

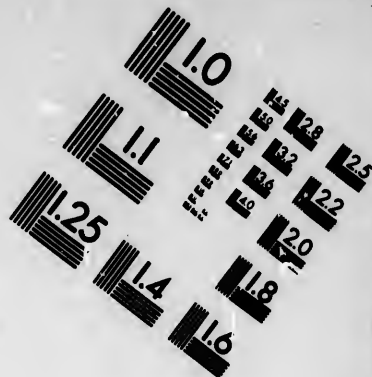
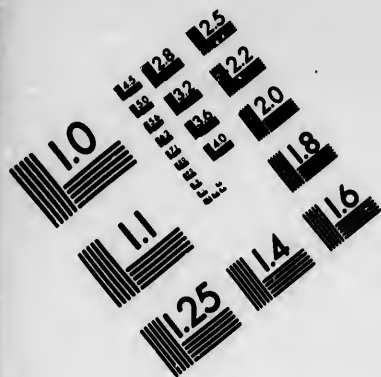
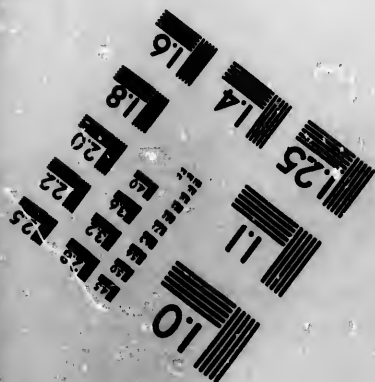
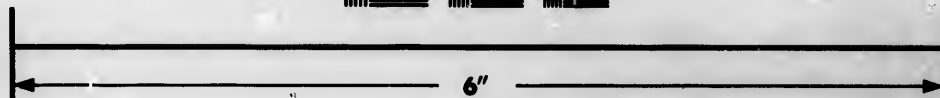
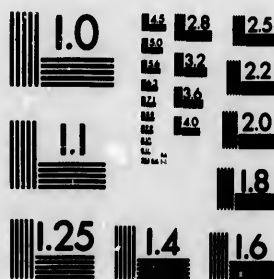


