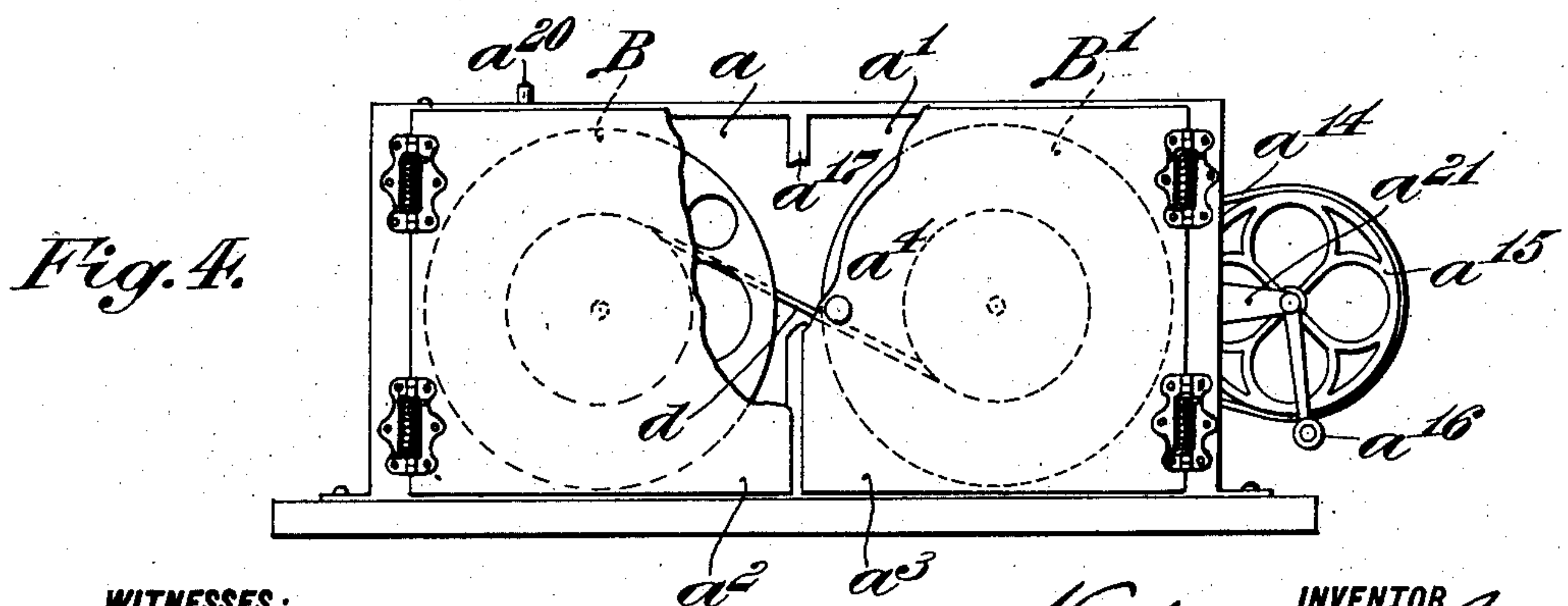
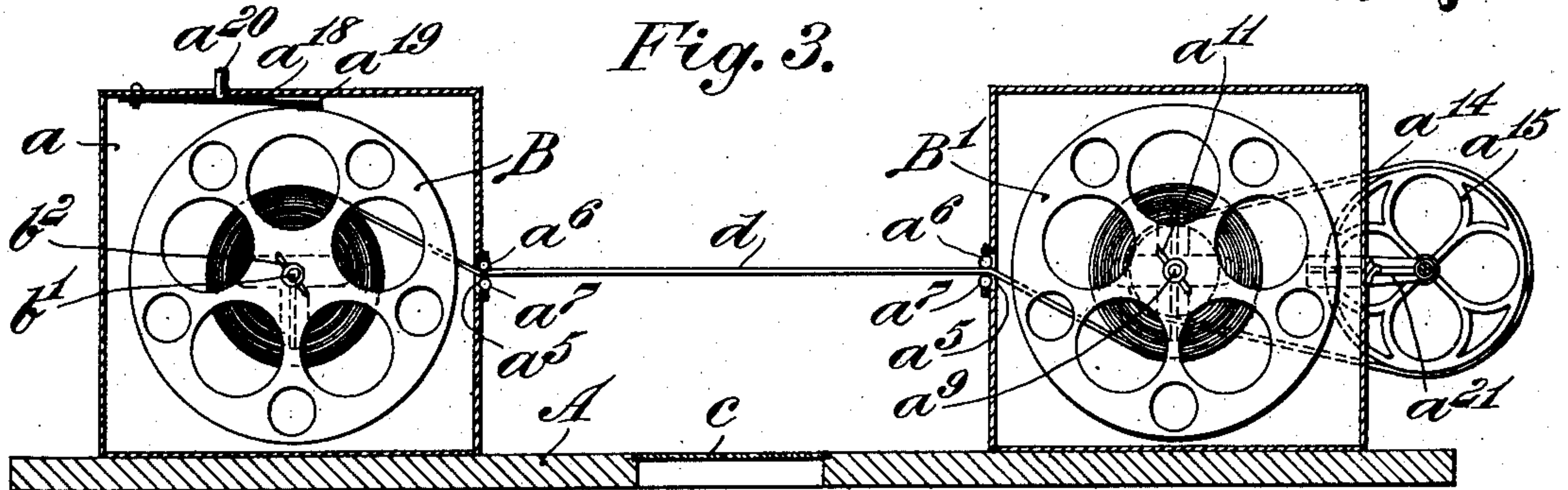
