

(No Model.)

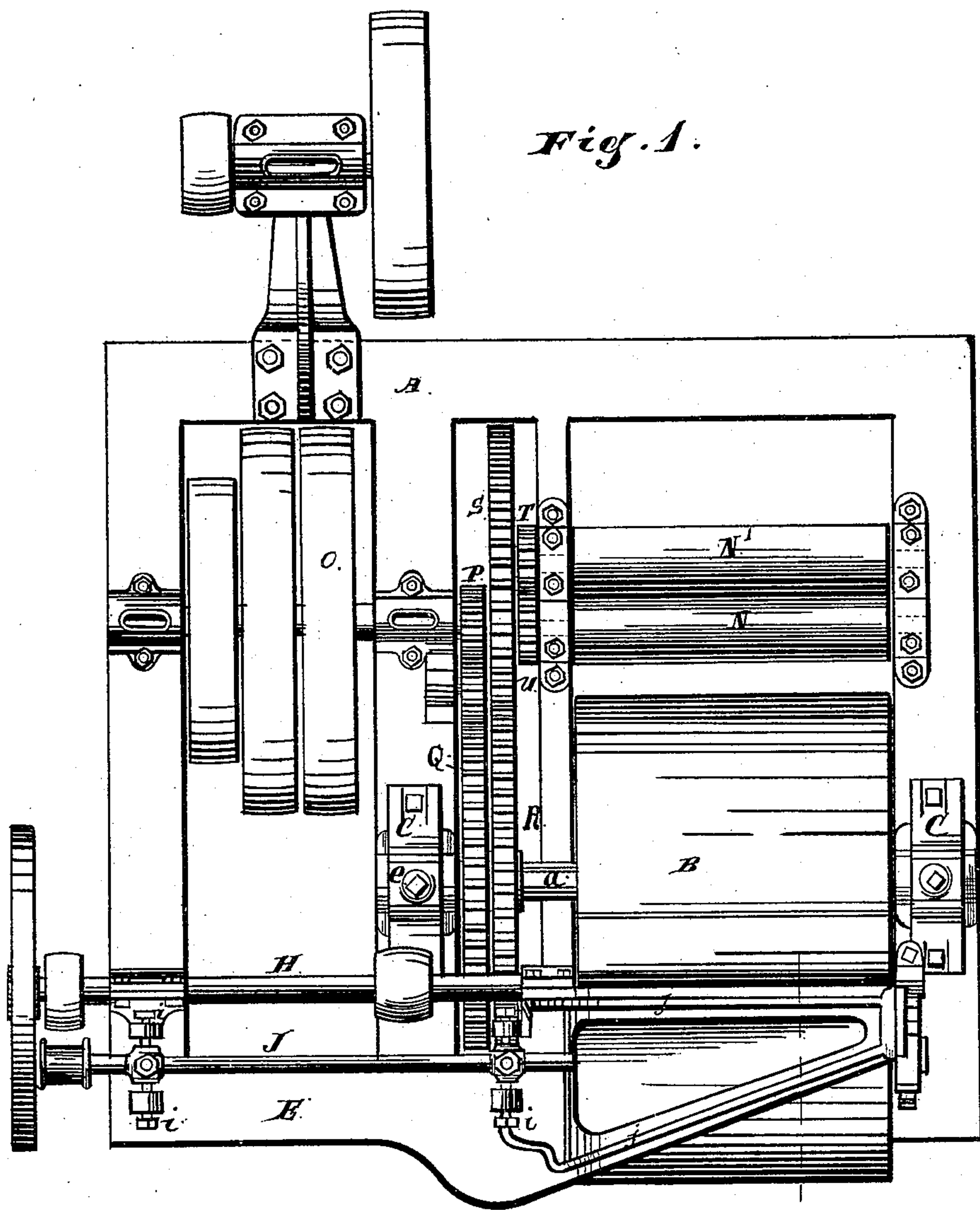
3 Sheets—Sheet 1.

F. E. DAVIS.

MACHINE FOR CLEANING INTESTINES.

No. 287,253.

Patented Oct. 23, 1883.



Witnesses:
Q. V. Bond.
Albert H. Adams.

Inventor:
Ferdinand E. Davis

(No Model.)

