No. 859,825. PATENTED JULY 9, 1907.

C. MANN.

DEVICE FOR RAISING AND LOWERING PIPES IN BORED WELLS.

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FIG. 1.

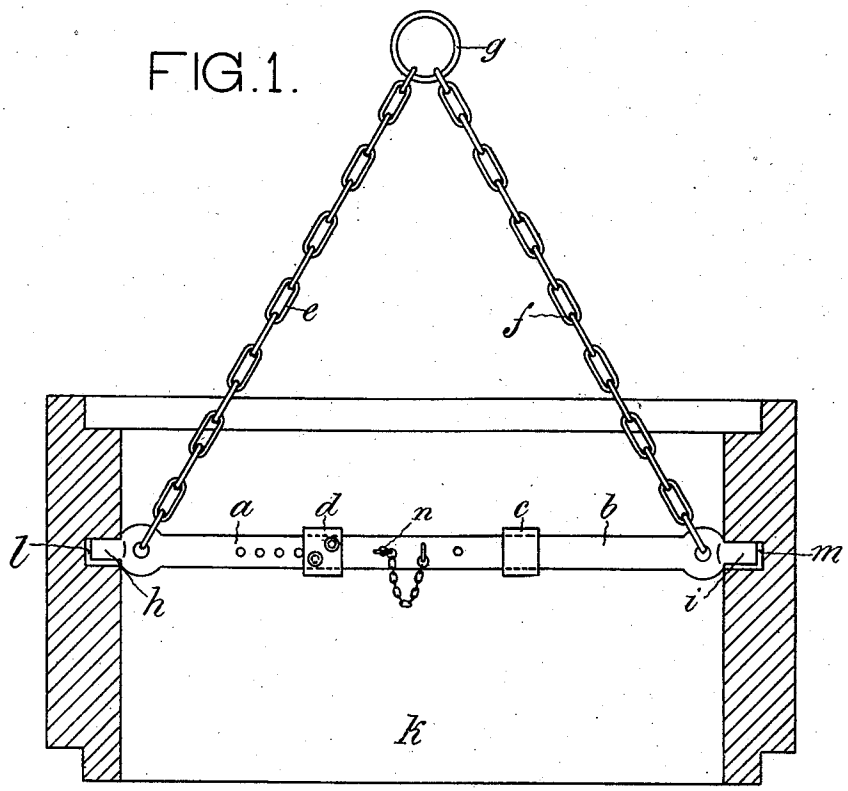
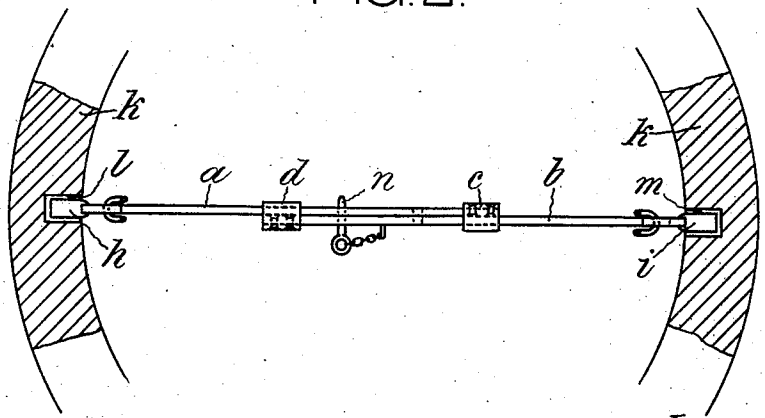


FIG. 2.



Witnesses:

E. H. Kliman

Inventor:
Carl Mann

by Henry Connett
Attorney

THE NORRIS PETERS CO., WASHINGTON, D. C.

UNITED STATES PATENT OFFICE.

CARL MANN, OF SANDBERG, GERMANY.

DEVICE FOR RAISING AND LOWERING PIPES IN BORED WELLS.

No. 859,825. Specification of Letters Patent. Patented July 9, 1907.

Application filed November 11, 1905. Serial No. 286,965.