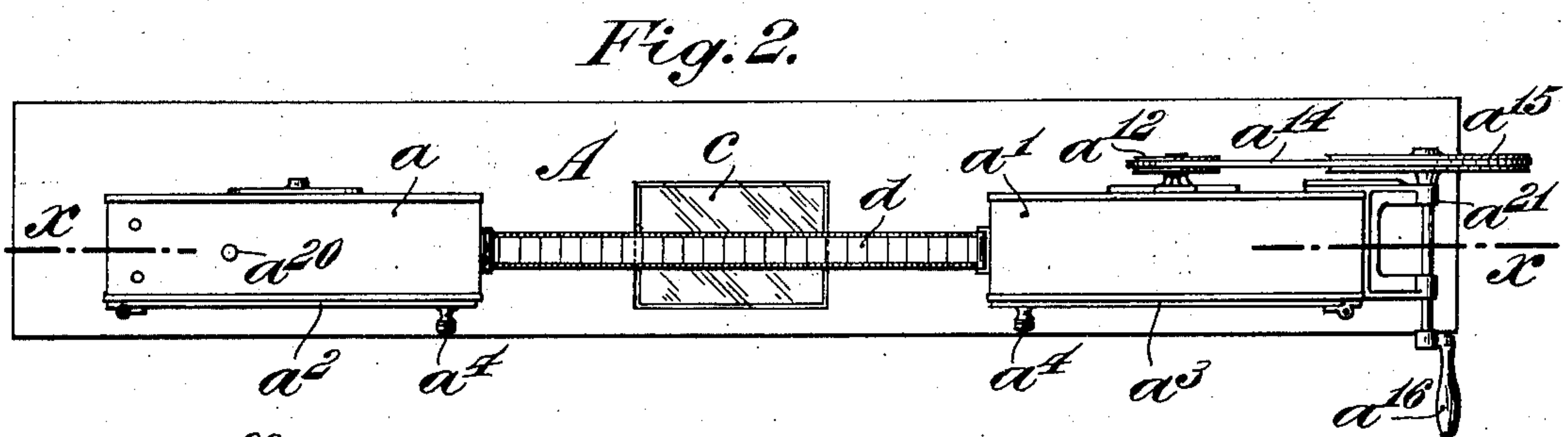
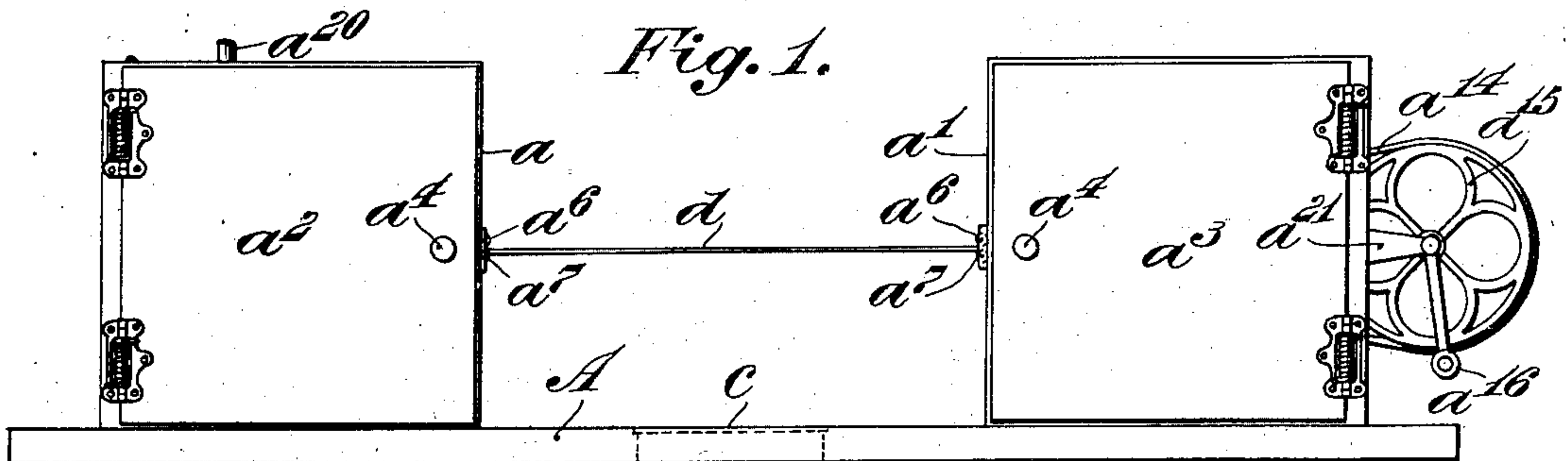