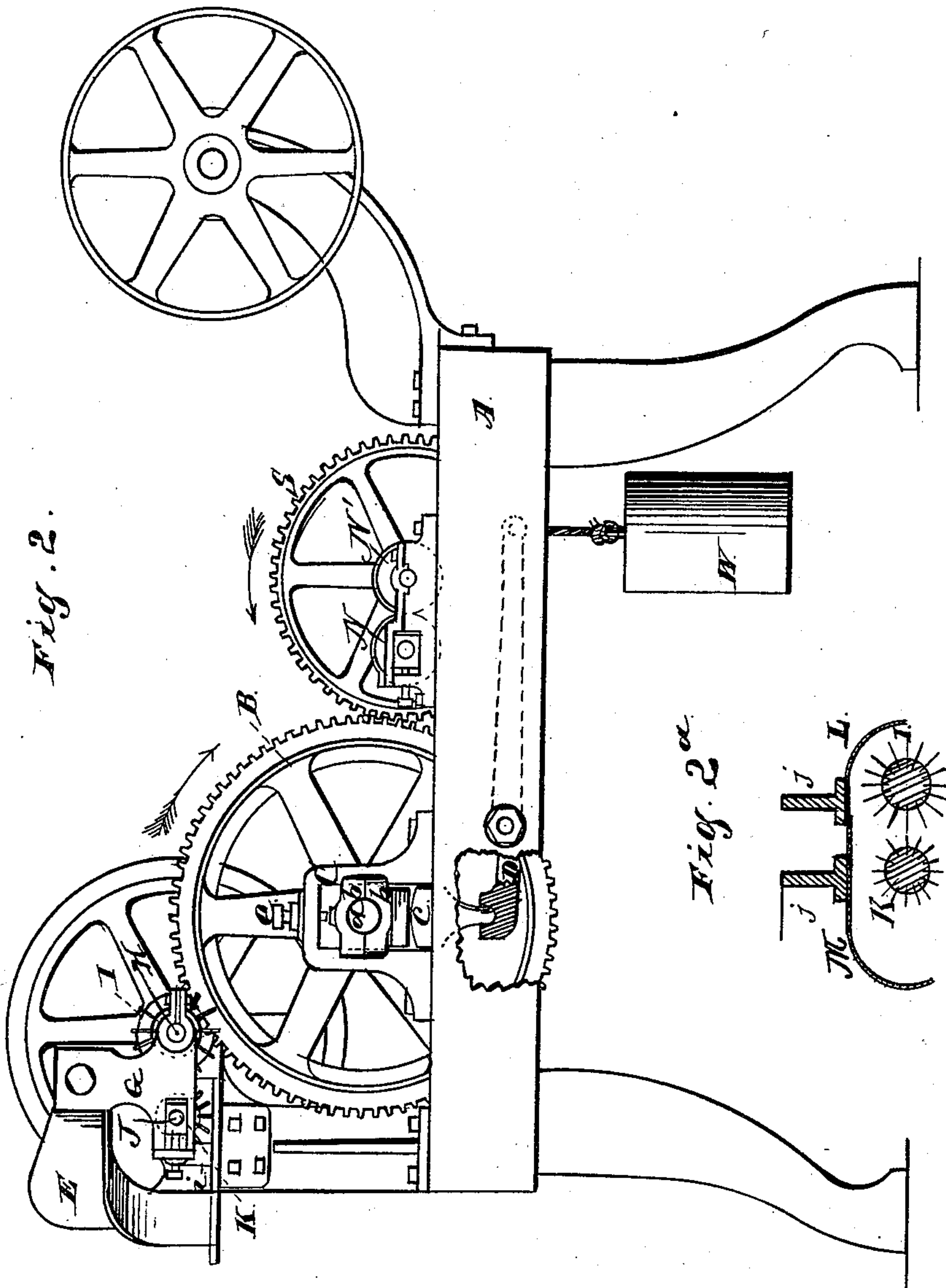
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3 Sheets—Sheet 3.

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Fig. 3.

