(No Model.)

V. D. ANDERSON.

PRESS.

No. 525,526. Patented Sept. 4, 1894.

Fig. 3.

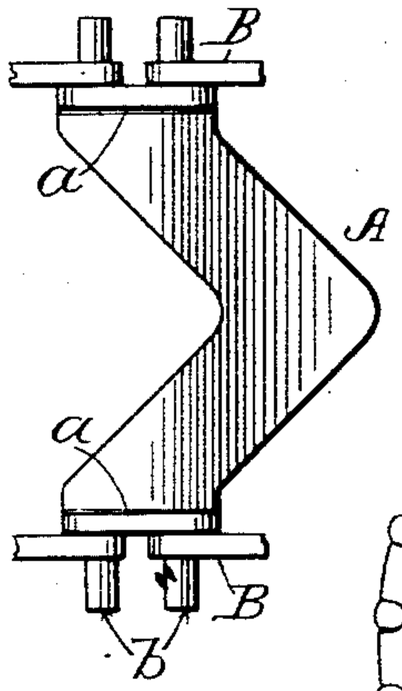

Fig. 1.

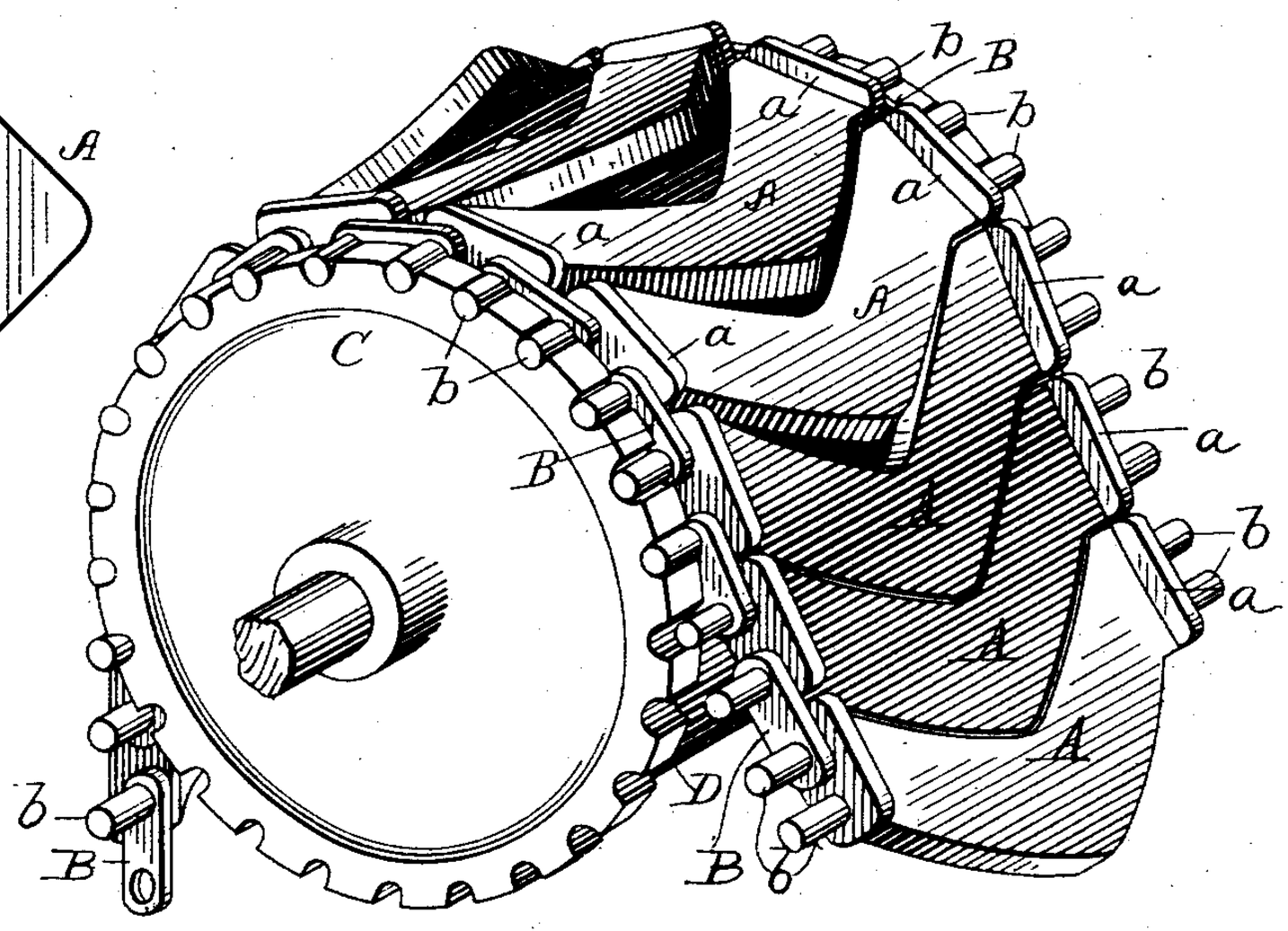

Fig. 4.