N. H. BROWN.
SAFETY APPLIANCE FOR REELING MOVING PICTURE FILMS.
APPLICATION FILED APR. 15, 1909.

930,037.

Patented Aug. 3, 1909.

2 SHEETS—SHEET 1.



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Fig. 5.

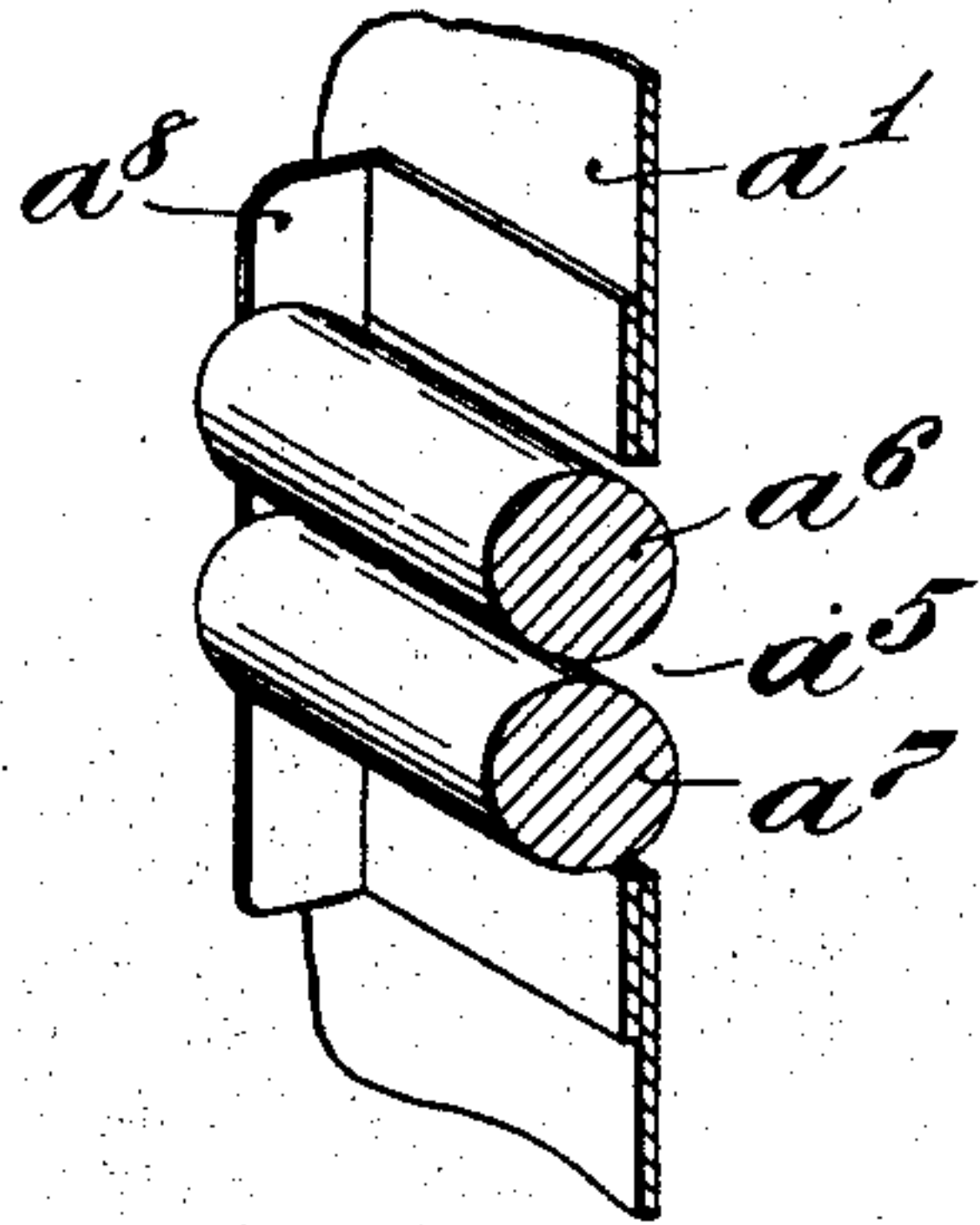


Fig. 10.

