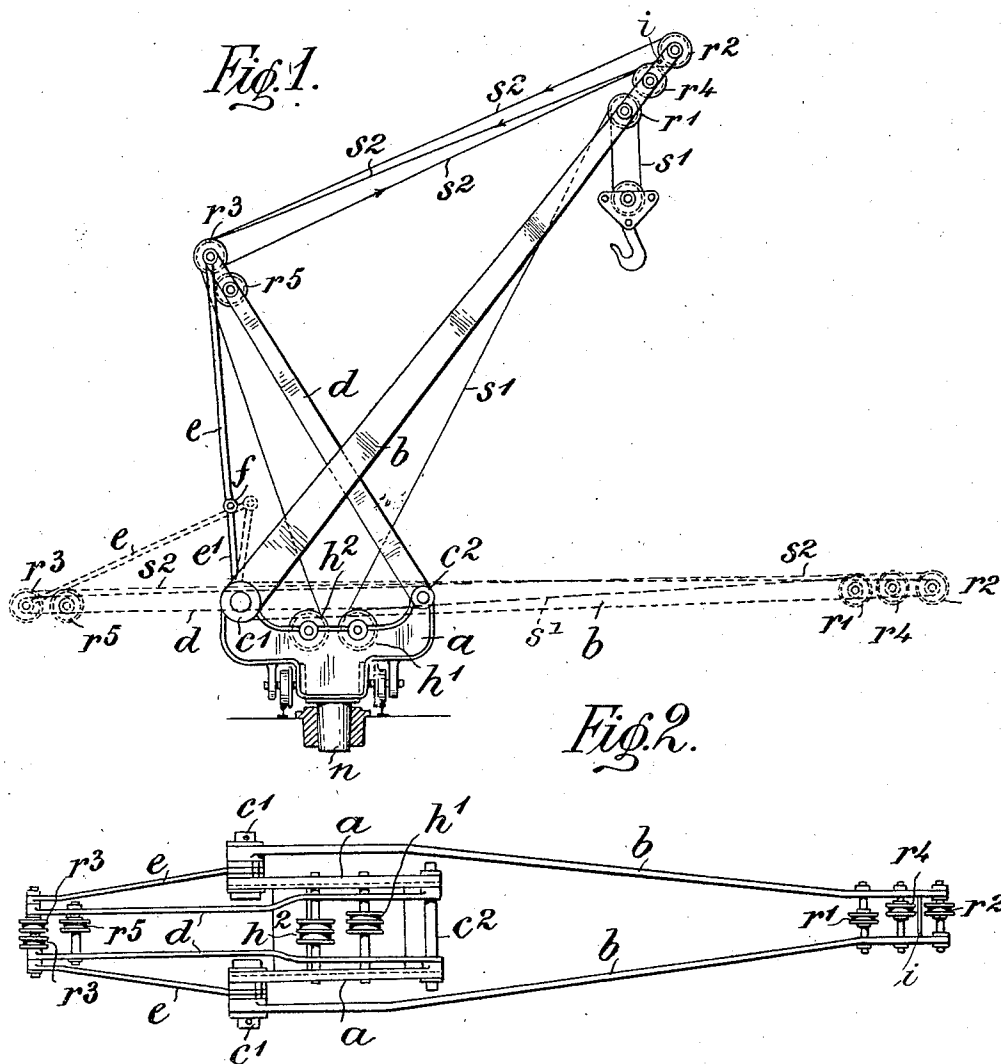


980,846.

Patented Jan. 3, 1911.

SHEETS-SHEET 1.