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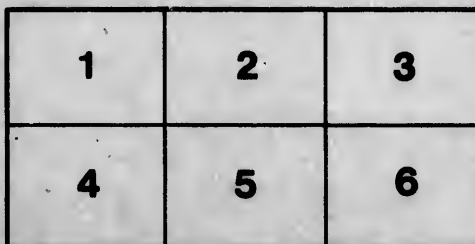
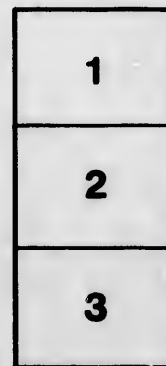
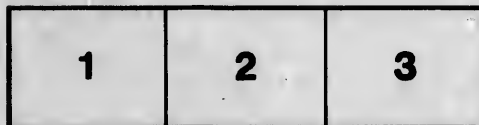
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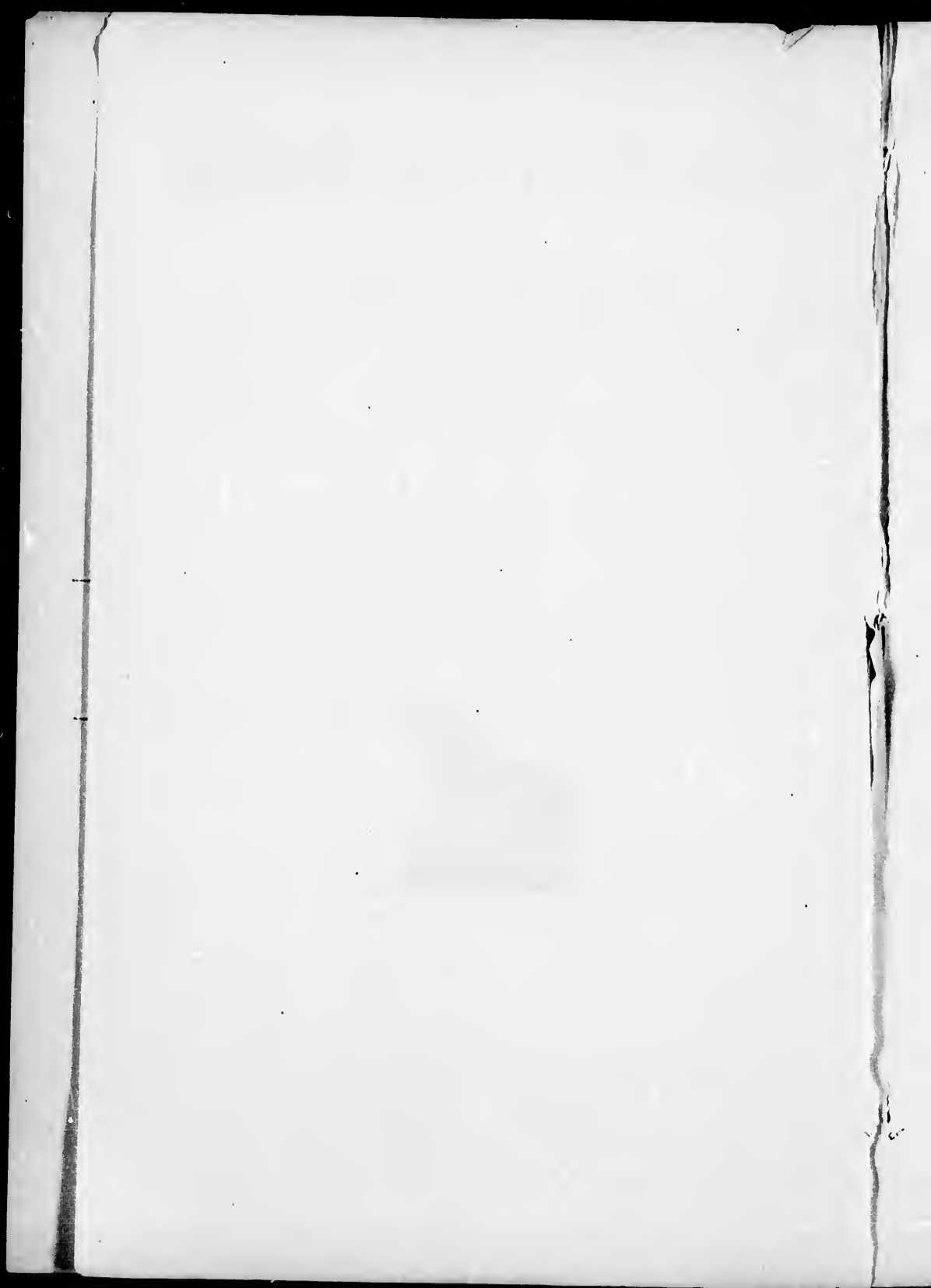
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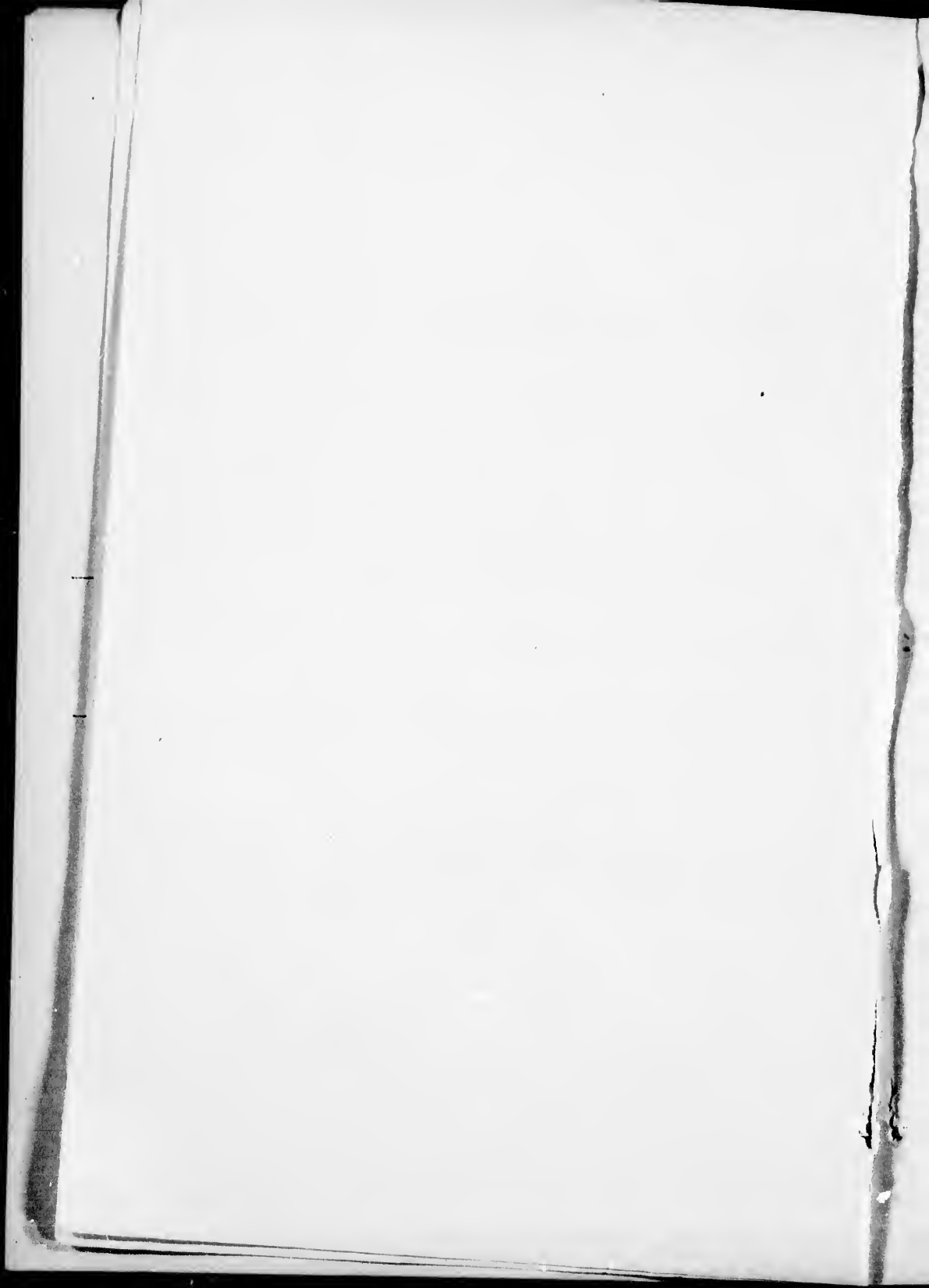
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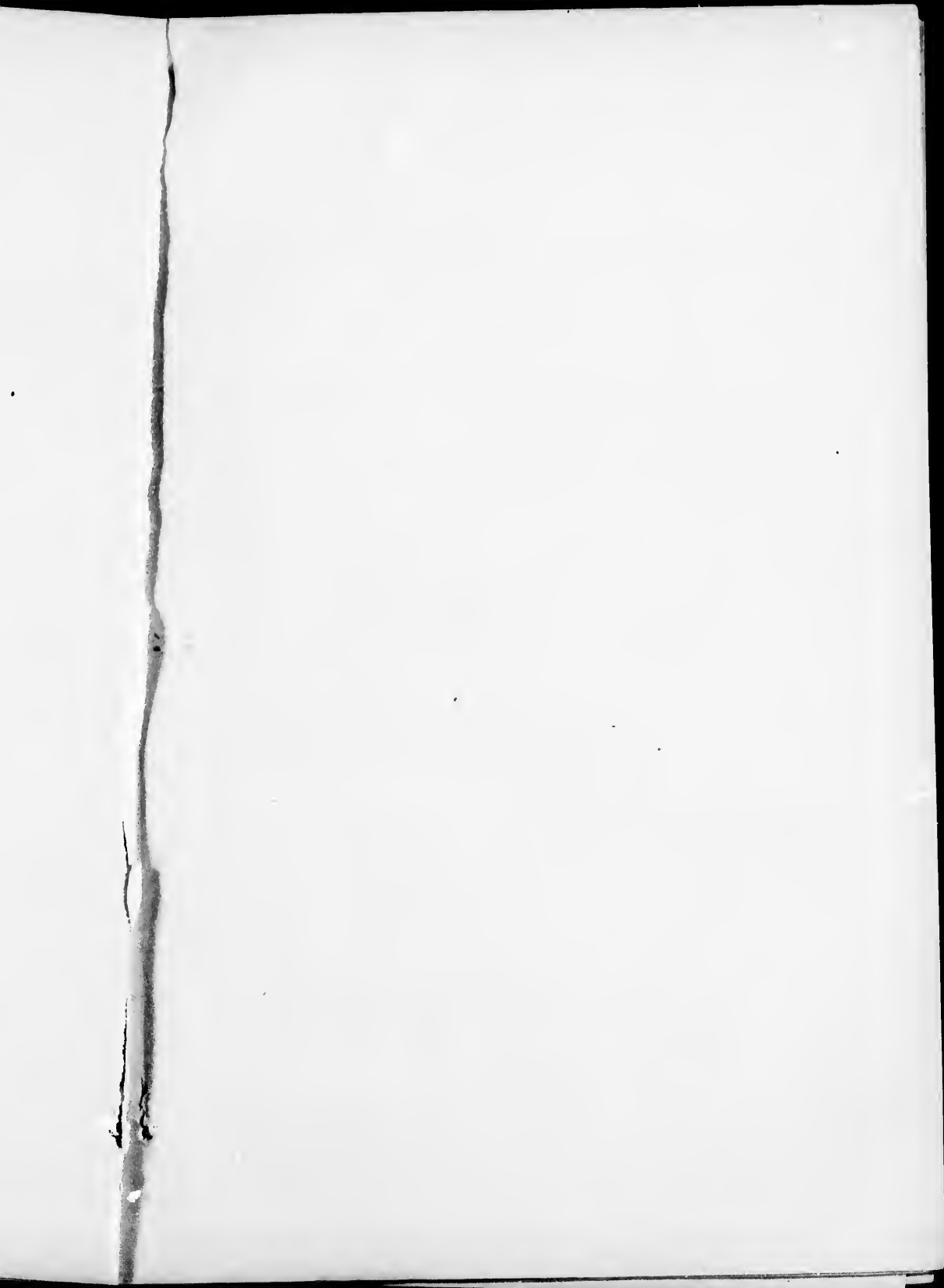