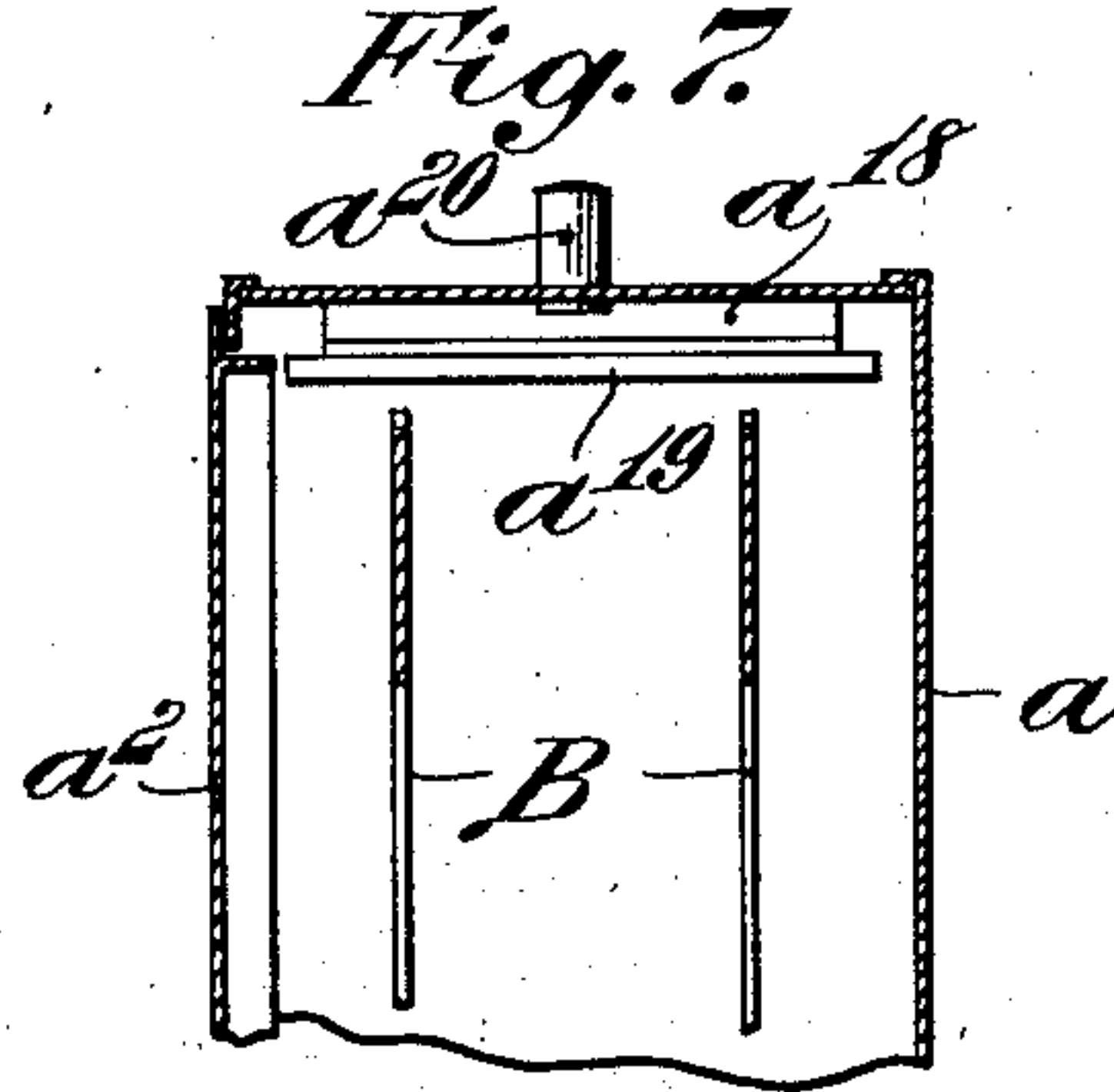
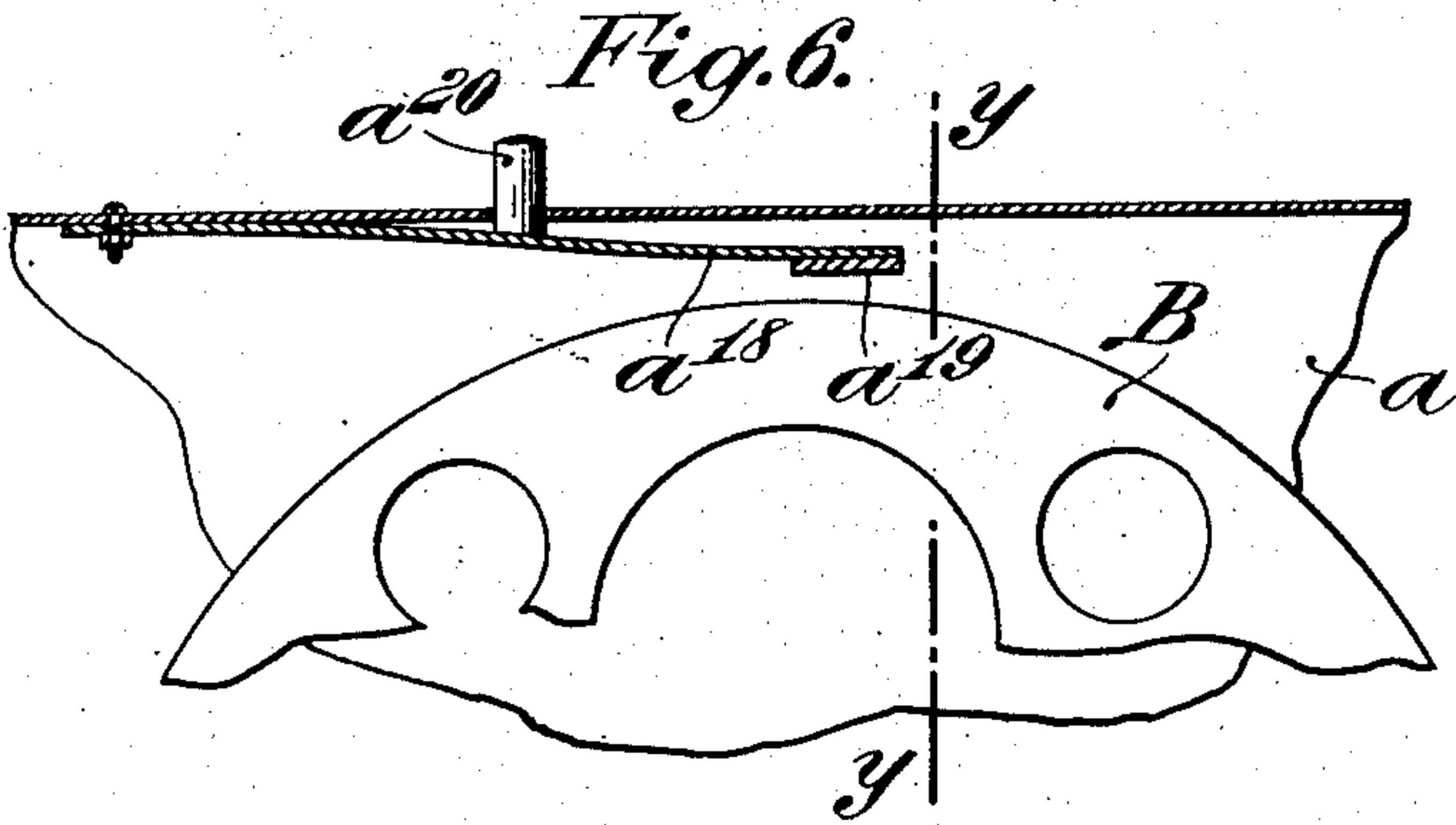
