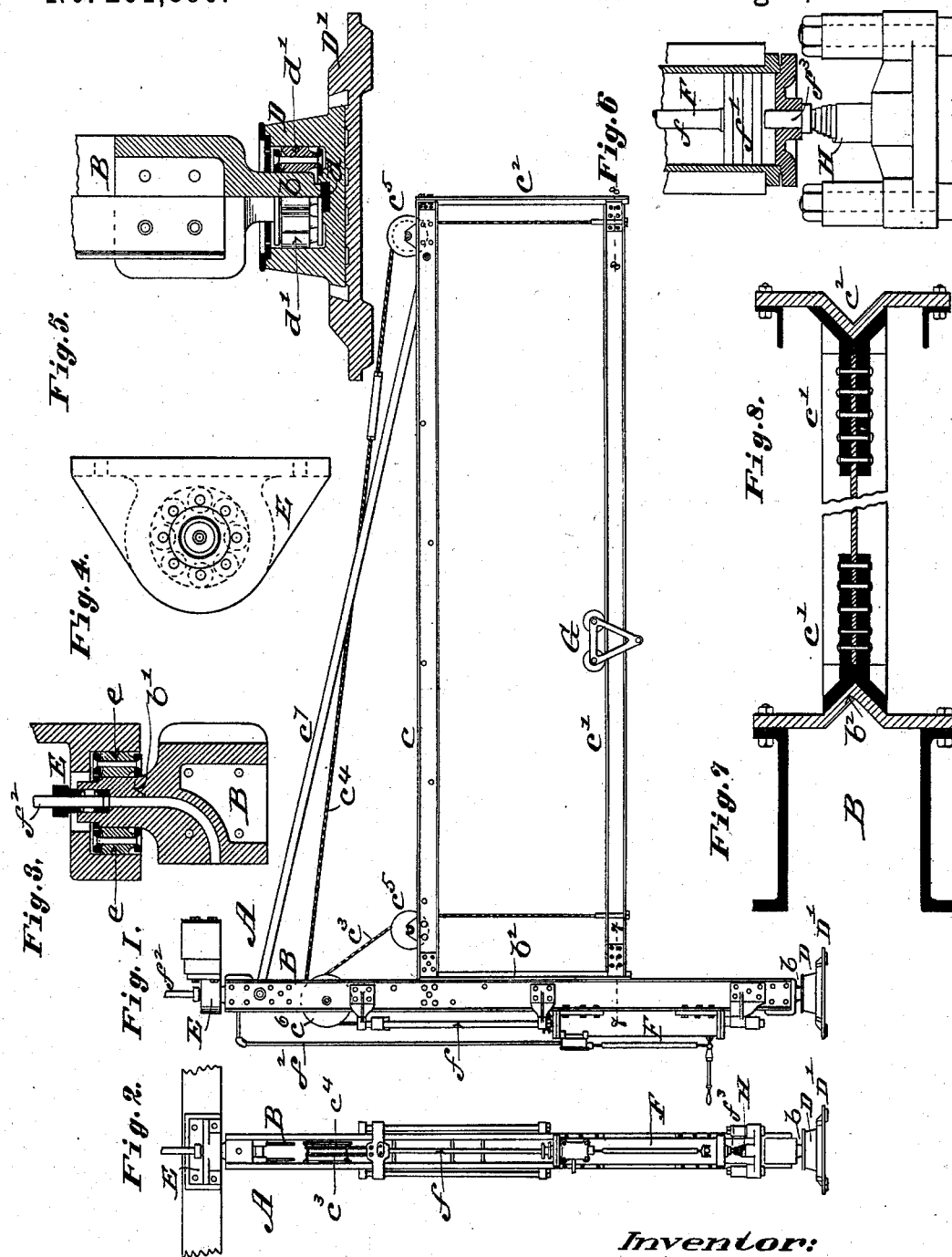


(No Model.)

R. BARRETT.
CRANE.

No. 261,899.

Patented Aug. 1, 1882.



Attest:

Samuel N. Boyd
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by C. P. Moody, atty

UNITED STATES PATENT OFFICE.

ROBERT BARRETT, OF ST. LOUIS, MISSOURI, ASSIGNOR OF ONE-HALF TO
PAUL A. FUSZ, OF SAME PLACE.

CRANE.

SPECIFICATION forming part of Letters Patent No. 261,899, dated August 1, 1882.

Application filed June 21, 1882. (No model.)