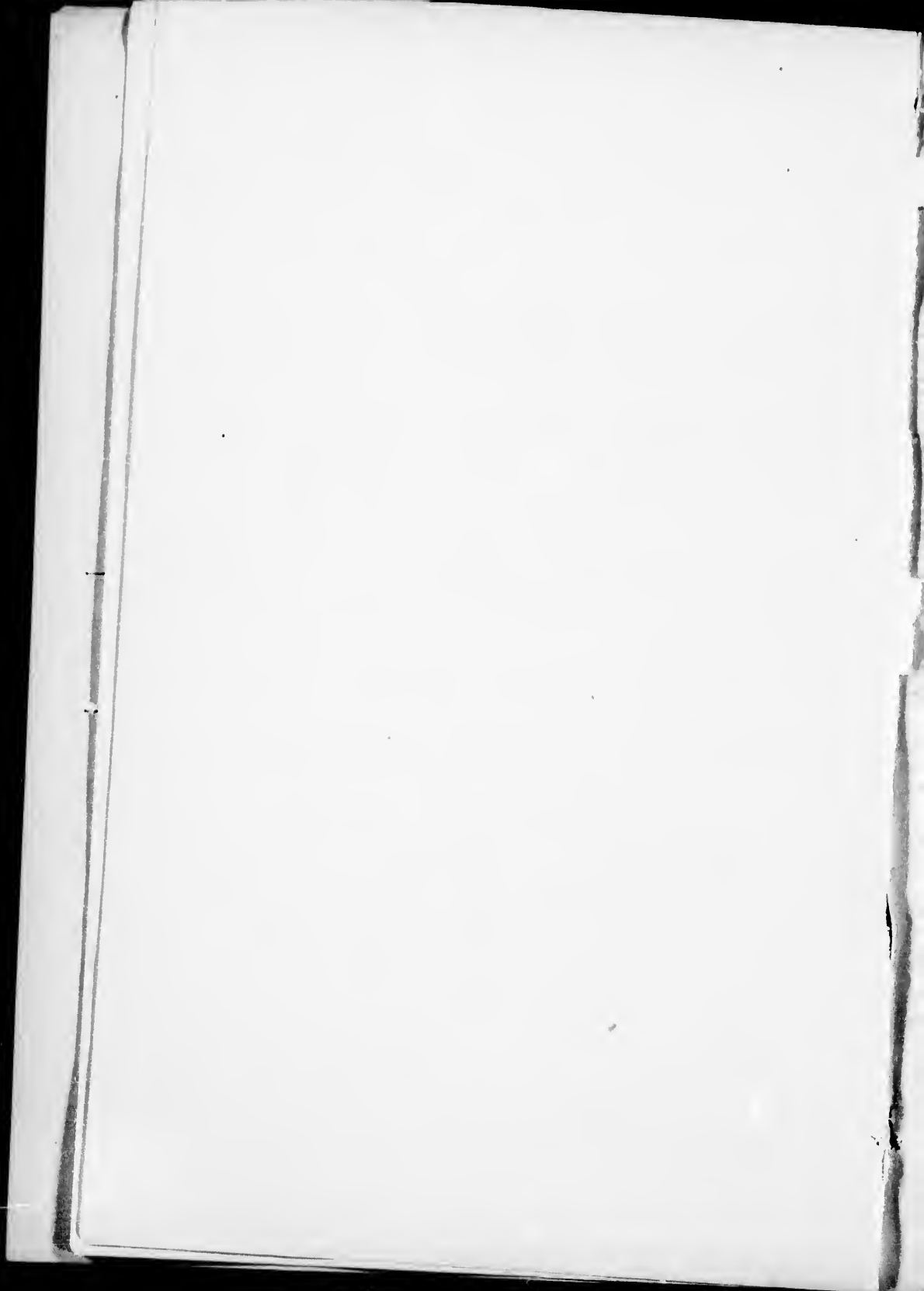
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MUSCLES OF THE HORSE.