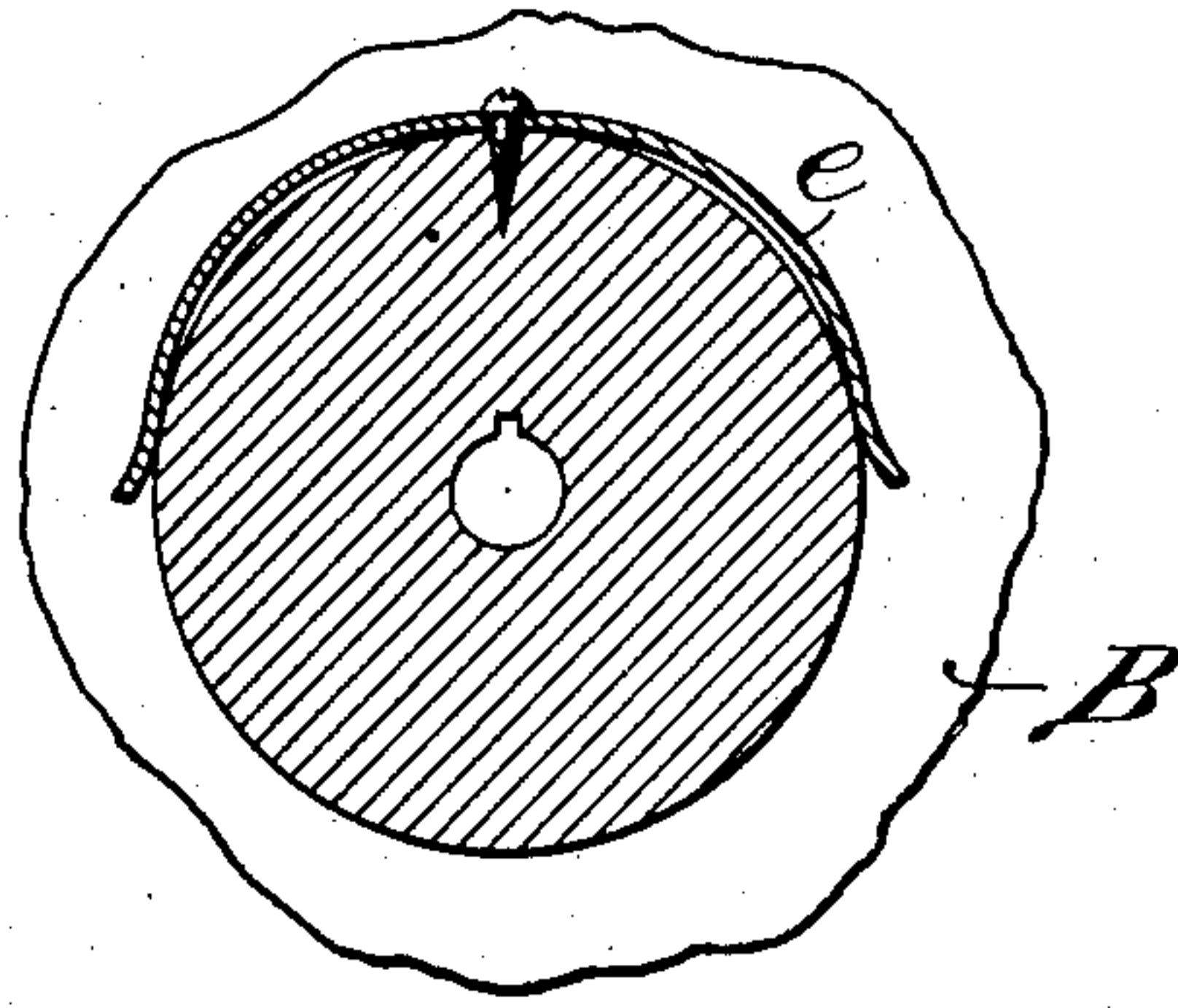


