

No. 682,832.

Patented Sept. 17, 1901.

J. G. McPHERSON.

SPECULUM.

(Application filed Dec. 29, 1899.)

(No Model.)

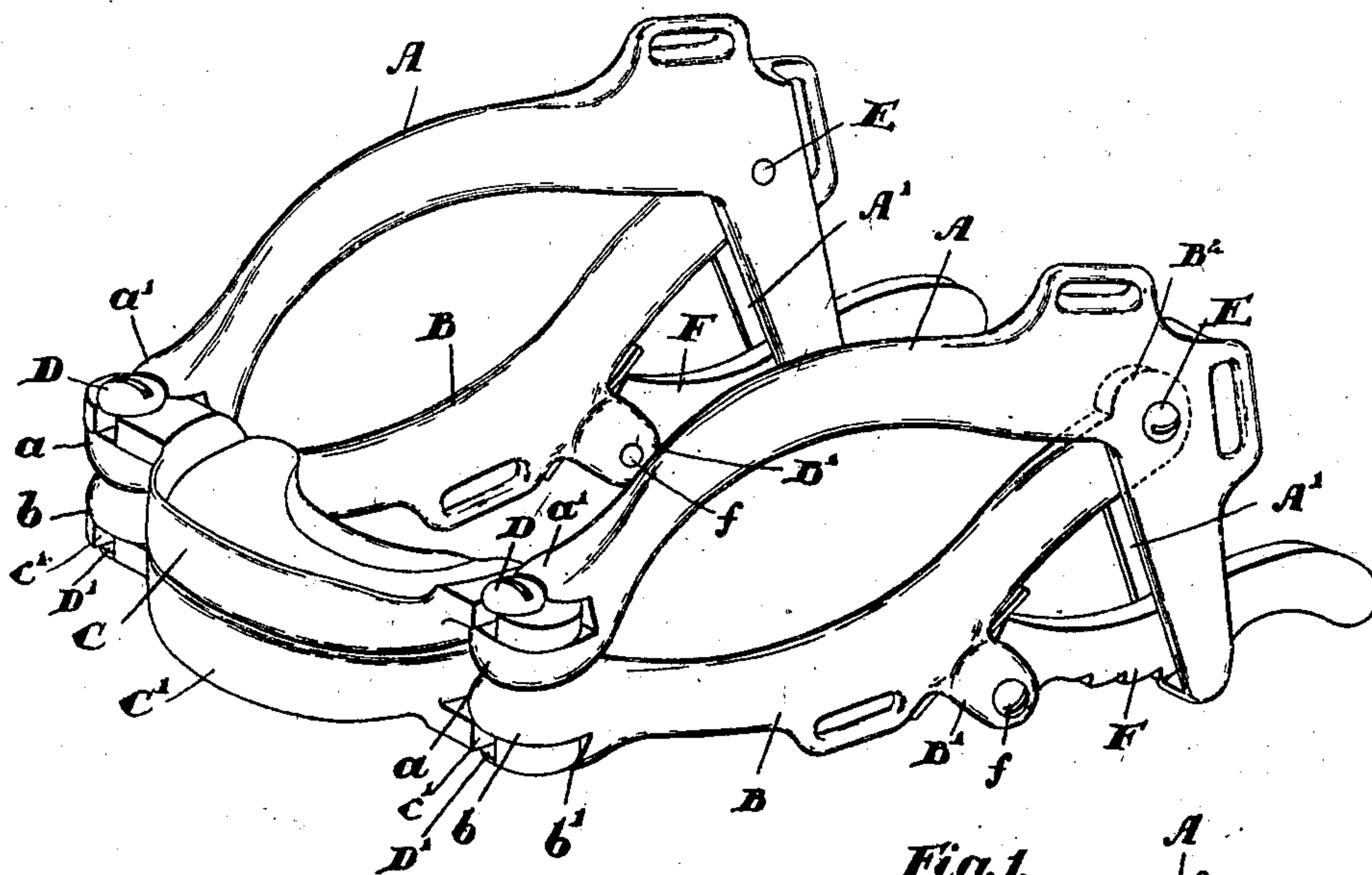


Fig. 1.