To all whom it may concern:

Be it known that I, ROBERT BARRETT, of St. Louis, Missouri, have made a new and useful Improvement in Cranes, of which the following is a full, clear, and exact description, reference being had to the annexed drawings, making part of this specification, in which—

Figure 1 is a side elevation of the improved crane; Fig. 2, a rear elevation of the crane-post and bearings; Fig. 3, a vertical section of the upper end of the crane-post and bearing; Fig. 4, a plan of the upper bearing; Fig. 5, a vertical section, partly in elevation, of the lower end of the crane-post and bearing; Fig. 6, a view, partly in vertical section and partly in elevation, showing the lower end of the cylinder used in operating the jib and the means for cushioning the piston; Fig. 7, a horizontal section taken on the line 7 7 of Fig. 1, and Fig. 8 a horizontal section taken on the line 8 8 of Fig. 1. The last six views are upon an enlarged scale.

The same letters denote the same parts.

The present improvement relates principally to the jib of the crane and the means for operating it.

The improvement also has reference to the bearing of the crane-post and to the means for cushioning the cylinder-piston.

A represents the improved crane. B represents the crane-post; C, the jib; D, the lower bearing or step of the post, and E the upper bearing of the post.

The jib is in two parts, an upper, *c*, and a lower, *c'*, beam. The upper beam, *c*, is a fixture upon the crane-post, standing out horizontally or thereabout therefrom. The lower beam, *c'*, projects horizontally from the crane-post, and is vertically adjustable thereon, and as follows: The inner end of the beam *c'* moves upon a bearing, *b*², (preferably V-shaped in cross-section,) upon the crane-post. The outer end moves upon a bearing, *c*², which depends from the upper beam, *c*, at the outer end thereof. The beam *c'* is upheld by the chains *c*³ *c*⁴, which lead from the beam *c'* and respectively at the inner and outer ends of the beam upward over rollers *c*⁵ upon the upper beam, and thence over a roller, *c*⁶, upon or in the crane-

post, and thence to the piston-rod *f* of the cylinder F, and on admitting the steam to the cylinder the piston *f'* is drawn downward therein and the beam *c'* is drawn upward on the bearings *b*² *c*², and when the steam is allowed to escape from the cylinder the beam *c'* is lowered on the bearings *b*² *c*². The beam *c'* can thus be adjusted in a horizontal position at any level between the termini of the bearings *b*² *c*². The traveler G upon the beam *c'* is used in the customary manner. The upper beam is stayed by means of the tie *c'*.

The journal *b*, at the lower end of the crane-post, rests on a plate, *d*, in the step D. The step is held in the base D'. A series of friction-rollers, *d'* *d'*, surround and laterally support the journal *b*. The journal *b'*, at the upper end of the crane-post, is similarly surrounded and supported by the friction-rollers *e e*. The latter are suitably held in the bearing E.

Steam is admitted to the cylinder F through the supply-pipe *f*², which pipe passes downward through the journal *b'* and post B, as shown in Fig. 3, and thence to the cylinder. The cylinder is attached to and rotates with the crane-post.

It will be seen that the piston *f'* is connected through the chains *c*³ *c*⁴ directly with the movable beam *c'*. As the piston reaches its lower limit it encounters the stop *f*³. This last-named part has an elastic support in the spring H. This serves to cushion the piston in its downward movement. The exhaust from the cylinder serves to control the movement of the piston in the opposite direction.

I claim—

1. The combination of the crane-post B, the bearing *b*², the beam *c*, the bearing *c*², and the adjustable beam *c'*, substantially as described.

2. A crane-jib having a vertically-adjustable horizontal beam, *c'*.

3. The combination of the crane-post B, the cylinder F, the chains *c*³ *c*⁴, the beam *c*, and the beam *c'*, substantially as described.

4. The combination of the crane-post B, the journal *b*, the step D, the rollers *d'* *d'*, and the plate *d*, substantially as described.

5. The combination of the crane-post B, the

journal *b'*, the bearing E, and the friction-rollers *e e*, substantially as described.

6. The combination of the crane-post B, the cylinder F, the piston *f'*, the stop *f*³, and the
5 spring H, substantially as described.

7. A crane-jib having a vertically-adjustable beam, *c'*.

8. The combination of the post B, the jour-

nal *b*, the step D, and the rollers *d' d' d'*, said rollers being separated from each other, substantially as described.

ROBERT BARRETT.

Witnesses:

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