MUSCLES.

Panniculus Carnosus.

<i>Origin</i>	From the angle of the maxilla, and orbicularis muscle of the
<i>Facial</i>	mouth, forming the Retractor anguli oris.
<i>Cervical</i>	Continued over the inferior cervical region, attached to the
	cariniform cartilage and by aponeurosis to lig. nuchae.
<i>Thoracic</i>	Passes over the shoulder and in this region the fibres run
<i>Abdominal</i>	up and down, differing from the cervical and abdominal
	which runs lengthwise and attached posteriorly to the
	stifle joint and fascia of the thigh.
<i>Action</i>	To twitch skin, and protect animals from flies.

HEAD.

Orbicularis oris.

<i>Origin, Insertion</i>	Sphincter muscle of the mouth, forming the lips
<i>Action</i>	Assist in mastication and closing lips.

Buccinator.

<i>Origin</i>	From the alveoli of the molar teeth of both jaws under
	the masseter muscle.
<i>Insertion</i>	To the orbicularis oris.
<i>Action</i>	Forces food between the molars.

Supernaso—labialis.

<i>Origin</i>	From the frontal and nasal bones.
<i>Insertion</i>	To the nostril, lip, and angle of the mouth.
<i>Action</i>	Assist to open the lips ; dilate the nostril.

Supermaxillo—Labialis.

<i>Origin</i>	From superior maxilla bone.
<i>Insertion.</i>	To the upper lip.
<i>Action</i>	To raise upper lip.

Dilator naris lateralis.

Origin From anterior part of maxillary spine.
Insertion To side of nostril and upper lip.
Action To dilate nostril.

Dilator naris transversalis.

Origin Nasal peak.
Insertion To the alae of the nostrils.
Action To dilate nostril.

Depressor lab. inferioris.

Origin From the alveolar tuberosity and superior border of inferior maxilla.
Insertion To the under lip.
Action To depress under lip.

Depressor lab. superioris.

Origin From the premaxilla.
Insertion. To upper lip and cartilage.
Action To close the lips.

Muscles that open the lips.

Super naso labialis.
 " maxillo "
 Depressor lab. inferioris.

Muscles that close the lips.

Depressor labii superioris.
 Levator menti.
 Orbicular oris.

Muscles that assist in mastication.

- | | |
|--------------|------------------------|
| 1. Masseter. | 3. Pterygoid externus. |
| 2. Temporal. | 4. " internus. |

Masseter.

Origin From spine and external surface of superior maxilla.
Insertion To the surface, border, and angle of inferior maxilla.
Action Assist in mastication.

of inferior



Temporal

<i>Origin</i>	From the external surface of parietal, occipital and temporal bone.
<i>Insertion</i>	To the coronoid process of inferior maxilla.
<i>Action</i>	To close mouth and give lateral motion to lower jaw.

Pterygoid externus.

<i>Origin</i>	From ala and pterygoid process of the sphenoid bone.
<i>Insertion</i>	To a depression below condyle on the inferior maxilla.
<i>Action</i>	To draw lower jaw forward, singly a lateral movement.

Pterygoid internus.

<i>Origin</i>	From pterygoid process of sphenoid and palatine ridge.
<i>Insertion</i>	To posterior border and angle of inferior maxilla bone.
<i>Action</i>	To close mouth and raise the jaw also, singly a lateral motion.

SUPERIOR CERVICAL GROUP.