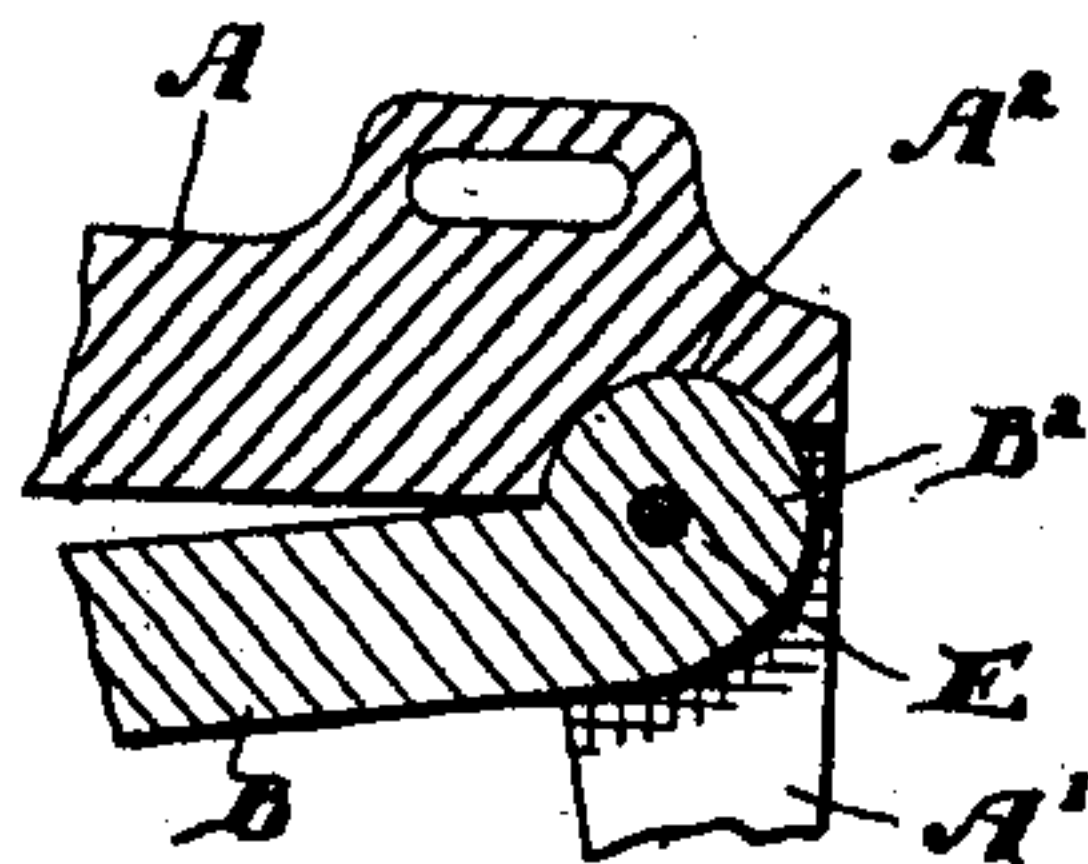


Fig. 4.

