

C. E. NEGLEY.
EXCAVATOR.

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958,158.

Patented May 17, 1910.

Fig. 1.

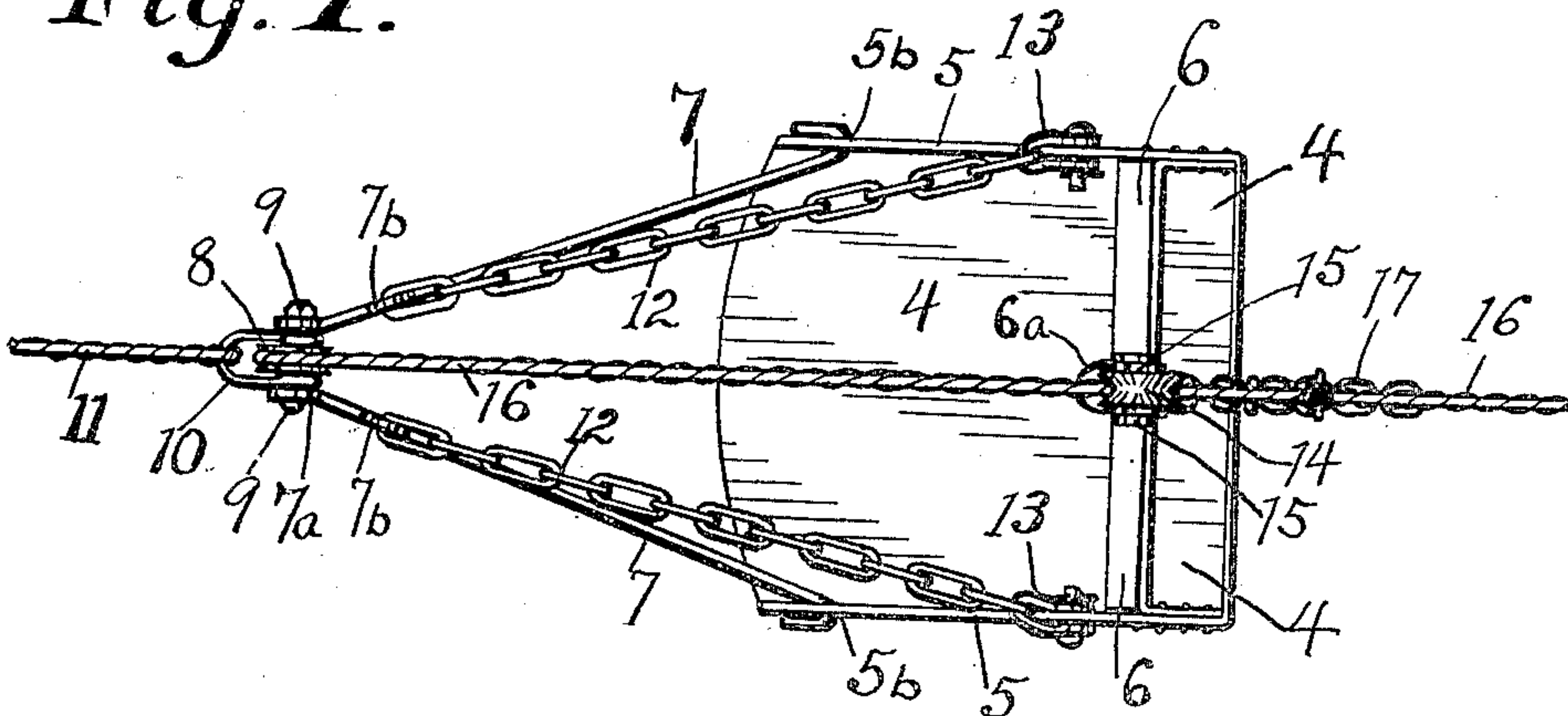


Fig. 2.

