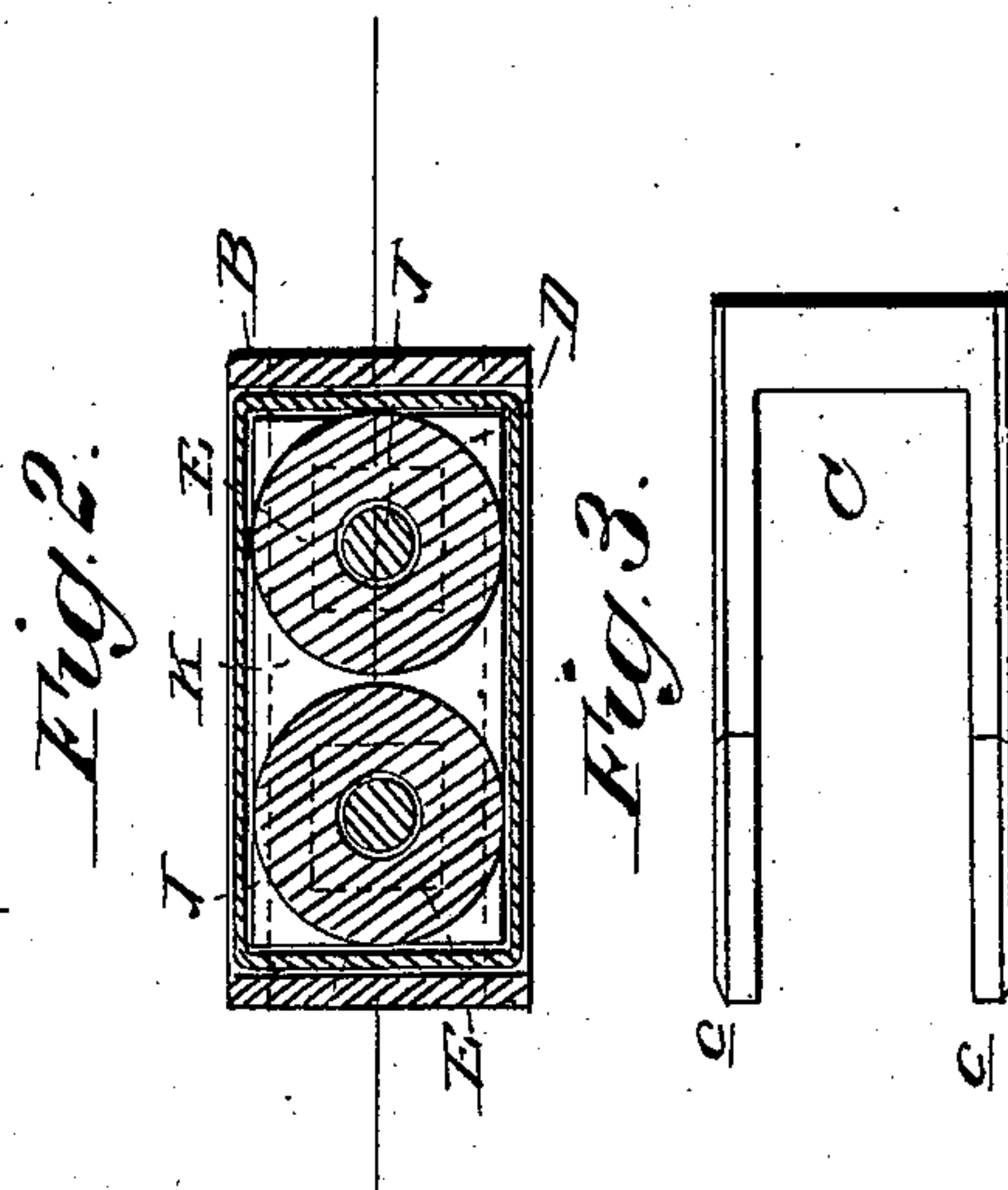
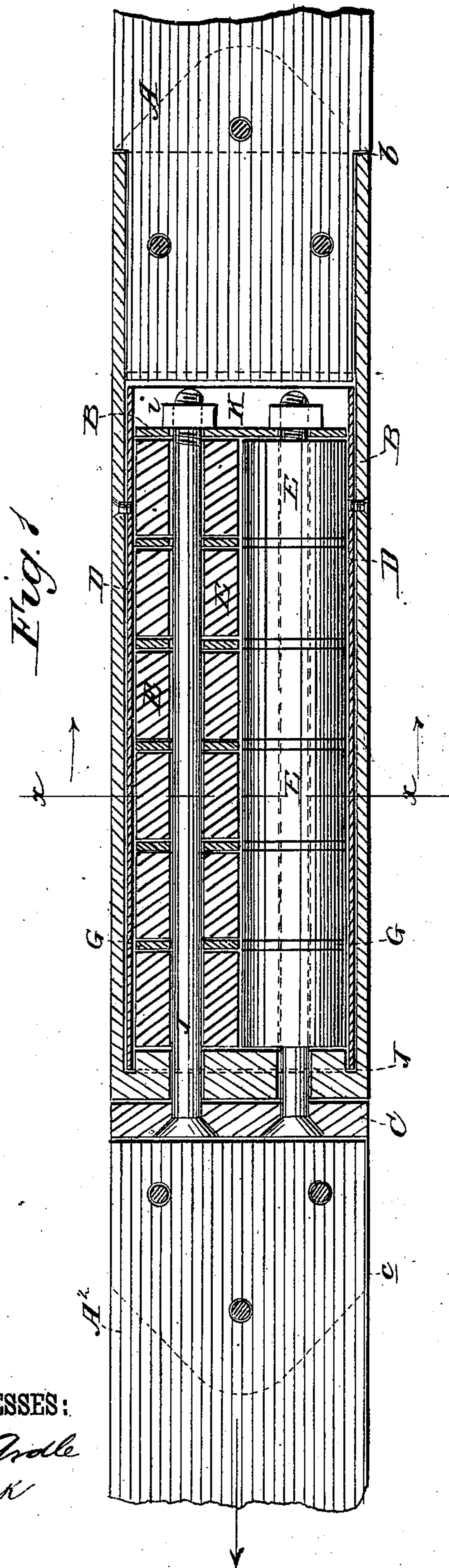


