have hereunto set my hand this 23d day July, A. D. 1891.

JAMES A. BURNS,

Witnesses:

W. B. CORWIN,
H. L. GILL.