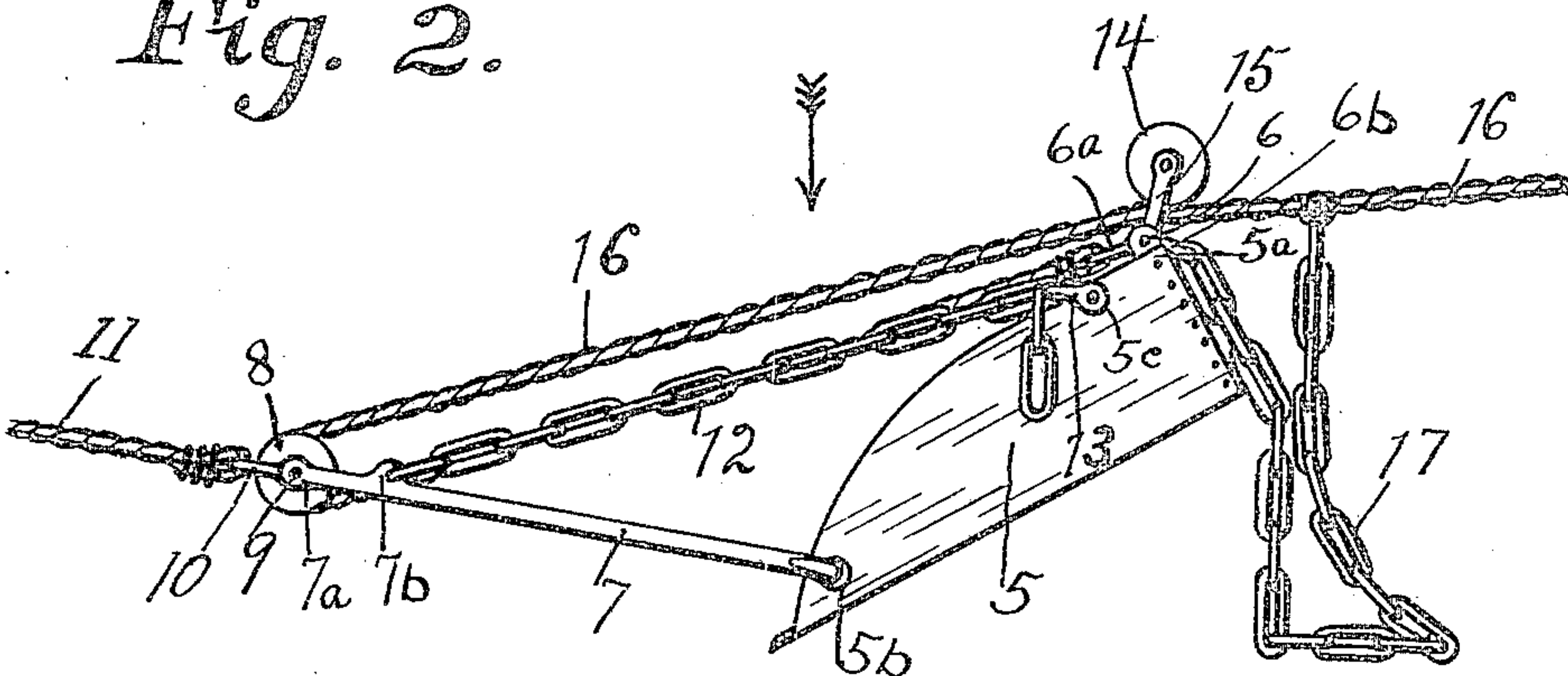