Fig. 9.

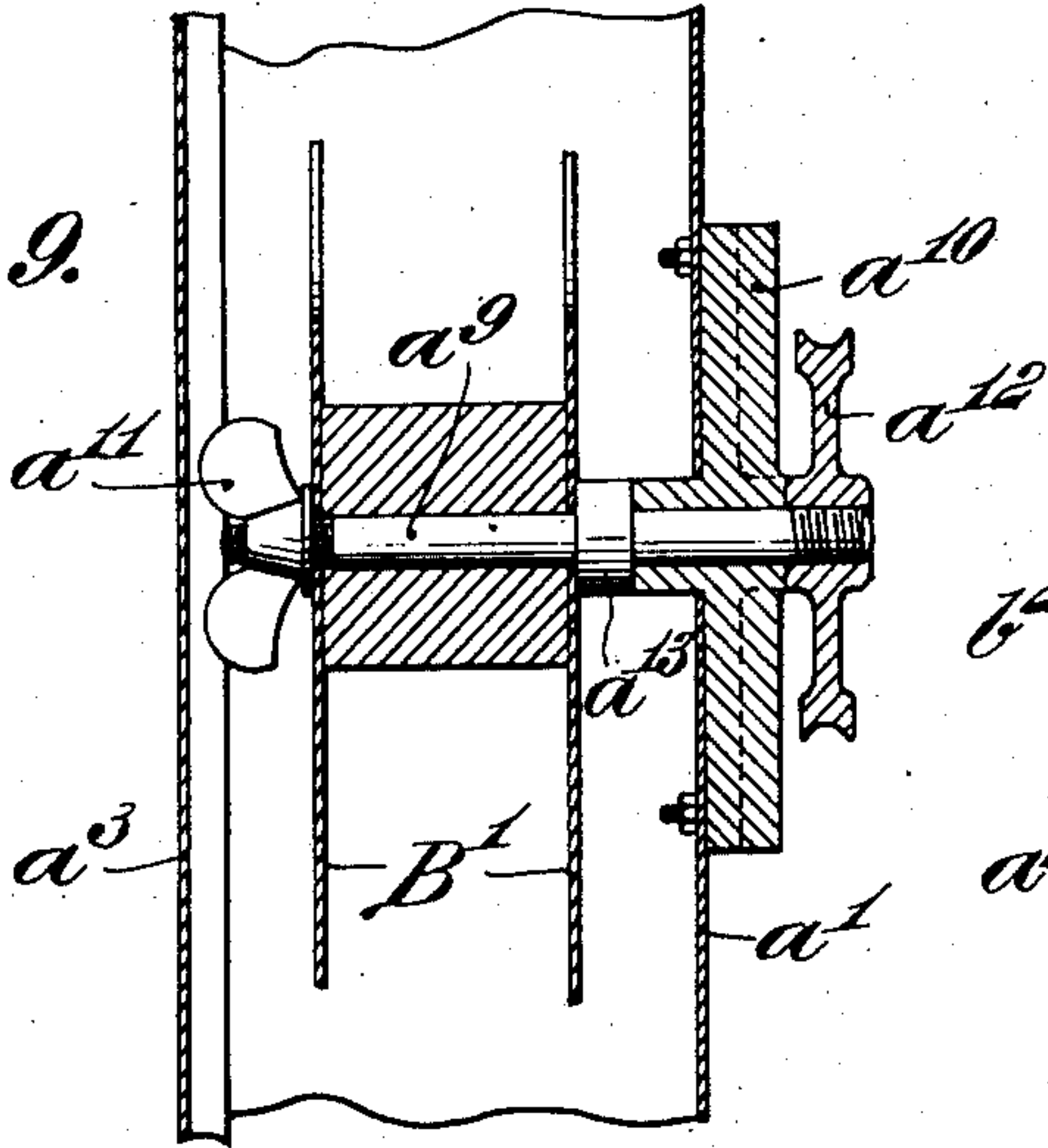
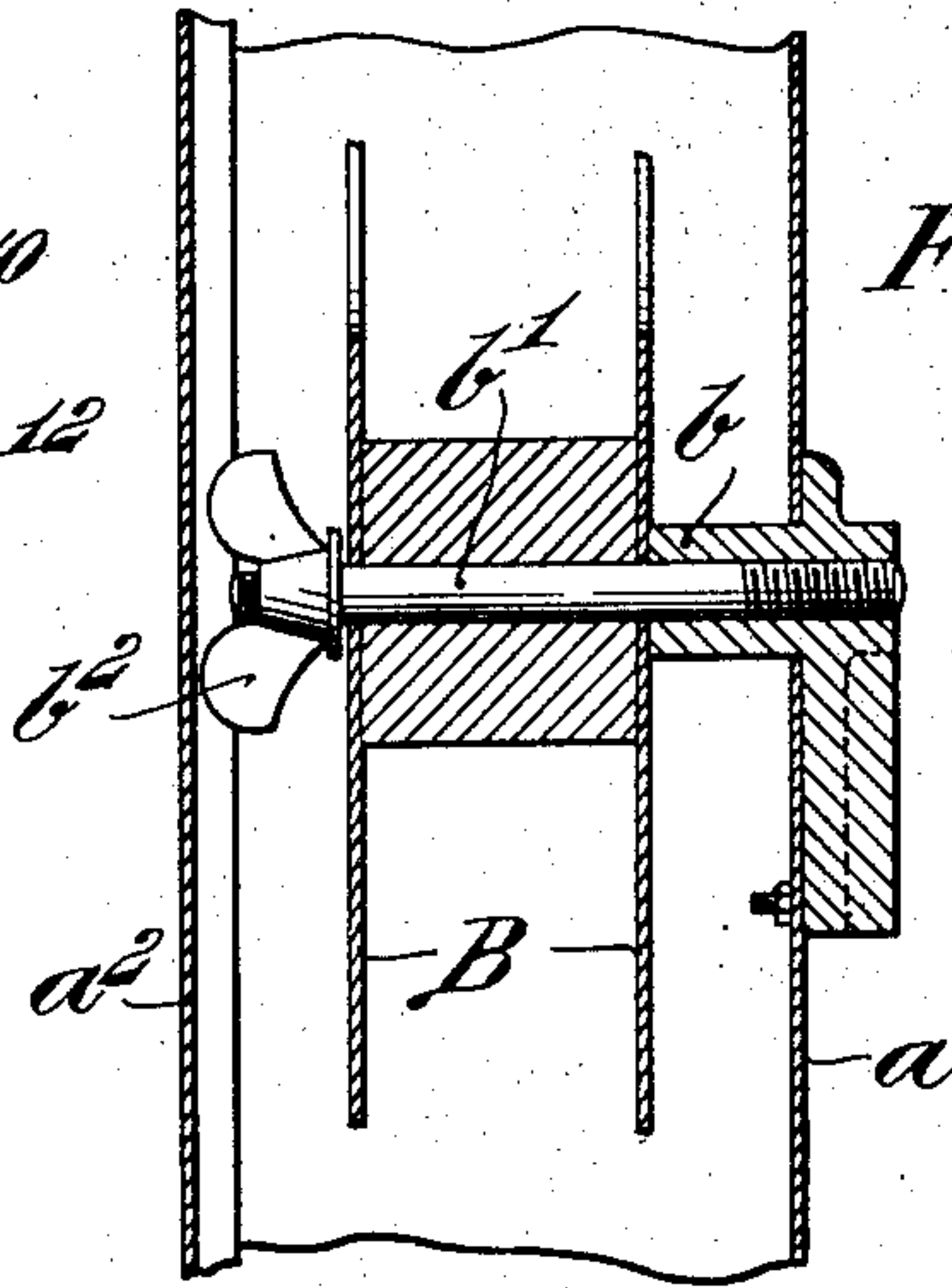