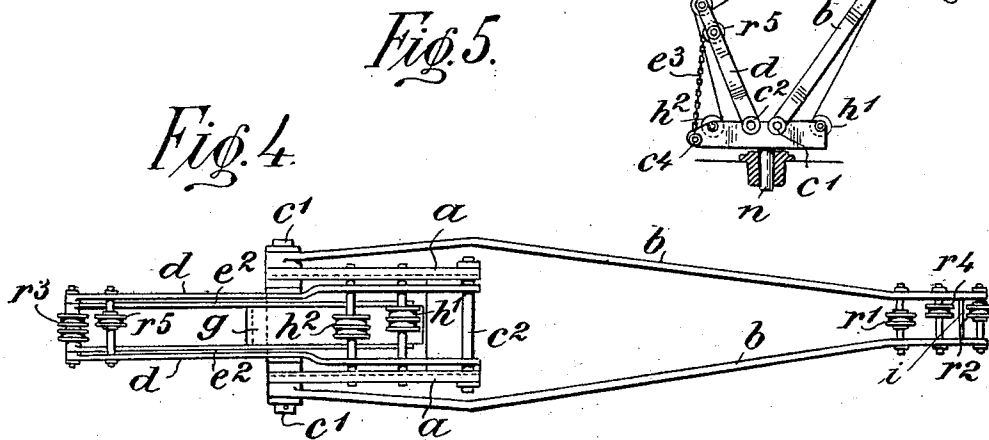
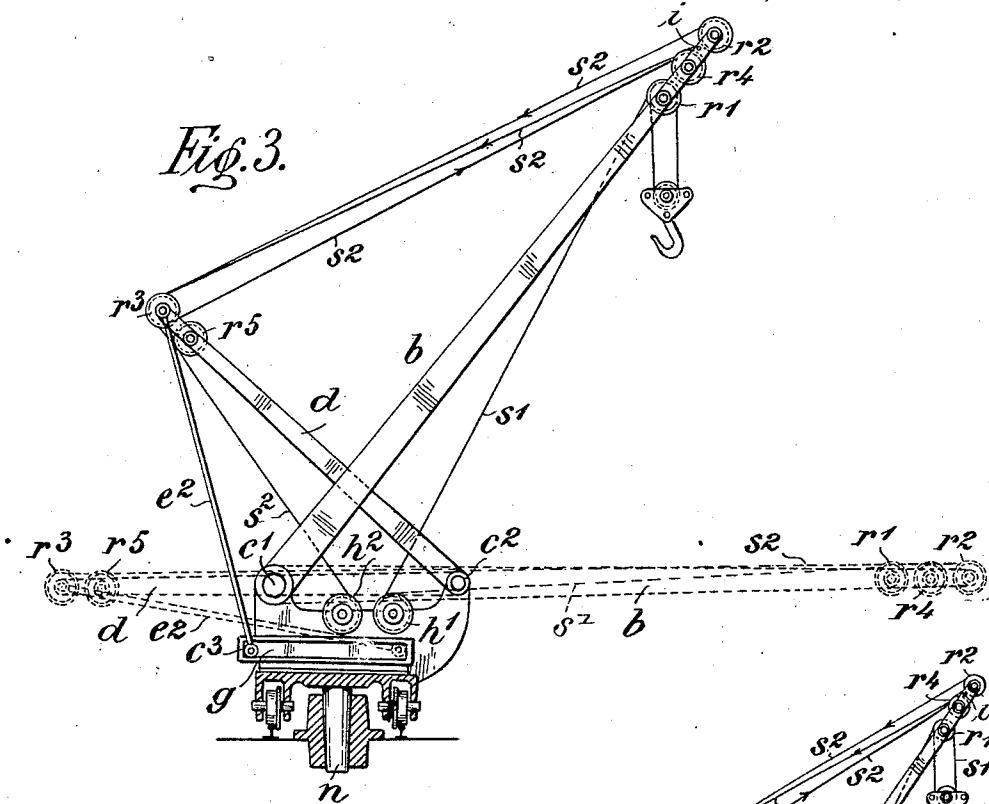
WITNESSES
J. P. Davis
C. S. Rollhaus

INVENTOR
Friedrich Sochor
BY *Munn & Co*
ATTORNEYS

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2 SHEETS-SHEET 2.



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UNITED STATES PATENT OFFICE.

FRIEDRICH SOCHOR, OF VIENNA, AUSTRIA-HUNGARY.

JIB-CRANE.

980,846.

Specification of Letters Patent.

Patented Jan. 3, 1911.

Application filed May 6, 1910. Serial No. 559,727.

To all whom it may concern:

Be it known that I, FRIEDRICH SOCHOR, a subject of the Emperor of Austria-Hungary, residing at Vienna, Empire of Austria-Hungary, have invented certain new and useful Improvements in Jib-Cranes; and I do hereby 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.

My invention relates to jib cranes and has for its object to provide a jib crane in which not only the jib, but also the post may be readily turned down into the horizontal position and turned up again so that the height of the entire crane when not in use is reduced to a minimum which is of great importance in many cases.

In the accompanying drawings: Figure 1 is a side elevation and Fig. 2 a plan of a jib crane constructed in accordance with my invention, Fig. 3 is a side elevation and Fig. 4 a plan of a modification and Fig. 5 is a diagrammatical side elevation of a further modification of my improved jib crane.

My improved jib crane consists of a horizontal base beam *a* on which is pivoted the jib *b* at *c'* and the post *d* at *c''*. The jib *b* carries at its outer end as usual a pulley *r'* for the load rope and besides a pulley or set of pulleys *r''* and one or more guide pulleys *r'''* for the jib actuating rope *s''*. The load rope *s'* runs from the pulley *r'* to the load windlass *h'* for raising and lowering the load. The jib actuating rope *s''* which has one end secured to the jib *b* at *i*, first passes around one of the pulleys *r'''* on the post *d*, then over the guide pulley *r''* and around pulley *r''* of the jib *b* and then over another pulley *r'''* of the jib *b* and the pulleys *r'''* at the outer end of the post *d* to the jib windlass *h''*. Besides a guide pulley *r'''* is journaled in the post *d*. The outer end of the post *d* is connected to the base beam by members adapted to limit the upward movement of the post. According to Figs. 1 and 2 these members consist each of two rods *e'* pivotally connected and having their outer ends pivoted to the outer end of the post and to the base beam *a* respectively, the two parts *e'* of the tie-rod being pivoted at *f*.