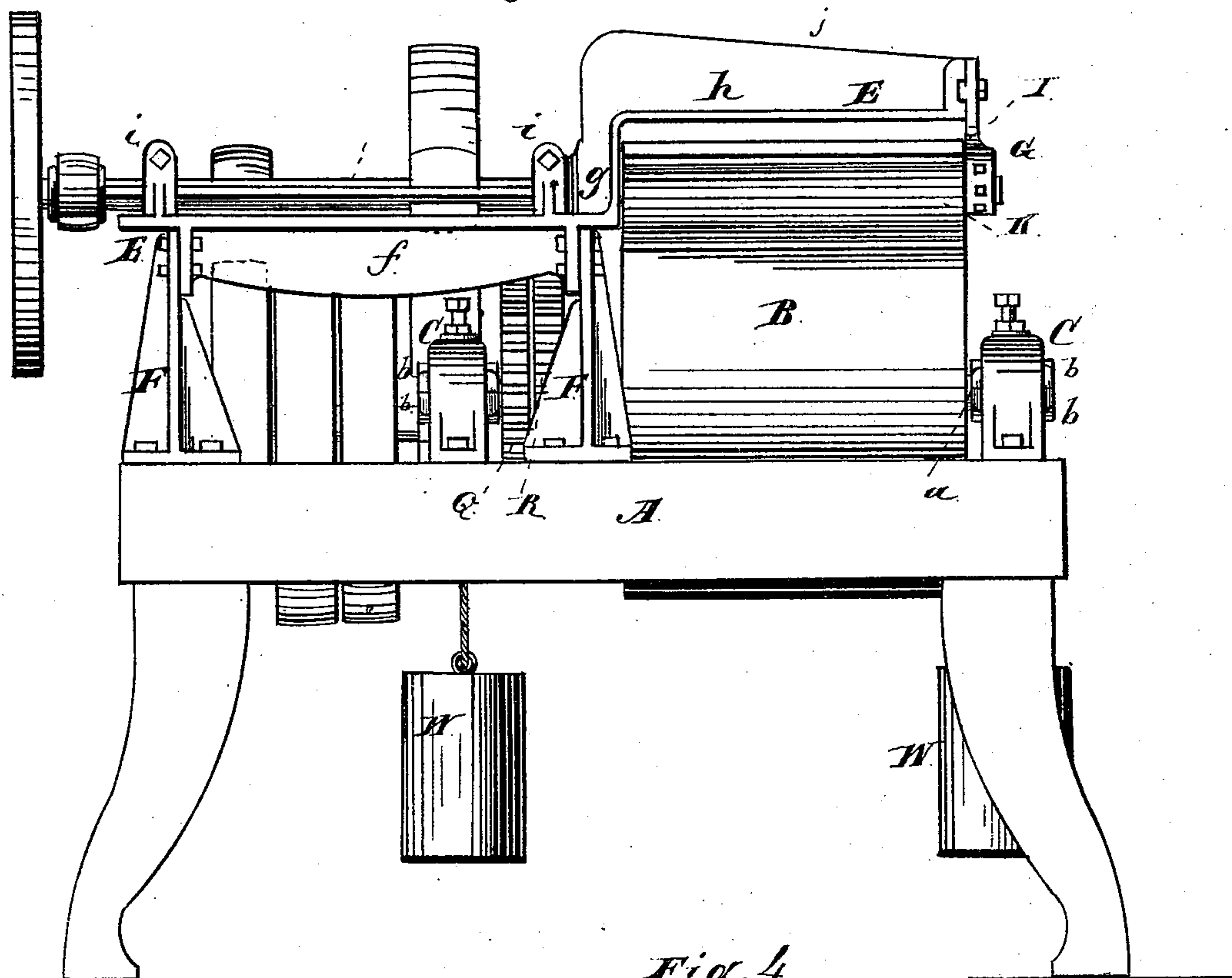


Fig. 4.