Fig. 8.



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SAFETY APPLIANCE FOR REELING MOVING-PICTURE FILMS.

No. 930,037.

Specification of Letters Patent.

Patented Aug. 3, 1909.

Application filed April 15, 1909. Serial No. 490,094.

To all whom it may concern:

Be it known that I, NATHANIEL H. BROWN, a citizen of the United States, residing at the city of Philadelphia, in the county of Philadelphia and State of Pennsylvania, have invented certain new and useful Improvements in Safety Appliances for Reeling Moving-Picture Films, of which the following is a specification.

My invention relates to a safety appliance for rewinding or reeling films for being used again in the magazine of a moving picture machine; and more particularly an appliance adapted to safeguard the film, as far as possible against fire during the rewinding or reeling and at the same time so arranged as to permit of examination being made or repairs while rewinding or reeling is going on, to correct inequalities in the films, ragged edges of the films or repairing breaks therein, requiring to be rejoined with accuracy in respect to sections thereof.

My invention, therefore, consists of a safety appliance for rewinding or reeling moving picture films and examining or repairing the same, during rewinding or reeling constructively arranged in substantially the manner hereinafter described and claimed.

The nature and scope of my present invention will be more fully understood from the following description taken in connection with the accompanying drawings, forming part hereof, in which—

Figure 1, is a side elevational view of a safety appliance for rewinding or reeling moving picture films and as constructively arranged, embodying the main features of my said invention. Fig. 2, is a top or plan view of the appliance. Fig. 3, is a vertical longitudinal section through the appliance on the line x, x , of Fig. 2. Fig. 4, is a side elevational view of a modified form of the appliance, showing the two sections thereof, formed integrally with the spring controlled front doors and with the internal perforated partition separating one section of the appliance from the other. Fig. 5, is a perspective view, enlarged, of the two rollers arranged in connection with the perforated side walls of the sections of the appliance, as arranged in Figs. 1, 2 and 3. Fig. 6, is a broken sectional plan, in side elevation, of a portion of a film unwinding reel and of the housing or casing of one section of the appliance, show-

ing a brake-device suitably connected with said housing or casing and operative from the outside thereof, for controlling the speed of rotation of the film unwinding reel of the said appliance. Fig. 7, is a vertical central section through the said brake-device on the line y, y , of Fig. 6. Fig. 8, is a similar view, through the said film unwinding reel and portion of its housing or casing, showing in detail the detachable arrangement thereof, within said housing or casing. Fig. 9, is a vertical central sectional view, partly in elevation of the winding-on reel removably mounted in its protective housing or casing and with a pulley-wheel outside back of the casing, for operatively permitting of the revolving of said reel; and Fig. 10, is a broken sectional view as shown, of the winding-on reel hub provided with spring clips for gripping an end of a film to hold the same while being wound onto the hub of the said reel by the rotating of the same.

Referring to the drawings A, is a platform upon which are mounted two square or other shaped metal housings or casings a and a^1 , having spring controlled side doors a^2 and a^3 , with handles or buttons a^4 , whereby when either door is opened by hand upon release of the hand from the button the door will spring against the casing or housing a or a^1 .

From the interior centrally of the housing or casing a , projects from the back of the same a bearing b , for engaging a threaded-pin b^1 , upon which a reel B, is mounted to revolve thereon. This reel B, is held on the pin b^1 , by means of a jam-nut b^2 . In one side wall of each housing Figs. 1, 2 and 3, is provided a slit a^5 , through which an end of the film to be wound off of the reel B, is extended and above and below this slit a^5 , are arranged two revoluble guide-rolls a^6 and a^7 , journaled to brackets a^8 , which are suitably attached to the slitted side walls of the housings or casings a and a^1 . These rolls not only guide the impelled film to and between the rolls a^6 and a^7 , of each of the slitted side walls of the housings or casings, but also prevent in case of the firing of the film of such extending into either of the casings or housings for the reason that these rolls as practice has demonstrated, extinguish or smother the fired film, by the film surface coming in contact with said rolls.

Between the housings or casings a and a^1 , is arranged a space to provide unobstructed

room to examine carefully a traveling film from one housing to the other and so as to detect irregularities as well as ragged edges of the film and to enable such irregularities or other necessary repairs to be quickly made before the film d , in passing from the unwinding reel B, of the housing a , reaches the winding-on reel B^1 , in the housing a^1 . The platform A, between the said housings a and a^1 , is provided preferably with a pane of glass c , and beneath may be located a powerful light, such as an electric lamp for reflecting said light through the pane of glass and onto the film, while being drawn from the housing a , close to or over the pane of glass to readily make whatever necessary repairs to the film d , may be required and before such film passes onto the winding-on reel B^1 , within the housing a^1 .