In Fig. 1 the full lines indicate the position of the parts of the crane when in use,

while the dotted lines indicate the position of the parts when the jib and the post are "folded down."

In order to bring the folded down crane into position fit for use first the jib actuating windlass *h''* is turned whereby the pulleys *r'''* at the outer end of the post *d* are drawn toward the pulleys *r''* at the outer end of the jib *b*. The weight of the long jib *b* being greater than the weight of the post *d*, the former remains in its horizontal position indicated in dotted lines in Fig. 1 until the post *d* has come into the position shown in full lines in Fig. 1 and the tie-rods *e'* have been stretched, whereby the upward movement of the post is arrested. If then the windlass *h''* continues to turn the pulley *r''* and the jib will move toward the post *d* the latter being stationary so that the jib will be raised and when it has reached its desired position the windlass *h''* is stopped and the load may be raised or lowered by the windlass *h'* as usual.

When it is desired to fold down the crane the windlass *h''* is turned in the opposite direction whereby first the jib *b* will be lowered into the horizontal position indicated in dotted lines in Fig. 1, this jib being heavier than the post, while the post *d* is held in its raised position by the action of the ropes on the pulleys *r'''* and by the tie-rods *e'*. When, however, the windlass *h''* continues to move the post *d* will turn down owing to gravity into the horizontal position indicated in dotted lines in Fig. 1, the tie rods *e'* turning relatively to each other.

In order that in the folded down position of the crane the rope *s'* may not come into contact with the rope *s''* and become entangled therewith the guide pulleys *r''* and *r'''* are so mounted in the jib *b* and in the post *d* respectively that the lengths of the rope *s''* extending between the jib and the post come on the top side of the said pulleys and thus are raised above the top edges of the folded down jib and post whereas the rope *s'* runs in a different plane to the bottom edge of the jib.

The horizontal base beam *a* is adapted to revolve on a central pivot *n* or to run on circular rails as usual; this feature does not form part of the present invention.

In the modification shown in Figs. 3 and 4 for the pivotally connected rods *e'* rigid rods *e''* are substituted, the lower ends of

which are provided with studs c^3 adapted to slide in a transverse guide g fast on the base beam.

In the modification shown in Fig. 5 for the tie-rods e e' a chain or wire rope e^3 is substituted, the lower end of which is fastened at c^4 to the base beam.

In the modification shown in Figs. 3 and 4 the upward movement of the post is limited by the rods e^2 when the studs reach the left hand end of the guide g . In the modification shown in Fig. 5 the upward movement of the post is stopped when the chain or rope e^3 is stretched.

In any case the jib and the post have to be so constructed and arranged that the one does not interfere with the movements of the other. Such a construction and arrangement is clearly shown in the drawings.

Claims:

1. In a jib crane, the combination of a base beam and a jib and a post having their bottom ends pivoted to such base beam, the jib being heavier than the post, pulleys mounted in the outer ends of the jib and of the post, a jib actuating rope running around such pulleys, means for actuating such rope whereby the jib and the beam may be raised and lowered, and means for connecting the post and the base beam and adapted to limit the upward movement of the post, substantially as and for the purpose described.

2. In a jib crane the combination of a base beam and a jib and a post having their bottom ends pivoted to such base beam the jib

being heavier than the post, pulleys mounted in the outer ends of the jib and the post, a jib actuating rope running around such pulleys, means for actuating such rope whereby the jib and the beam may be raised and lowered, means for connecting the post and the base beam and adapted to limit the upward movement of the post, a load pulley mounted on the jib, a load rope running on the said load pulley, guide pulleys for the jib actuating rope mounted in the jib and in the post and adapted to keep the said jib actuating rope at all times clear of the said load rope, substantially as and for the purpose described.

3. In a jib crane the combination of a base beam and a jib and a post having their bottom ends pivoted to such base beam, the jib being heavier than the post, pulleys mounted in the outer ends of the jib and the post, a jib actuating rope running around such pulleys, means for actuating such rope, whereby the jib and the beam may be raised and lowered, and tie-rods having their outer ends pivoted to the post and the base beam respectively and adapted to limit the upward movement of the post, substantially as and for the purpose described.

In testimony whereof, I affix my signature, in presence of two witnesses.

FRIEDRICH SOCHOR.

Witnesses:

ARTHUR BAUMANN,
AUGUST FUGGER.