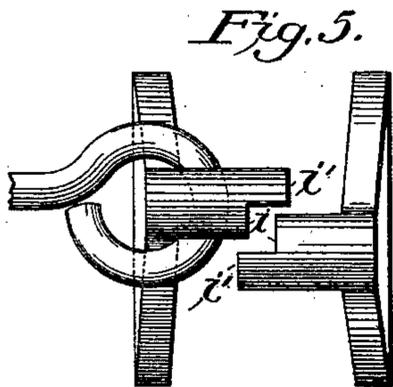
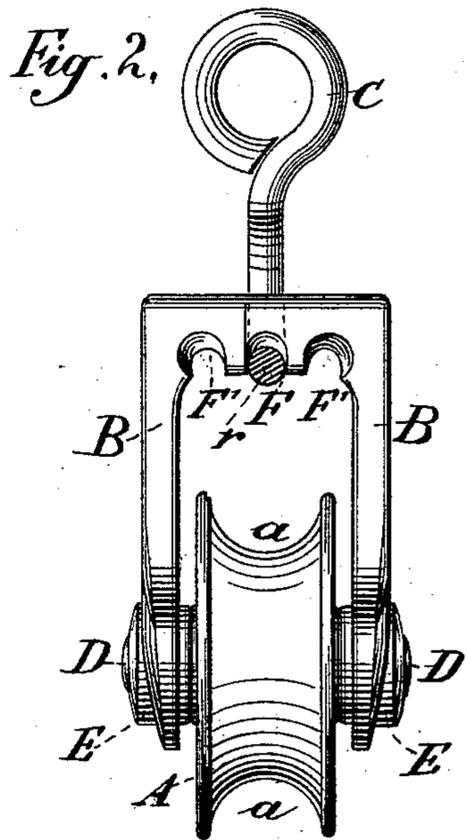
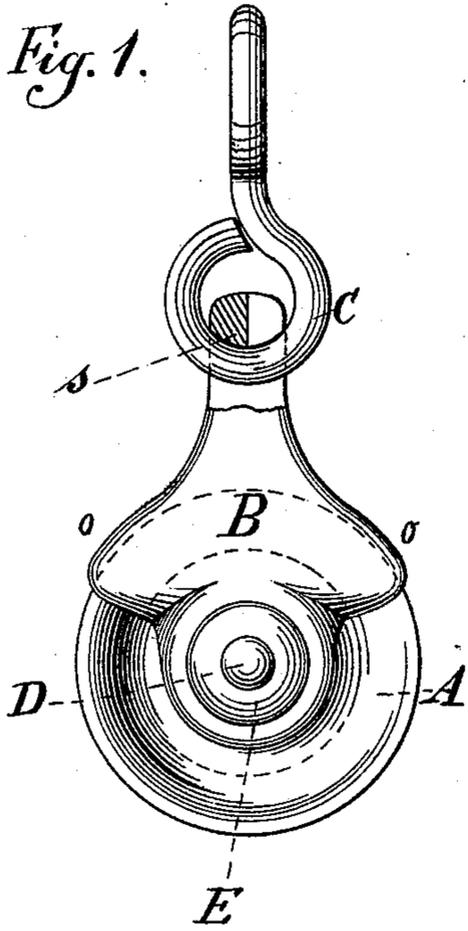


(No Model.)

F. GIRR.  
PULLEY.

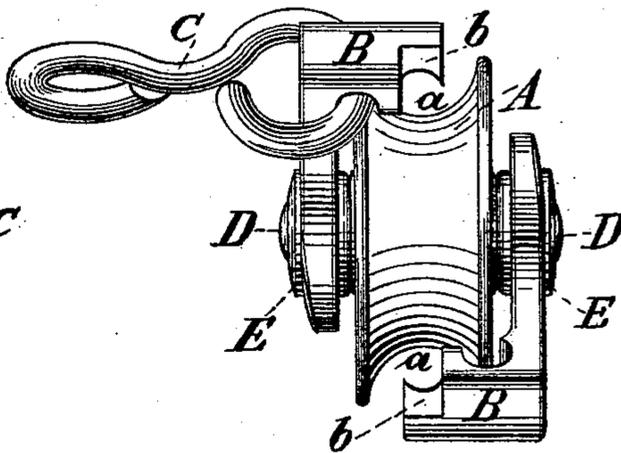
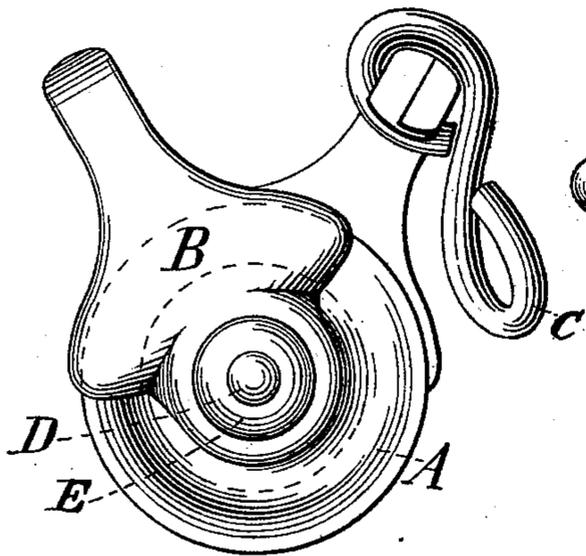
No. 529,028.

Patented Nov. 13, 1894.



*Fig. 3.*

*Fig. 4.*



Witnesses:-

*Fr. Nemo Roehrich*

*Alexander Ellis*

Inventor.  
*By Frederick Girr*  
*L. G. Böhm.*  
 Attorney.