- | | |
|--------------------------|--|
| 1. Trapezius Cervicalis. | 7. Rectus large or Rectus capitis Post.-Major. |
| 2. Rhomboideus Longus | 8. " small " " Minor. |
| 3. Splenius | 9. Spinalis Colli |
| 4. Complexus Major. | 10. Oblique (posterior or large). |
| 5. Trachelo Mastoideus | 11. " (anterior " small). |
| 6. Complexus Minor. | |

Trapezius Cervicalis.

<i>Origin</i>	From funicular portion of ligamentum nuchæ.
<i>Insertion</i>	To spine of scapula along with the dorsalis.
<i>Action</i>	To elevate and draw shoulder forward.

Rhomboideus Longus.

<i>Origin</i>	From funicular portion of lig. nuchæ as high as 2nd cervical vertebrae.
<i>Insertion</i>	To the anterior angle of scapula and cartilage of prolongation.
<i>Action</i>	To elevate and draw scapula forwards.

Splenius.

<i>Origin</i>	From spines of 1st (4 or 5) dorsal vertebrae; along lig. nuchæ superiorly. and to the transverse processes of 3rd, 4th and 5th cervical vertebrae.
---------------	--

Insertion By one tendon along with trachelo mastoideus to the wing of the atlas, and by the other to the crest and ridge of occipital bone.
Action To elevate head, alone it draws head to one side.

Complexus Major.

Origin From the transverse and spinous processes of 1st five dorsal and oblique processes of all the cervical.
Insertion To the side of occipital tuberosity.
Action To extend head.

Trachelo Mastoideus.

Origin From the transverse processes of the 1st two dorsal and oblique processes of last five cervical vertebrae.
Insertion By two tendons; one to the wing of the atlas, the other to the mastoid process of temporal bone.
Action To erect the head, alone draws head to one side.

Complexus Minor.

Origin From spine of dentata.
Insertion To the side of occipital tuberosity.
Action Extend head.

Rectus large.

Origin From spine of dentata.
Insertion To a depression below tubercle of occiput.
Action To extend head.

Rectus small.

Origin From supero-anterior part of atlas.
Insertion Along with rectus large, but slightly below.
Action To extend head.

Oblique (posterior or large).

Origin From superior surface and spine of the dentata.
Insertion To superior surface of wing and body of the atlas.
Action To extend head, singly to bend to one side.

Oblique (anterior or small).

Origin From supero-anterior edge of wing of atlas.
Insertion To the crest and styloid process of the occiput.
Action To extend head, and bend to one side.

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Spinalis coli.

<i>Origin</i>	From oblique processes of 1st dorsal and last five cervical vertebrae.
<i>Insertion</i>	To superior spines of all the cervical vertebrae but the first.
<i>Action</i>	To extend and curve the neck.

INFERIOR CERVICAL GROUP.

Levator humeri.	Rectus long or anticus major.
Sterno-maxillaris.	Rectus short " minor.
Sterno-thyro-hyoideus.	Scalenus
Subscapula-hyoideus.	Longus colli.

Levator humeri.

<i>Origin</i>	By one tendon to the crest of occiput and mastoid process of the temporal bone ; by the other to the wing of the atlas, attached to the transverse processes of the 2nd, 3rd and 4th cervical vertebrae loosely by fascia over the shoulder.
<i>Insertion</i>	To the deltoid ridge of the humerus.
<i>Action</i>	To extend or elevate the limb, depress head ; singly turn head and neck to one side.

Sterno Maxillaris.

<i>Origin</i>	From the anterior part of cariniform cartilage, united to its opposite fellow along the inferior third.
<i>Insertion</i>	To angle of the lower jaw.
<i>Action</i>	To depress head ; singly to turn head to one side.

Sterno-thyro-hyoideus.

<i>Origin</i>	From superior part of cariniform cartilage with its fellow.
<i>Insertion</i>	To inferior part of thyroid cartilage and spur process of os hyoides.
<i>Action</i>	To depress hyoid bone, larynx, and tongue.

Subscapula hyoideus.

<i>Origin</i>	From fascia covering subscapularis muscle.
<i>Insertion</i>	To inferior border of spur process of os hyoideus,
<i>Action</i>	To depress hyoid apparatus.

Rectus long.

Origin From transverse processes of 3rd, 4th, and 5th cervical vertebræ.
Insertion To basilar process of occiput and body of sphenoid bone.
Action To flex head downwards or laterally.

Rectus short.

Origin From body of the atlas.
Insertion Along with rectus long.
Action To assist in flexing head.

Scalenus.