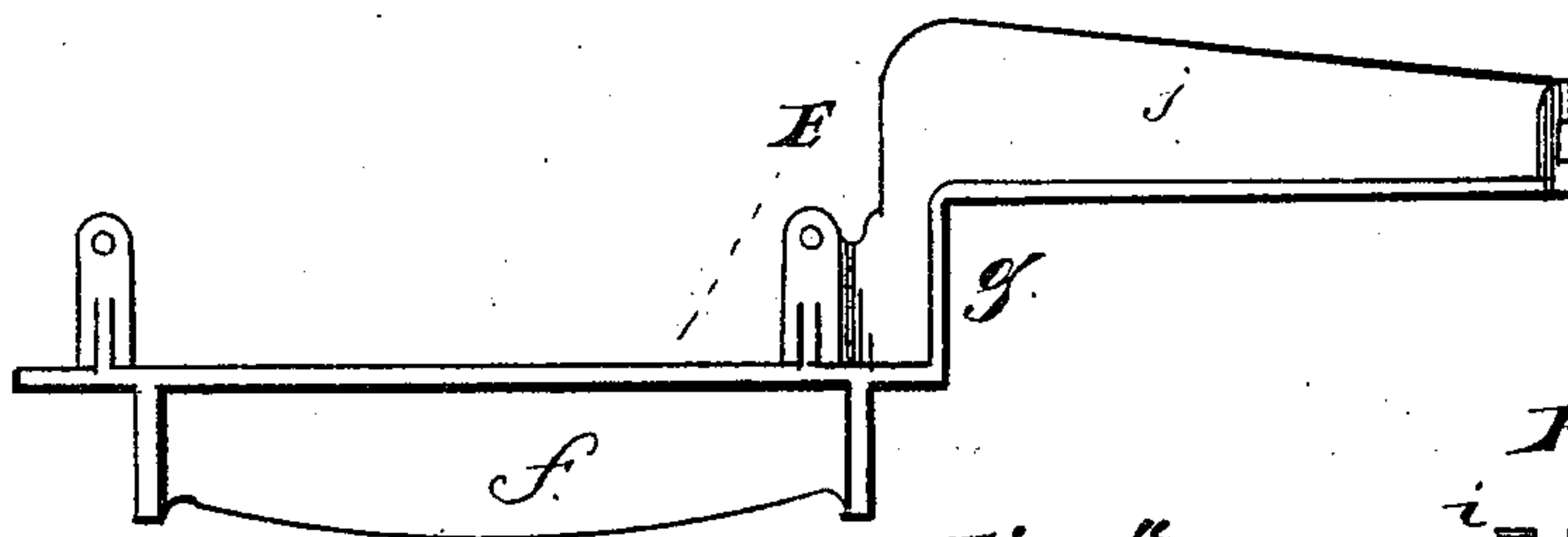


Fig. 5.

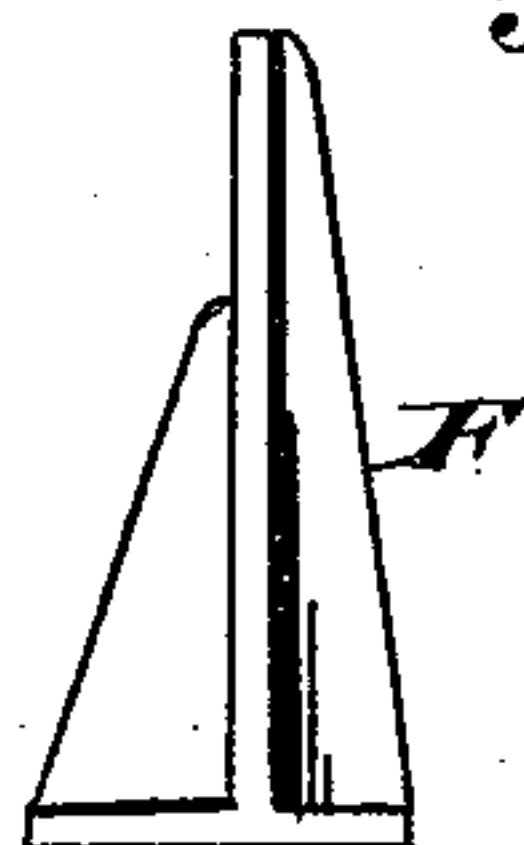
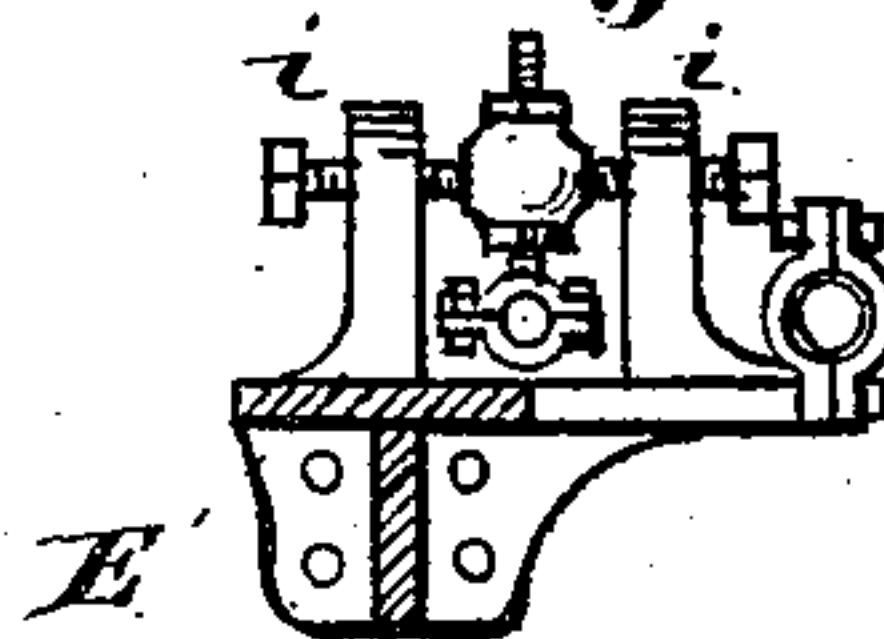


