

UNITED STATES PATENT OFFICE.

HENRY V. HARTZ, OF CLEVELAND, OHIO.

PULLEY-BLOCK.

SPECIFICATION forming part of Letters Patent No. 527,425, dated October 16, 1894.

Application filed February 12, 1894. Serial No. 499,915. (No model.)

To all whom it may concern:

Be it known that I, HENRY V. HARTZ, a citizen of the United States, residing at Cleveland, in the county of Cuyahoga and State of Ohio, have invented certain new and useful Improvements in Pulley-Blocks; and I do hereby declare that the following is a full, clear, and exact description of the invention, which will enable others skilled in the art to which it appertains to make and use the same.

My invention relates to improvements in pulley blocks, and the invention consists in a pulley block constructed substantially as shown and described and particularly pointed out in the claims.

In the accompanying drawings, Figure 1 is a side elevation of my improved block, with a part of the top broken away toward the center to disclose more clearly the construction and means of attaching the ring. Fig. 2 is a vertical central sectional elevation on a line corresponding to 2, 2, Fig. 1. Fig. 3 is a cross section of the casing or shell of the pulley on line 3, 3, Fig. 1. Fig. 4 is a front elevation of a section of that part of the sheave which is shown below in Fig. 2, looking in from the right thereof, and which contains the grease or oil pocket. Fig. 5 is a cross section on line 4, 4, Fig. 2, showing the grease pocket and its front closing plate in cross section. Fig. 6 is a detail in perspective of the front plate for the grease pocket in the bent form in which it is inserted before springing to its seat. Fig. 7 is a detail of the shaft before upsetting.

A represents the casing, frame or shell of the pulley, which is cut and stamped out of a single piece of sheet steel or other suitable metal, fashioned in a die or dies to the form here shown, or to a substantially similar or like suitable form. There are several features of construction which are desirable in a shell or case of this kind to give strength and serviceability, such as the outward flaring edges —2— along the sides of the shell and the slightly circular or convex top or back —3— thereof. This top or back —3—, it will be observed, has a downward inclination at both sides, as seen in Fig. 1, and the flanges —2— along the edges run up to this bend and lose themselves therein. The purpose of this bend or bow of the back is to

utilize as fully as possible all the metal in the sides and back for the purposes of strength, and this effect is promoted by this construction because it makes the sides and edges contribute to the strength of the center. If the casing were built with a straight flat top and excessive weight or pull were brought upon the sheave D, the tendency would be to throw the weight directly on the lines between the shaft E and the suspensory ring F, and there being no connection between the sides 2, 2, and ring F but the back —3—, which is unsupported except at its center, these sides would not contribute materially to the supporting strength of the pulley; but by forming the top of the casing or shell substantially as herein shown, or possibly a little less or even a little more, the pull is distributed uniformly across the shell and the whole of each side is brought into action. This utilizes the bent edges —2— directly in the support of the weight and altogether makes an exceedingly strong and durable shell. The shell is further strengthened by the struck up rib —6—, formed about shaft E and with said shaft at its center.

The shaft E is constructed to form a bearing for the sheave D and to have it turn thereon, but is fixed rigidly in the shell or frame A. To effect this result the eye of the shell at each side has a flat or straight portion —7—, and the ends of the shaft are cut away or scarfed to correspond to this construction of eye, and are provided with square shoulders —8— to bear against the inside of the shell. In assembling the parts the shell is sprung over the ends of the shaft, and the said ends are then upset or riveted substantially as shown, and thus secure the sheave and shell permanently and firmly together. The shell is held between shoulders —8— and head —10— so that it cannot contract nor spread, and the sheave is made perfectly free to turn without danger of binding.

The ring F is formed as shown out of a single piece of metal bent to the desired shape and has its two extremities flattened on the inside. The metal driven from this point is forced back rather than in elongation of the part so that it widens the shank as compared with the other part of the ring, as seen at —12— in Fig. 1. There is nearly the same