# UNITED STATES PATENT OFFICE.

FREDERICK GIRR, OF HOBOKEN, NEW JERSEY.

## PULLEY.

SPECIFICATION forming part of Letters Patent No. 529,028, dated November 13, 1894.

Application filed April 17, 1894. Serial No. 507,874. (No model.)

*To all whom it may concern:*

Be it known that I, FREDERICK GIRR, a citizen of the United States, and a resident of Hoboken, in the county of Hudson and State of New Jersey, have invented certain new and useful Improvements in Pulleys, of which the following is a specification.

My invention relates to improvements in pulleys such as are used for clotheslines and for raising heavy weights and various other purposes in mechanics. It has special reference to live, movable or loose pulleys and has for its purpose to produce a pulley from which the chain or rope may be easily taken off without opening or cutting it or running the entire length of it through.

Heretofore such pulleys consisted of a wheel, the so-called sheave which runs in a block. The supporting frame consisted of one continuous piece of metal, hence the rope could not be taken out unless it was opened or cut or run through completely. In my improved pulley, however, the supporting frame is made in two congruent pieces so that the rope may be taken out conveniently at any time without opening or cutting it, or running it all through.

The pulley can be used for various purposes but I shall describe it as especially adapted for clotheslines. It is used on windows with advantage. By means of my improved pulley which allows the taking out of the rope, the cleaning of the latter is greatly facilitated and old ropes may be taken out and new ones put in without any trouble.

The pulley is illustrated in the accompanying drawings in which—

Figure 1 is a side elevation which shows the upper part of the supporting frame at "s" in section. Fig. 2 is a front view showing also the ring of the hook at "r" in section. Fig. 3 shows a side view with open frame. Fig. 4 represents a top view with opened frame, and Fig. 5 shows the top parts of the frame nearly closed.

The same letters in the various figures designate corresponding parts.

"A" is the revolving wheel or sheave. "B" is the supporting frame. "C" is the hook. "D" is the axle, and "E" shows the strength-

ened parts of the frame in which the axle runs.

My improved pulley is made of metal, preferably of cast iron. The cast parts are galvanized so that they withstand atmospheric influences. The wheel or sheave "A" is made as usual, but the wheel supporting frame "B" is cast in two congruent parts. The shape of these parts "B" is shown in Figs. 1 and 3. The cheeklike portions of them extend at "o" (Fig. 1) a little over the sheave for the purpose of preventing the slipping of the rope between the wheel and the frame. The axle runs in the block-like lower ends of the supporting frame, which are strengthened at "E." These heavier parts "E" of the frame add strength to the pulley and the whole is mounted so that the top ends (Fig. 5) extend a little over each other when the frame is still open and it takes a little force to close it. By means of mounting this way some spring-power is imparted to the parts forming the frame and the friction thus exerted on the touching surfaces "i" and "i'" helps to keep the frame in a stationary position when the same is closed.

The supporting frame is further provided with three small recesses "F," "F'," and "F'." They are located on the lower side of the top parts of the frame. (Fig. 2.) The hook fits in these recesses. When the hook is in the middle recess, then it is impossible to open the frame. If now the pulley attached somewhere and in use and it is desired to take out or put in a new rope or chain or to clean the rope, then the hook is moved sidewise and in order to prevent that the hook slips out, which would result in the falling down of the pulley, the two recesses "F," "F'," are provided. It is desirable to have one recess "F'" to the right and one to the left, because pulleys are often attached in places, for instance on windows, where they can be reached and handled conveniently only from one side.

In order to prevent the ends of the top parts of the frame (Fig. 4 at "b" and Fig. 5) from passing each other when being closed, these ends are rectangularly reduced in size

one-half the diameter and these reduced sections extend over the center line and fit each other by their overlapping portions, so that, when the frame is closed, the top looks as if  
 5 made of one piece of metal.

The two recesses "F" are in those portions of the top which do not overlap, while the middle recess "F'" is in these overlapping portions and is consequently located partly  
 10 in one and partly in the other portion which form the top piece.

The axle is made so strong that it will never bend.

The hook consists of two rings at right  
 15 angles to each other and is made of one continuous piece of strong iron wire or of other metal rod.

The operation of my improved pulley is very simple. When in use, then the hook  
 20 rests in the middle recess, but when a new chain or rope shall be put in or when the rope shall be cleaned or an old one be taken out, then the hook is removed into the right or left recess. The frame is then opened and,  
 25 for instance, a new rope is put in. The frame is then closed again and the hook is brought back into the middle recess.

Having thus described my invention, what I claim therein as new, and desire to secure  
 30 by Letters Patent, is—

1. A live, movable or loose pulley, consisting of a sheave with axle, a movable support-

ing frame made in two parts and provided with strengthening flanges and three recesses  
 35 in the lower portions of the top piece and reduced and overlapping top ends in which the middle recess is located, and a hook adapted to fit in these recesses, substantially as described.

2. In a live or loose pulley, a wheel or  
 40 sheave supporting frame made in two parts which are movable on the axle and provided with strengthening flanges and three recesses in the lower portions of the top piece and reduced and overlapping top ends in  
 45 which the middle recess is located and a hook adapted to fit in these recesses, substantially as described and for the purpose set forth.

3. In a movable pulley, a wheel or sheave  
 50 supporting frame made in two parts which are movable on the axle and provided with strengthening flanges and three recesses in the lower portions of the top piece and reduced and overlapping top ends in which  
 55 the middle recess is located, in combination with a wheel or sheave with axle, and a hook, substantially as described.

Signed at New York, in the county of New York and State of New York, this 14th day of April, A. D. 1894.

FREDERICK GIRR.

Witnesses:

ALEXANDER ELLIS,  
 ALVAR ÅBERG.