Origin From transverse processes of last four cervical vertebræ.
Insertion To anterior border of 1st rib.
Action Assist in inspiration, extend neck, draw neck to one side.

Longus Colli.

Origin From the inferior surface of 1st six dorsal vertebræ, and inferior spine and transverse processes of last six cervical vertebræ.
Insertion To the spine or tubercle of the atlas.
Action Flex neck downwards.

COSTAL REGION.

1. Trapezius dorsalis.
2. Rhomboideus brevis.
3. Latissimus dorsi.
4. Serratus magnus.
5. Transversalis costarum.
6. Ext. intercostal.
7. Int. intercostal.

Trapezius Dorsalis.

Origin From the highest point of withers and supraspinous lig. between 3rd and 11th dorsal vertebræ.
Insertion To the tubercle on the spine of the scapula along with trap. cervicalis.
Action To draw scapula up and back.

Rhomboideus brevis.

Origin From spines of 1st five dorsal vertebræ.
Insertion To inner and superior costa of scapula and cartilage of prolongation.
Action To draw scapula up.

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Latissimus dorsi.

- Origin* By aponeurosis from highest point of withers stretching as far back as last lumbar vertebræ, passing obliquely down and forwards.
- Insertion* To internal tuberosity of humerus along with teres internus.
- Action* Flex shoulder joint and assist in expiration.

Serratus magnus.

- Origin* From transverse processes of the last five cervical vertebræ and external surface of the eight true ribs from their middles to their cartilages.
- Insertion* To the venter surface of scapula between rhomboideus long and subscapularis muscle.
- Action* Great sling muscle of ant. extremity ; assists in inspiration and elevates the neck.

Transversalis costarum.

- Origin* From transverse processes of 1st lumbar vertebræ, and all ribs near tubercles.
- Insertion* To last cervical vertebræ.
- Action* Compress ribs and thus assist in expiration.

Intercostal ext.

- Origin and Insertion* Fibres run down and backwards between each rib terminating at costal cartilages,

Intercostal internus.

- Origin and Insertion* Fibres run down and forwards, between each rib, and do not extend above the angle.
- Action* Assist in inspiration, and aid action of diaphragm.

LUMBAR REGION.

Longissimus dorsi.

Spinalis dorsi.

Longissimus dorsi.

- Origin and Insertion* From crest, inner surface and angles of ilium, also spines and transverse processes, of 1st two bones of sacrum,
- “ “ and oblique processes of all the lumbar,
- “ “ processes of all the dorsal,
- “ “ “ “ last four cervical.

Also attached to the external surface of last sixteen ribs.

<i>Action</i>	To assist in kicking, and rearing.
	Spinalis dorsi.
<i>Origin</i>	From spines of anterior dorsal vertebræ and supraspinous ligament as far back as twelfth dorsal.
<i>Insertion</i>	To superior spines of last four cervical vertebræ.
<i>Action</i>	To assist in elevating neck.

SUBLUMBAR REGION.

1. Psoas magnus.
2. " parvus.
3. Iliacus.
4. Quadratus Lumborum.

	Psoas magnus.
<i>Origin</i>	From inferior surface of last two ribs, and bodies of last two dorsal, the bodies and transverse processes of all the lumbar except last.
<i>Insertion</i>	To the internal trochanter of femur bone.
<i>Action</i>	Rotate thigh, flex loins, and roach back.

	Psoas parvus.
<i>Origin</i>	From bodies of last four dorsal and all the lumbar.
<i>Insertion</i>	To the ilio-pectineal eminence on brim of pubis.
<i>Action</i>	To flex pelvis and roach the back.

	Iliacus.
<i>Origin</i>	From ilio-pectineal ridge, and all the venter surface of ilium.
<i>Insertion</i>	Internal trochanter of the femur.
<i>Action</i>	To flex femur and rotate outwards.

	Quadratus lumborum.
<i>Origin</i>	From inferior sacro-iliac-ligament and transverse processes of lumbar.
<i>Insertion</i>	To posterior border of last rib.
<i>Action</i>	To assist in flexing lumbar vertebræ and draw last rib back.

PECTORAL GROUP.

- | | | |
|----------------|----|---------------------------|
| 1. Superficial | or | { Pectoralis transversus. |
| 2. Deep | | { Pectoralis anticus. |
| | | { Pectoralis magnus. |
| | | { " parvus. |

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Superficial pectoral.