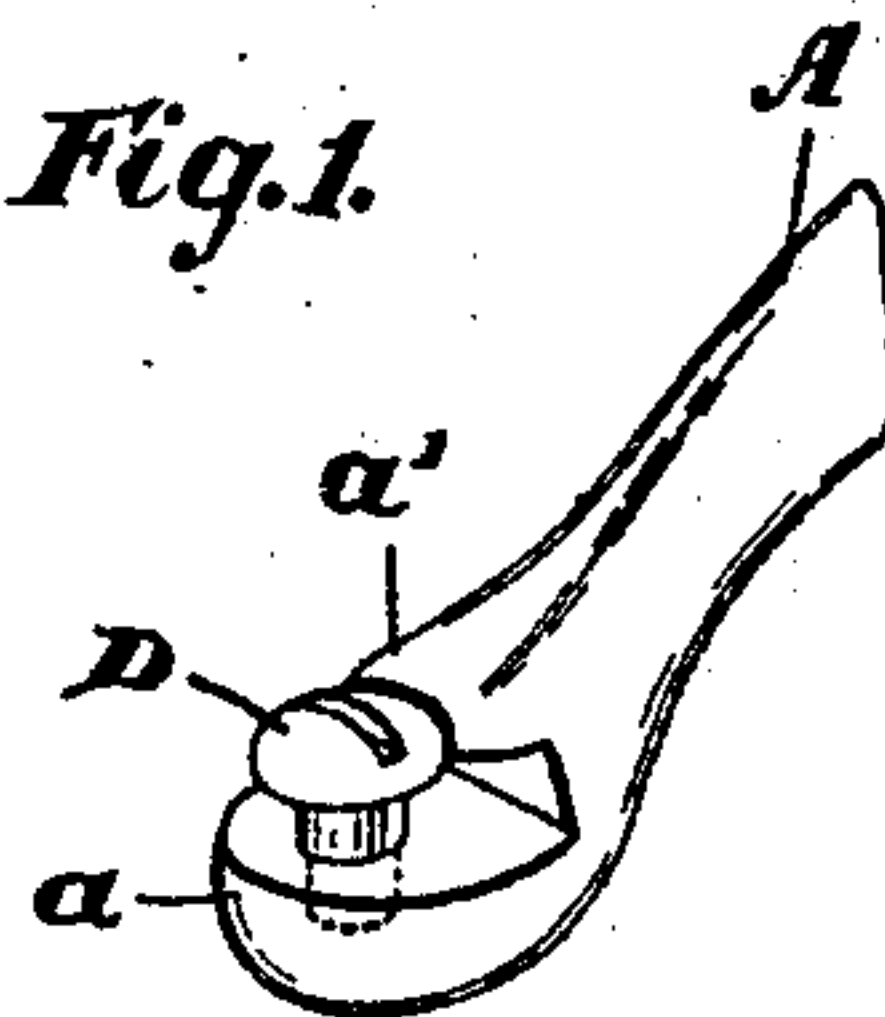


Fig. 2.

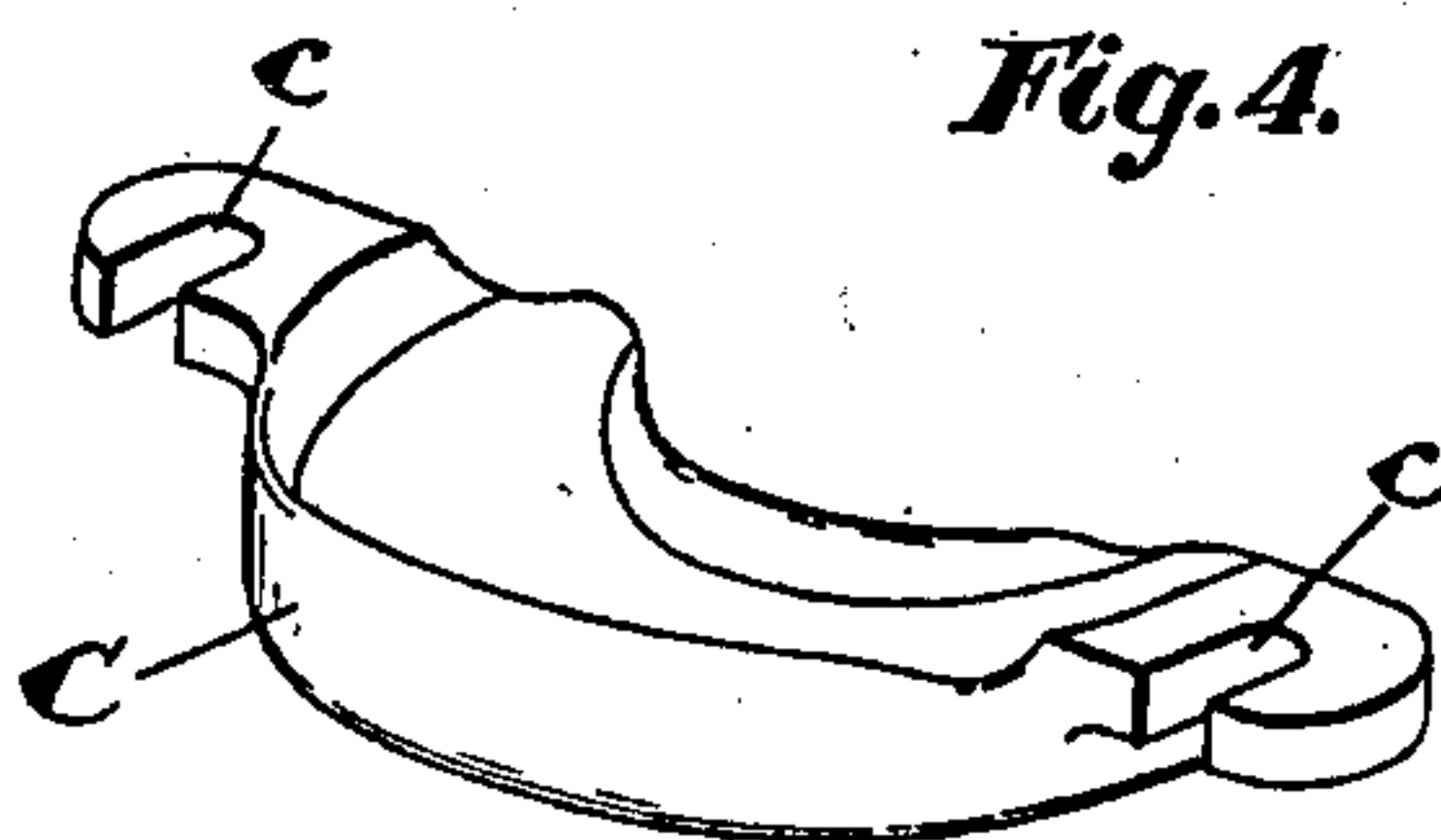


Fig. 3.