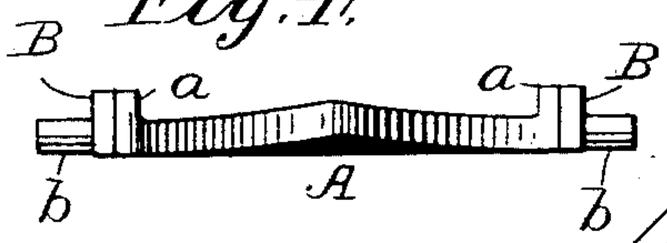

Fig. 2.

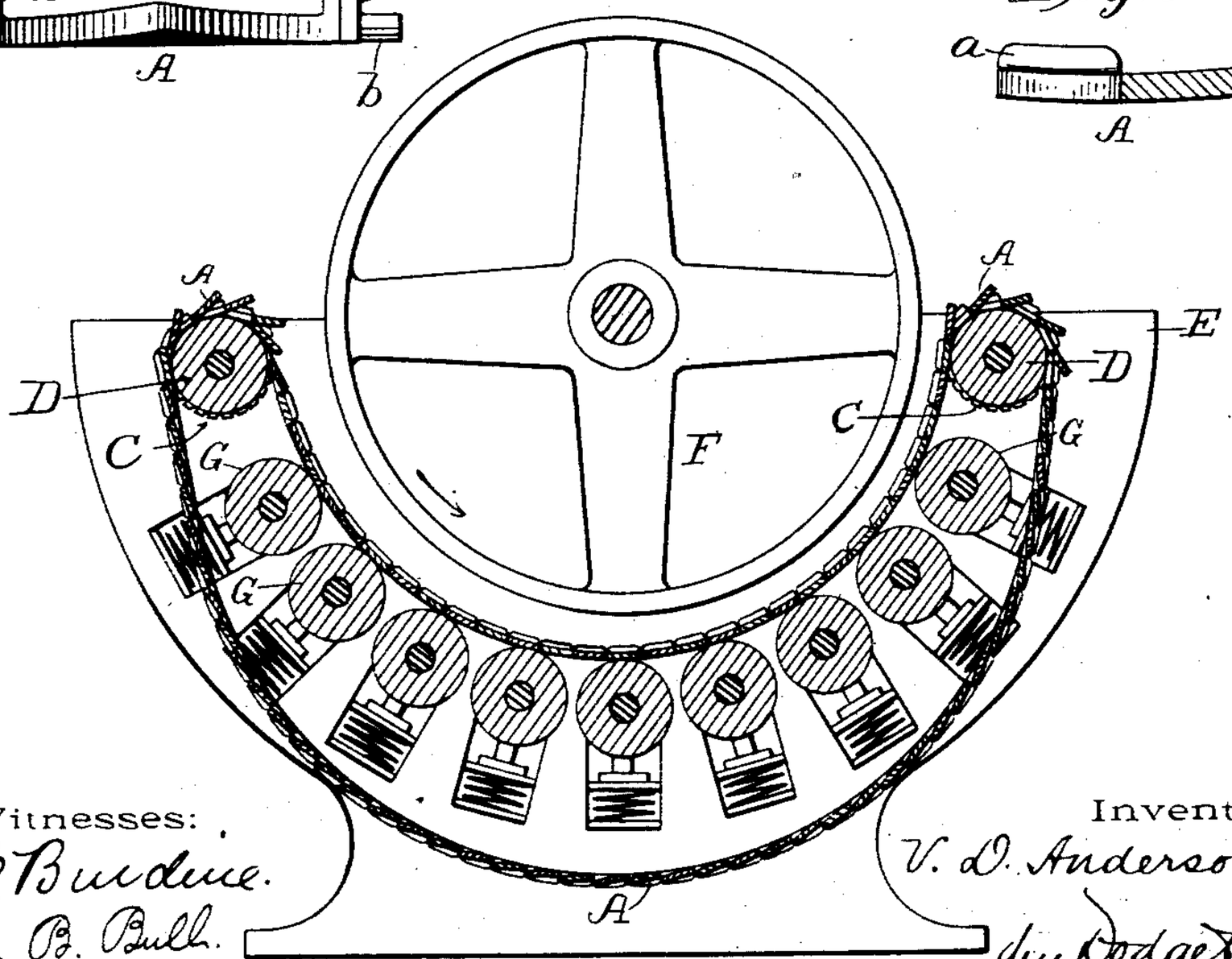

Fig. 5

Witnesses:
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C. B. Bull.

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UNITED STATES PATENT OFFICE.

VALERIUS D. ANDERSON, OF CLEVELAND, OHIO.

PRESS.