(Model.)

S. COURTRIGHT.
Tug Attachments.

No. 227,738.

Patented May 18, 1880.



WITNESSES:

F. M. Andle
C. Sedgwick

INVENTOR:

BY *S. Courtright*
Munn Ho
ATTORNEYS.

UNITED STATES PATENT OFFICE.

SILAS COURTRIGHT, OF HOOKER'S STATION, ASSIGNOR TO HIMSELF AND
FELIX BOOKWALTER, OF LANCASTER, OHIO.

TUG ATTACHMENT.

SPECIFICATION forming part of Letters Patent No. 227,738, dated May 18, 1880.

Application filed March 19, 1880. (Model.)

To all whom it may concern:

Be it known that I, SILAS COURTRIGHT, of Hooker's Station, in the county of Fairfield and State of Ohio, have invented a new and
5 useful Improvement in Tug Attachments, of which the following is a specification.

This invention consists in a novel construction, arrangement, and combination of a metallic frame and case, a pair of bolts, a sliding
10 head or follower, and a number of rubber springs and interposed washers, for preventing the sudden shock to either the horse or the vehicle in starting a load or striking an obstruction.

15 In the accompanying drawings, Figure 1 is a longitudinal sectional view of a tug attachment embodying my improvements. Fig. 2 is a transverse section taken in the line *xx* of Fig. 1. Fig. 3 is a detail view.

20 Similar letters of reference indicate corresponding parts.

A represents the portion of the tug which is toward the hame or collar, and A^2 the portion toward the vehicle. The portion A is attached
25 to a box or case, B, by means of bolts or screws passing through it and through ears *b* formed at the end of the box or case. The portion A^2 is attached to a plate, C, (an edge view of which is shown in Fig. 3,) by means of bolts
30 or screws passing through it and through ears *c* formed on the plate.

The box or case B is of oblong form, and has its two sides and two ends closed and its top and bottom open. In this box or case is
35 another box or case, D, also of oblong form, but having its top and bottom and two sides closed and its two ends open.

In the case D a number of rubber cylinders, E, are carried. The diameter of each cylinder is nearly equal to the depth of the case D and
40 half its width, said width being double the depth. The length of each cylinder may be equal to or greater or less than its diameter, as may be preferred.

The cylinders E are arranged in two rows 45 in the case D, with metallic washers G interposed between them, and the case D is placed in the case B. Two bolts, J J, are then passed through the plate C, thence through holes in one end of the case B, thence through the cyl- 50 inders E and washers G, and finally through holes in a head or follower, K, outside of which the ends of the bolts are secured by nuts *i i*. The parts A and A^2 are then attached, as before described, and the tug is ready for use. 55

The cylinders E act as springs in taking off the jar and preventing the shock when starting suddenly or striking an obstruction.

If desired, an oblong block of rubber may be used instead of two cylinders; but I prefer 60 to use the cylinders.

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

The combination, with the tug A A^2 , of the 65 plate C, boxes or cases B and D, bolts J J, rubber cylinders E, metal washers G, follower K, and nuts *i i*, as shown and described, for the purpose specified.

SILAS COURTRIGHT.

Witnesses:

C. W. McCLEERY,
C. VON BENHORST.