In the interior of the housing a , and secured preferably to the roof of the same projects a strip a^{18} , having a cross-piece a^{19} , of rubber or wood arranged to be brought into contact with the peripheral surface of the reel B, Figs. 3, 6 and 7, to control the speed of rotation of the unwinding reel B. This is highly desirable, to prevent damage to a film. The strip a^{18} , is arranged to be operated by a push-pin a^{20} , projecting through the roof of the housing a , as shown in Figs. 1, 2, 3, 4 and 6.

The reel B^1 , in the housing or casing a^1 , is mounted on a shaft a^9 , extending through a boss a^{10} , secured to the back of the housing a^1 , and threaded at each end to receive at the front end within the housing a jam-nut a^{11} , and on the opposite threaded end a grooved pulley a^{12} , revolving with the shaft a^9 , and between the inner end of the boss a^{10} , and reel B^1 , in position in the housing a^1 , is provided on the shaft a^9 , a collar a^{13} , as clearly shown in Fig. 9. The pulley a^{12} , is revolved by a belt a^{14} , passing around a larger grooved-wheel a^{15} , journaled to a bracket a^{21} , secured to the housing a^1 , and which wheel a^{15} , is operated by a handle a^{16} , for revolving said belt- and pulley-mechanism to actuate the reel B^1 , to rewind a film from the reel B, for use in the magazine of a moving picture machine, not shown.

In Fig. 4, the arrangement of the safety appliance differs from the appliance illustrated in Figs. 1 to 3, in that the two sections a and a^1 , of the appliance, are made as but a single structure, with spring controlled doors a^2 , a^3 , and the structure mounted on a platform A, with the two sections of the appliance separated from each other by an internal perforated partition a^{17} , as shown and through which perforation the film is adapted to pass from the unwinding reel B, onto the winding-on reel B^1 , by operating the handle a^{16} , of the belt-and-pulley-operating means of the reel B^1 , and when a finger has been placed upon the push-button a^{20} , of the

brake-device of the reel B, to control the speed of rotation of the unwinding reel B, in action.

The preferred arrangement of the safety appliance is that shown in Figs. 1 to 3 inclusive, due to the facility with which an examination as well as repairs to the films can be made for subsequent use.

Each of the hubs of the reels B, B^1 , may be provided with a spring clip e , Fig. 10, for engaging an end of the film to hold the same during winding or unwinding from either reel.

It will be observed that by arranging the two housings or casings a and a^1 , containing the reels B and B^1 , in the manner explained, first, the appliance can be conveniently handled as well as placed to afford the greatest possible convenience in use; second, repairs to a film can be readily made, during rewinding; third, the brake-device on the full reel to be unwound will readily control the speed of the unwinding because too rapid unwinding is calculated to tear a film or to give it ragged edges or even to tangle the film; and fifth, as only a short length of a film is exposed between housings of the safety appliance, as shown in Figs. 1 to 3, the rolls adjacent to each of the slits a^5 , of the housings a and a^1 , between which the films pass from one housing to the other will protect such against firing within either of them, for the reason that surface contact of the rolls with the burning film will every time quickly extinguish the flaming film before any fire reaches the interior of either housing or casing.

Having thus described the nature and objects of my invention, what I claim as new and desire to secure by Letters Patent is:—

1. In a safety appliance of the character described, housings having spring controlled doors and slits in one of the walls, reels in each of said housings, one movably mounted on a support and the other mounted on a shaft and revolving therewith, means located outside one of the housings on said shaft and adapted to be actuated from the front of said housing and means connected with the other of said housings and arranged to engage the reel within said housing to control the speed thereof.

2. In a safety appliance of the character described, housings having spring controlled doors and with slits in one of the walls having rolls above and below the slits, reels in each of the housings, one movably mounted on a support and the other mounted on a shaft and revolving therewith, means located outside of the housing on said shaft and adapted to be actuated from the front of the housing, and a brake-device located in one of said housings and arranged to engage the reel to control the speed of rotation of the same.

3. In a safety appliance of the character described, a platform, two housings mounted thereon but separated from each other to provide an intervening space, said housings
5 provided with slits in one of the walls, a brake-device in one of the housings adapted to be operated from the outside, said housings having spring actuated front doors,
10 reels mounted in each of said housings, one mounted on a support and the other revoluble on a shaft and means to actuate the same and operated from the front of said housing.

4. In a safety appliance of the character
15 described, a platform, two housings mounted thereon and arranged to provide a space between having a glass insert, reels mounted in said housings having spring actuated doors, one of said reels mounted on a support
20 and the other revoluble with a shaft journaled to said housing, means located on the outside of said housing and operated from the front to actuate said shaft, and a brake-

device movably connected with the interior of the other of said housings and operated
25 from the outside for controlling the speed of rotation of the reel within said housing.

5. In a safety appliance of the character described, two housings mounted side by side but with a space provided between
30 them, said housings having side slits with rolls above and below each of said slits, reels mounted in said housings and one of said reels movable with a shaft, means for actuating said shaft, and a brake-device adapted
35 to be connected with the other reel of said housings for controlling the speed of rotation of the same.

In witness whereof, I have hereunto set my signature in the presence of two subscrib-
40 ing witnesses.

NATHANIEL H. BROWN.

Witnesses:

J. WALTER DOUGLASS,
THOMAS M. SMITH.