Fig. 6.



Witnesses:

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UNITED STATES PATENT OFFICE.

FERDINAND E. DAVIS, OF CHICAGO, ILLINOIS, ASSIGNOR TO SIGMUND OPPENHEIMER, OF NEW YORK, N. Y.

MACHINE FOR CLEANING INTESTINES.

SPECIFICATION forming part of Letters Patent No. 287,253, dated October 23, 1883.

Application filed February 16, 1883. (No model.)

To all whom it may concern:

Be it known that I, FERDINAND E. DAVIS, residing at Chicago, in the county of Cook and State of Illinois, and a citizen of the United States, have invented new and useful Improvements in Machines for Cleaning Intestines, of which the following is a full description, reference being had to the accompanying drawings, in which—

Figure 1 is a plan. Fig. 2 is a side elevation. Fig. 2^a is a detail. Fig. 3 is an end elevation. Figs. 4, 5, and 6 are details.

Letters Patent of the United States, No. 230,927, were granted to me August 10, 1880; and my present invention relates to improvements on the machine shown and described in said patent. In my said patent the scrapers were adjustable relatively to the cylinder; but I think it desirable to make the scraper stationary and to make the cylinder adjustable. In my said patent the scrapers are mounted on shafts supported in two bearings, the scrapers being outside of the inside bearings, without any support at the outer ends of the scrapers. I find it desirable to provide shafts which carry the scrapers, with bearings at the outer ends of the scrapers to hold the scrapers in place more securely. I also find it desirable to provide guards over the scrapers to prevent injury to the operator. My present improvements relate to the three points above mentioned, and I accomplish the desired objects as hereinafter fully set forth.

In the drawings, A represents the main frame.

B is the cylinder or drum, over which the articles to be cleaned are passed.

C are two yokes bolted to the main frame, one at each end of the cylinder B. The shaft *a* of the cylinder is supported in suitable bearings, *b*, which have a vertical movement in the yokes C. Beneath each bearing *b* is a block or support, *c*, which also can move vertically in the yoke. The lower end of each block *c* is supported in a groove in the short arm of a lever, D, which lever is pivoted upon the frame, and upon the outer end of each lever is suspended a weight, W.

e are screws, one of which passes through the top of each yoke, the lower end of each screw coming in contact with one of the bearings *b*.

By adjusting these screws up or down, the shaft of the cylinder, and of course the cylinder, can be raised or lowered, the weight W holding the bearings *b* up against the lower end of the screws *e*.