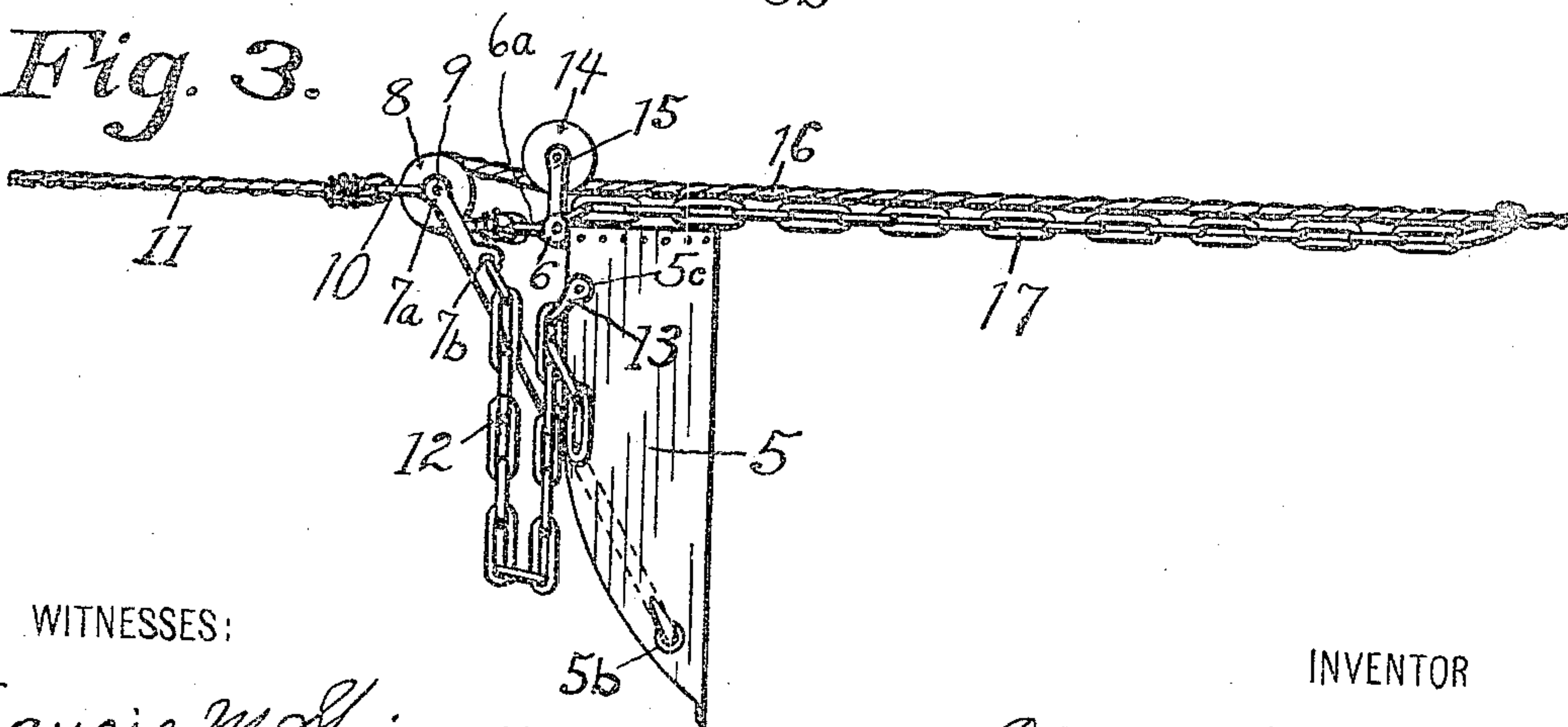