SPECIFICATION forming part of Letters Patent No. 525,526, dated September 4, 1894.

Application filed May 12, 1894. Serial No. 510,999. (No model.)

To all whom it may concern:

Be it known that I, VALERIUS D. ANDERSON, a citizen of the United States, residing at Cleveland, in the county of Cuyahoga and State of Ohio, have invented certain new and useful Improvements in Presses, of which the following is a specification.

My invention relates to that class of presses in which an endless chain or belt is employed in connection with a drum or cylinder, such for instance as shown and described in Letters Patent No. 474,802, granted to me on the 17th day of May, 1892.

The present invention relates especially to the construction of the chain, and is designed to secure a better action of the press by reason of the gradual squeezing of the material from a point midway between the ends of the lag and the cylinder, outward, with gradually increasing pressing surface.

Figure 1 is a perspective view, showing a short length of my improved chain, and the sprocket wheels for driving the same. Fig. 2 is a vertical longitudinal section of a press suitable to employ the improved chain, many details of the press being omitted as unimportant in the present connection. Figs. 3 and 4 are, respectively, face and edge views of one of the lag chain sections; and Fig. 5, a cross section at a point midway between the ends of such section.

The chain is designed for, and is capable of, use in any and all presses employing lag chains, and it is to be understood, therefore, that I do not restrict myself to its application to the particular type of press here indicated, or to any other special form of press, but for convenience of description and illustration, I have shown it in connection therewith.

The chain is composed of a series of plates or sections A, each of V-form, and having upturned ends or flanges *a*, as shown in the several figures. Each plate or section is a counterpart of the others, and consequently when assembled as indicated in Figs. 1 and 2, the point of one section enters the recess or cavity of the next, and so on throughout the series, as best indicated in Fig. 1.

The sections A are connected at their ends by links B, which are secured in place by shouldered pins *b* passing through the links and through the upturned ears *a* of the plates or sections A, the holes of the links being sufficiently large to permit a perfectly free movement of the links upon the studs or pins.

The projecting studs or pins are uniformly spaced, and are designed to be acted upon by sprocket wheels C, entering notches or seats in the peripheries of said wheels, and to be propelled thereby. These sprocket wheels are placed outside of and are independent of the drum or roller D which sustains the chain.

The plates or sections A are curved in the direction of their travel to conform more or less nearly to the curvature of the drum or cylinder with which they co-operate. This will be better understood upon referring to Fig. 2, in which E indicates a main frame in which is mounted a drum or cylinder F, and a series of sliding boxes or blocks supporting the journals of a series of pressure rollers G, which rollers are arranged in a semicircular group about the lower side of the drum or cylinder.

Motion being imparted to the sprocket wheels C, the chain is caused to move forward in the direction indicated by the arrow, and, owing to the presence of material in the space between the chain and the drum, and to the gradually decreasing width of said space, the motion of the chain imparts rotation to drum F. In this way the material passing between the chain and the drum is pressed or squeezed, as in the press described in my aforesaid patent. Under the present construction, however, it is found that with far less power to operate the machine, a greater pressing effect is secured, owing to the peculiar form of the lags or sections A; for, it will be seen that as these lags or sections move forward, their points receive the pressure, and as a consequence the entire pressure is at first received on a very small surface, and the lag is readily forced inward and caused to compress or squeeze the material. As the broader portion of the lag comes between the main frame or cylinder and a given roller, the preliminary squeezing having been effected by the point or forward end of the lag, the finishing pressure is easily given. Another reason why this particular form of lag begets such improved results is the fact that by squeezing from the center toward the ends, the juices and matters expressed are caused to flow from

the center outward, and are not locked in by the solidly compressed matters at the ends, but have a chance to escape.

Practical operation of both forms of press, or of presses with both forms of chain, demonstrate the vast superiority of the present form of chain.

As above stated, the type of press is immaterial, the invention residing in the construction of the chain.

The chain herein described is peculiarly adapted for use in connection with straining or filtering cloths, in that the meeting line of adjacent lags or sections is an irregular one, and the cloth cannot, therefore, readily sink into the opening between them.

Having thus described my invention, what I claim is—

1. A press chain or endless band, consisting of a series of lags A of substantially V-form, flexibly connected one to another.

2. The herein described chain or belt for presses, consisting of a series of lags or plates A of substantially V-form, and connecting links B applied to their ends substantially as shown and described.

3. A chain or pressure band for presses, consisting of a series of lags A of substantially V-form, provided with upturned ends or flanges, and connected at their ends by links, substantially as shown and described.

4. In a press, a chain or belt consisting of a series of lags or sections of substantially V-form flexibly connected, the forward end of one section extending into the rear side or end of the next preceding to a considerable distance beyond the pivots connecting the two.

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

VALERIUS D. ANDERSON.

Witnesses:
A. D. ANDERSON,
WM. H. DE WITT.