To all whom it may concern:

Be it known that I, CARL MANN, a subject of the King of Prussia, residing at Sandberg, near Altwasser, Silesia, in the Kingdom of Prussia and Empire of Germany, have invented new and useful Improvements in Devices for Raising and Lowering Pipes in Bored Wells, of which the following is a specification.

My invention relates to devices for raising and lowering pipes of cement, clay or the like in bored wells. For this purpose use has already been made of devices consisting of bars arranged similarly to scissors, these bars having at their lower ends lateral projections upon which, in the open position, the pipe to be raised or lowered bears with its lower face, while the upper ends of the bars, by means of suitable projections, bear against the inner periphery of the pipe and are held in this position by a kind of bell-crank lever. By pulling a cord connected with the bell-crank lever the device may at any moment be separated from the pipe to be raised or lowered. This device has the disadvantage that by its premature disengagement from the well-pipe held in suspension, caused either accidentally or purposely by pulling the said cord, accidents and other unpleasant occurrences are liable to take place.

A further inconvenience connected with these devices lies in the fact that their application to a pipe already lowered into the well and thus the removal of said pipe is possible only after it has been raised to such an extent that the lateral projections can take below the face of the pipe. Moreover, for raising and lowering well-pipes devices are known which consist of a spindle and arms jointed to this spindle and having pointed outer ends which by their own weight bear against the inner periphery of the pipe and, in the case of soft material, partially dig into the wall of the pipe. In this case, too, it may happen that the device when being lifted will slide along the inner periphery of the pipe and thus give rise to accidents. With pipes having a smooth interior periphery, such as cement pipes or glazed clay pipes, this liability will be increased so that such devices may under certain conditions prove perfectly unsuitable.

The object of my said invention is to so construct a device for raising and lowering well-pipes, that accidents will be obviated with certainty, this device as compared with the well-known devices possessing moreover the advantage of being simple in construction and easy to work. According to my invention this object is realized by employing, for the raising and lowering of the pipes, two bars which can be displaced relatively to each other, the ends of these bars being adapted to be inserted into corresponding recesses in the wall of the pipe and locked in this position.

In the accompanying drawing I have shown by way of example a constructional form of this invention.

Figure 1 shows the device in its operative position, the well-pipe being represented in longitudinal section. Fig. 2 is a plan of the same partly in section.

The improved device comprises two bars *a*, *b*, preferably made of flat iron, and held together by means of sleeves or guides *c*, *d* so that they can be displaced relatively to each other in the longitudinal direction. These bars *a*, *b* are connected by rods or chains *e*, *f* to a common lifting ring *g* and are provided at their ends with pins or bolts *h*, *i* preferably round in cross section. For the reception of these pins or bolts I provide corresponding recesses *l*, *m* at opposite points in the inner periphery of the pipe *k*.

In order to apply the device to the pipe *k* for the purpose of raising the same, the two bars *a*, *b* are pushed over each other so that their total length corresponds to the diameter of the pipe, then their ends are extended for placing them in the recesses *l*, *m* in the pipe, whereupon they are locked in this position for instance by a pin or bolt *n*.

By the suitable arrangement of bolt holes in the flat-iron bars the device may be used for any desired widths of pipes between certain limits.

Of course the position of the adjusted bars may be secured by any other means available for this purpose, such as for instance by a spring fastened to one of the bars and engaging by a pawl with corresponding spaces between teeth on the other bar.

What I claim as my invention, and desire to secure by Letters Patent, is—

1. In a device of the character described, the combination of two adjustable bars provided each at one end with a guide for the other bar, and at the other end with a bolt, means for locking said bars to each other, a ring, and chains attached to the outer ends of said bars and to the said ring.

2. The combination with a pipe-section having in its inner surface two oppositely disposed recesses, of a device to aid in raising and lowering said pipe, said device comprising an elongatable bar having non-yielding bolts on its respective ends to engage the respective recesses in the pipes, means for locking the sections of the bar together unyieldingly when the bolts are in place, and a bridle connected to said bar for handling the pipe.

In testimony whereof I have signed my name to this specification in the presence of two subscribing witnesses.

CARL MANN.

Witnesses:
ERNEST A. MAN,
LOUIS KATZ.