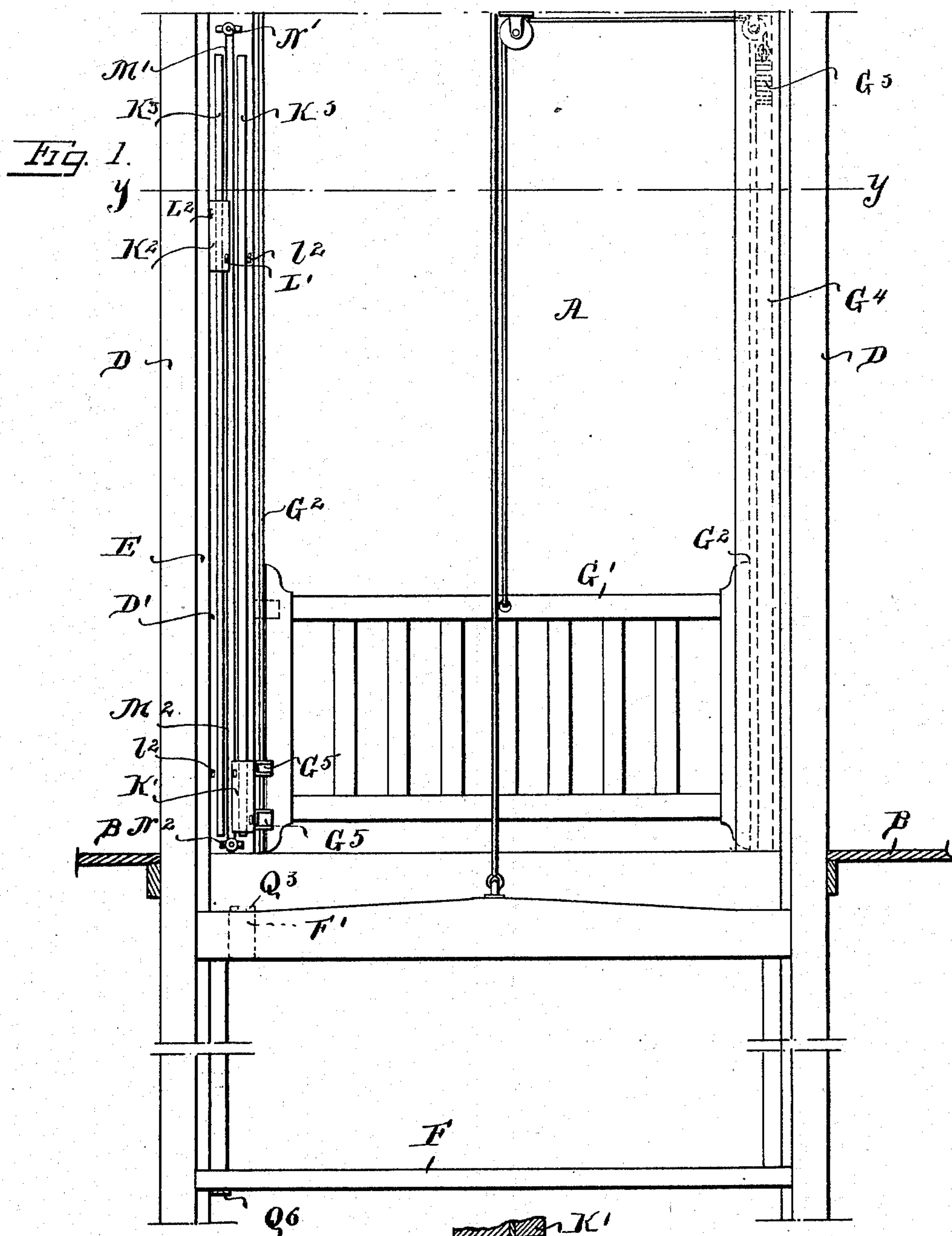
(No Model.)

2 Sheets—Sheet 1.

W. HILL.
ELEVATOR APPARATUS.

No. 527,426.

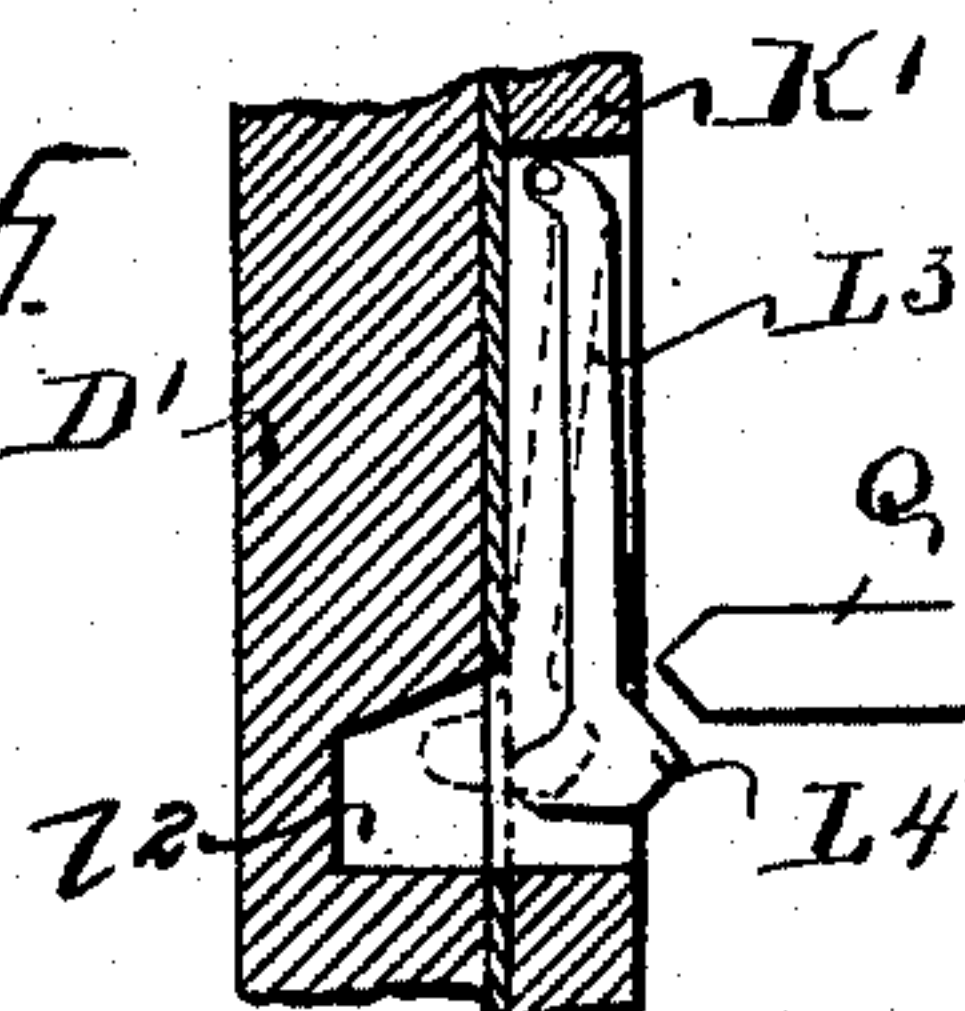
Patented Oct. 16, 1894.



Witnesses:

Jerse B. Helleri -
Musik-Mund-Musik

Fig.



Inventor.

Inventor:
William Hill

By

Attorney.