Witnesses.

H. Demiston.

A. H. McAdam.

Inventor.

J. G. McPherson.

by Feltham & Co.

Attys.

UNITED STATES PATENT OFFICE.

J GORDON MCPHERSON, OF TORONTO, CANADA.

SPECULUM.

SPECIFICATION forming part of Letters Patent No. 682,832, dated September 17, 1901.

Application filed December 29, 1899. Serial No. 741,989. (No model.)

To all whom it may concern:

Be it known that I, J GORDON MCPHERSON, veterinary surgeon, of the city of Toronto, in the county of York, in the Province of Ontario, Canada, have invented certain new and useful Improvements in Speculums, of which the following is a specification.

My invention relates to improvements in speculums adapted to hold open the mouths of horses, cattle, and other animals; and the objects of the invention are, first, to devise a construction for the ends of the side pieces of the speculum whereby the incisor-plates may be held rigidly in position under all circumstances, and, secondly, to provide a means for relieving the strain of the pivotal pins of each set of side pieces; and it consists, essentially, first, of providing the ends of the side pieces with an overhanging lip, which extends over the ends of the incisor-plates, and, secondly, of a concentric socket formed in each upper side piece and designed to receive a correspondingly-shaped end of each lower side piece, the pin of which extends through the upper side piece into and through the end of the lower side piece and is relieved from the strain by the construction aforesaid and as hereinafter more particularly explained.

Figure 1 is a perspective view of my speculum. Fig. 2 is a detail of the end of each side piece. Fig. 3 is a detail of the incisor-plate. Fig. 4 is a detail of the hinge.

In the drawings like letters of reference indicate corresponding parts in each figure.

A A are the upper side pieces, and B B the lower side pieces. The upper side pieces are provided with the end offsets *a* and the overhanging lip *a'*. The lower side pieces B B are also provided with similar offsets *b* and the forwardly-projecting lip *b'*.

C is the upper incisor-plate, which is provided with the usual notched ends *c*, which are designed to fit between the lips *a'*, and the offsets *a* and D are the screw-pins, which extend through the notches *c* into the offsets *a* when the incisor-plate C is fitted in position, as indicated. D' represents corresponding pins, which extend into the offsets *b* through the notches *c'* in the lower incisor-plate C'. It

will be noticed that the rear end upper pieces are provided with slots A', the upper ends of which are formed with arc-shaped sockets A², (see detail Fig. 4,) within which fit the substantially circular ends B² of the lower side pieces B.

E represents the pivot-pins, which extend through the upper side pieces and the substantially circular ends of the lower side pieces, as indicated. It will be readily seen that as the substantially circular ends B² are a snug fit into the socket A² in each of the side pieces A the strain is relieved from the pin E. It will also be noticed that as the substantially circular ends are eccentrically pivoted within the sockets A² they will form cam-stops. Thus as the side pieces are spread these cam-shaped ends B² will form a subsidiary stop to prevent the incisor-plates being spread too far apart. Of course the ordinary way of doing this is by means of the notched adjusting-bars F, which are designed to engage with the lower end of the upper side piece A, inside the slot A'. Such adjusting-bars are pivoted on the pins *f* in the lugs B', and are spring-held by the springs *b*². The adjusting-bars F are of the usual construction and are designed to regulate the distance apart of the free ends of the hinged side pieces, and consequently of the incisor-plates. Heretofore the incisor-plates frequently slipped out of place when the pressure of the incisor-teeth of the horse or other animal was exerted upon them, such plate slipping backwardly over the side pieces. The pins E, also, were, on account of the great strain exerted upon them, frequently broken or forced out of place. By my invention, however, both of these defects are overcome and the veterinary surgeon operating upon the horse or other animal can do so with impunity and without any fear of the parts becoming broken or out of place.

What I claim as my invention is—

1. In a speculum, the combination with the incisor-plates having the end notches, of the side pieces provided with the offsets upon which the ends of the plate rest, the screw-pin extending through the notches into the offsets and the overhanging lips extending over the

ends of the plate and designed to hold them in place as and for the purpose specified.

2. The combination with a speculum having upper side pieces with depending slotted ends
5 and sockets at the ends of said slots of the lower side pieces having cam-shaped ends pivoted in said slotted ends, the cam portions

of said pieces coacting with walls of said sockets to provide a subsidiary stop, substantially as described.

J GORDON MCPHERSON.

Witnesses:

B. BOYD,
W. AMES.