Fig. 3.



WITNESSES:

Francis M. Springer
Cornelia Huesche.

INVENTOR

Claude E. Negley
BY
Thomas W. Colson.
ATTORNEY

UNITED STATES PATENT OFFICE.

CLAUDE E. NEGLEY, OF INDIANAPOLIS, INDIANA.

EXCAVATOR.

958,158.

Specification of Letters Patent.

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To all whom it may concern:

Be it known that I, CLAUDE E. NEGLEY, a citizen of the United States, and a resident of Indianapolis, in the county of Marion and State of Indiana, have invented certain new and useful Improvements in Excavators, of which the following is a specification.

My invention relates to automatic loading and unloading excavators and the object of this improvement is to provide a device to take sand and gravel from beds at the bottoms of rivers and other submerged points where it is difficult or impossible to load the excavators now in use. This device is equally useful for making all kinds of excavations and removing earth from one place to another, or for loading cars, wagons and the like. I attain these objects by means of the device illustrated in the accompanying drawings, in which—

Figure 1 is a top view of my invention; Fig. 2 is an elevation of the same showing its position when loading; and, Fig. 3 is a similar view showing its position when being dumped or unloaded.

Similar numerals of reference indicate similar parts throughout the several views.

The excavator is composed of a bottom portion 4, whose forward edge is made sharp to cut into the earth to be removed, and the integral side walls 5; but it is preferably constructed with no back wall thus allowing the water to drain out of the load while being transported to the unloading position. The cross bar 6 is rigidly secured to the upper rear corners of said side walls 5, as at 5^a. The bail portions 7 are pivotally secured to the eyes 5^b in the forward portions of said walls 5. The grooved pulley 8 is journaled on the bolt 9. Said bolt 9 also passes through the eyes of the clevis 10 and the eyes 7^a in the forward ends of the bail portions 7 to operatively connect said excavator with the cable 11.

The forward ends of the chains 12 are secured to the eyes 7^b of the bail portions 7 and removably secured at or near their rearward ends to the openings 5^c near the upper rear corners of said side walls 5, by means of the clevises 13. The chains 12 are provided to maintain the excavator at the correct angle to make it enter the earth to load. The angle of said excavator may be varied to make it load, in harder or softer earth, by letting out the chains 12 at the clevises 13

for softer earth and by taking them up to load harder earth.

The grooved pulley 14 is journaled in the bearings 15, which latter are pivotally secured to the central portion of the cross bar 6. The cable 16 is operatively connected at one end to the drum of a hoisting engine or some other source of power, passes under the grooved pulley 14 and around the grooved pulley 8 and has its other end secured to the central portion of said cross bar 6, as at 6^a. One end of the chain 17 is secured to the central portion of the cross bar 6, as at 6^b, and at its other end to the cable 16 and is provided to prevent the excavator from turning upside down while being dumped or unloaded.

My improvement operates as follows:—The cables 11 and 16 are attached to independently operated drums of hoisting engines or other sources of power. The excavator is drawn to the work by cable 16, then upon loosening cable 16 and tightening cable 11 said excavator takes the position shown in Fig. 2, and enters the dirt, sand or gravel as the case may be to load. When the unloading position is reached cable 16 is tightened which draws the bail and excavator to the positions shown in Fig. 3 to dump the load. The chain 17 acts as a stop to prevent the excavator from turning upside down. The excavator is again drawn back to the work by cable 16 and loaded as before. As has already been noted the angle of the excavator may be varied to suit the kind of earth to be loaded. When using smaller excavators it is found to be advantageous to secure a weight to the rear bottom portion of the excavator to make it right itself quickly after being unloaded.

One of the most important features of this device is that it is operated entirely by the two cables.

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

1. In a device of the kind described, the combination with an excavator having a bail pivotally secured to its forward portion, a cable attached to said bail and a cable secured to the rear portion of said excavator, of a means connecting the central portion of said bail and the rear portion of said excavator to maintain said excavator in the correct angle to scoop a load of earth.

2. In a device of the kind described, the

combination with an excavator having a bail pivotally connected to its forward portion, and a loading cable attached to said bail, of a cross bar rigidly secured across the upper rear portion of said excavator, a guide secured to the central portion of said bail, a second guide secured to said cross bar, and a dumping cable fastened to said cross bar and operatively secured in said first guide and said second guide substantially as described.

3. In a device of the kind described, the combination with an excavator having a bail pivotally connected to the forward portion of said excavator and a loading cable secured to said bail, of a grooved pulley journaled in the central portion of said bail, a cross bar rigidly secured across the upper rear portion of said excavator, a bearing secured to said cross bar, a second grooved pulley journaled in said bearing, and a dumping cable secured to said cross bar and passing around said first grooved pulley and under said second grooved pulley and to the source of power.

4. In a device of the kind described, the

combination with an excavator having a bail pivotally attached to its forward portion, of two chains having their forward ends secured near the central portion of said bail and their rearward ends removably secured to the rear portion of said excavator to maintain said excavator at the correct angle to scoop a load of earth.

5. In a device of the kind described the combination with an excavator and a loading cable operatively connected to its forward portion, of a means for maintaining said excavator in the correct position to scoop a load of earth, a cross bar secured across the rear upper portion of said excavator, a dumping cable operatively secured to said cross bar, and a means for preventing said excavator from turning upside down while being dumped or unloaded.

In witness whereof, I hereunto set my hand in the presence of two witnesses.

CLAUDE E. NEGLEY.

Witnesses:

WILLIAM H. HUSTON,
FRANCIS M. SPINGER.