E is a broad arm or bar, which is supported upon two standards, F, which are bolted to the main frame. The under side of this bar E is strengthened by a rib, *f*. This bar E is carried upward, as shown at *g*, Figs. 3 and 4, and then is carried out in a direct line over the scrapers, as shown in Figs. 3 and 4.

h is a strengthening-flange upon the top of that portion of the bar E which is over the scrapers. To the right-hand end of the bar E, looking at Fig. 3, there is firmly secured a pendent arm, G.

H is the shaft upon which the main scraper I is supported, and J is the shaft upon which the auxiliary scraper K is supported. These shafts H J are each supported in three bearings, two of which are upon the left-hand side of the scrapers, looking at Fig. 1, while the others are in the hanger or pendant G. The shaft J is supported in bearings which can be adjusted by means of screws *i*, for the purpose of regulating the distance between the two scrapers. That portion of the bar E which is over the scrapers forms an overhanging arm, and, as shown in Fig. 1, it consists of two parts coming together at the outer end, between which parts there is an open space. These two parts of this overhanging arm are strengthened by ribs *j*.

L M are guards over each of the scrapers I K. They extend the whole length of the scrapers, and are located at a little distance therefrom, so as not to interfere with their operation, and they may be supported by being secured to the overhanging parts of the arm E. The object of these guards is to prevent the hands of the operator from coming in contact with the scrapers. The scrapers are provided with a series of wings secured to the shafts H J.

N N' are two elastic rollers, the same as are shown in my said patent. The remaining parts of the machine consist, chiefly, of gear-wheels and suitable driving-pulleys.

O is the main driving-pulley; P, a pinion, which engages with a second pinion which

drives the gear-wheel Q, which is on the shaft *a* of the cylinder.

R is another gear-wheel on the same shaft, *a*, which drives the gear-wheel S, which, with the pinion T, is on the shaft of the roller N', and the pinion T engages with the pinion U on the shaft of the roller N. The remaining driving parts and the belting-connections need not be described.

10 The operation of this machine, when in use, is substantially the same as the machine shown and described in my said Patent No. 230,927, except as modified by the improvements herein described and claimed, the operation of
15 which has been already stated. I will, however, briefly describe the operation. The intestines to be cleaned are first prepared in the usual manner, and are to be fed in between the cylinder B and the rotary scraper I, the cylinder revolving in the direction of the arrow thereon in Fig. 2, and the scraper I revolving in the opposite direction. This scraper forces out the contents of the intestines, and also scrapes off the integument which covers the
25 exterior thereof. The auxiliary scraper K prevents such integument or membrane from coiling around the scraper I. The scraper K revolves faster than I. The intestines pass from the cylinder B between the rollers N N'. The
30 cylinder can be adjusted relatively to the scraper I, as described. The bearings in the arm or pendant at the end of the overhanging arm support the outer ends of the scrapers, render them more firm, and relieve the bearings at the
35 other end of the scrapers from undue strain. The guards L M prevent the hands of the operator from coming in contact with the scrapers either in front or rear.

It is not essential to make the overhanging

arm which carries the bearings for the outer ends of the scrapers a continuation of the bar E—it might be separate therefrom—but I regard the form shown as the best. The outer ends of the scrapers cannot well be supported, except by an overhanging arm.

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

1. The combination, in a machine for cleaning intestines, of an overhanging arm and the shafts carrying scrapers, and having one end journaled in a bearing at the outer end of the said arm, with the cylinder for supporting the intestines, mounted in vertically-movable bearings, and a set-screw for depressing and a lever for raising the bearings of the cylinder, substantially as described.

2. The combination, in a machine for cleaning intestines, of the shafts carrying scrapers mounted in stationary bearings, with the cylinder for supporting the intestines, mounted in movable bearings, the yokes containing the latter, and the set-screw for depressing and the pivoted weighted lever for raising the bearings of the cylinder, substantially as described.

3. The combination, in a machine for cleaning intestines, of the overhanging arm E, the shafts H and J, carrying scrapers, and having one end journaled in a pendant bearing at the outer end of the overhanging arm, the guards L and M, attached to the said overhanging arm and extending the length of the scrapers, and the cylinder for supporting the intestines, mounted in vertically-adjustable bearings.

FERDINAND E. DAVIS.

Witnesses:

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ALBERT H. ADAMS.