- Origin* From cariniform cartilage and first four bones of the sternum meeting its fellow on opposite side.
- Insertion* To the olecranon, by fascia covering inside of the arm and to the anterior part of humerus.
- Action* To adduct the arm and tense brachial fascia.

Deep pectoral.

- Origin* From bones of sternum and cartilages (cariniform and ensiform).
- Insertion* To inner trochanter of the humerus, and by fascia over bioipital groove to ext. trochanter also to the anterior costa of the scapula as high up as antea spinatus.

ABDOMINAL GROUP.**Accessories.**

1. Tunica abdominalis.
2. Linea alba.
7. Poupart's ligament.
8. Inguinal canal.

Muscles.

3. Obliquus abdominis externus.
4. " " internus,
5. Rectus abdominis.
6. Transversalis abdominis.

Tunica abdominalis.

- Position* Composed of yellow elastic tissue thick at the pubis extending on each side of the linea alba and thinning out towards the sternum anteriorly.
- Action* Gives mechanical support and elasticity to the abdominal viscera.

Linea alba.

A white fibrous cord extending from ensiform cartilage to the pubis, formed by the meeting of the aponeurosis of the abdominal muscles.

Obliquus abdominis ext.

- Origin* From external surface of last thirteen or fourteen ribs the fibres running downwards and backwards, also to the anterior illiac spine.
- Insertion* To the pubis and prepubian tendon, and to the linea alba.
- Action* To compress abdominal viscera, flex vertebræ, and assist in expiration, also assist in (defecation urination, parturition.)

Poupart's ligament.

It is formed by the aponeurosis of the external oblique connecting the external angle of the ilium to the symphysis pubis, forming the crural arch for vessels to pass. Anterior to this we have the inguinal canal, 2 to $\frac{1}{2}$ inches in length running in same direction, downwards, backwards and inwards.

Inernal oblique.

- Origin* External angle of ilium, posterior border of last rib and cartilages of the false ribs.
Insertion To the linea alba, and symphysis pubis by the prepubian tendon.
Action To assist ext. oblique.

Tunica abdominis.

- Origin* To inferior surface of ensiform cartilage and sternum, cartilage of last four true and 1st two false.
Insertion Posteriorly on each side of linea alba to pubis by the prepubian tendon.
Action Compress abdominal viscera, flex spinal column and assist in respiration.

Transversalis abdominis.

- Origin* Transverse processes of lumbar vertebræ and inner surface of the cartilages of all the false ribs.
Insertion To ensiform cartilage and linea alba.
Action To assist the oblique muscles, and raise viscera.

Diaphragm.

- Origin* By two crura, right and left, below sublumbar vertebræ of which right is the longer and larger, and attached to bodies of all lumbar except last, while the left is inserted to about two anterior lumbar.
Insertion To the cartilage of last twelve ribs and inferiorly to ensiform cartilage. Fleishy at circumference and tendinous in centre.
Action Great muscle of inspiration.
Foramens Foramen dextrum, below and to right—for passage of posterior vena cava.
 Foramen sinistrum to the left, near centre—for passage of oesophagus pneumogastric nerve.
 Hiatus aorticus above between pillars—for passage of posterior aorta vena azygos and thoracic duct.

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MUSCLES OF PECTORAL LIMB.

1st Scapular group, external.

- | | |
|--------------------|-------------------|
| 1. Antea spinatus. | 3. Teres externus |
| 2. Postea " | 4. Deltoid. |

Antea-Spinatus.

- Origin* From the *anterior* (fossa, costa) and anterior border of spine of the scapula and cervical angle of scapula.
- Insertion* By two tendons, one to external trochanter and the other to the internal trochanter of humerus.
- Action* To extend the humerus, and act as a ligament for shoulder joint.

Postea spinatus.

- Origin* From posterior fossa and costa of the scapula and posterior border of its spine, and cartilage of prolongation.
- Insertion* By one tendon on the inside of the external humeral trochanter, the other tendon passes over the trochanter and is inserted to roughened ridge below. We find a bursa in connection.
- Action* Abduct humerus and rotate it outwards.

Teres externus.

- Origin* From dorsal angle and by fascia from tubercle on spine of scapula.
- Insertion* To the deltoid ridge of the humerus.
- Action* To abduct humerus and rotate outwards.

Deltoid.

- Origin* From posterior border of scapula and tendinous slips from posterior fossa and tubercle on rim of glenoid cavity.
- Insertion* To the deltoid ridge.
- Action* To abduct and rotate humerus outwards.

Internal scapular group.

- | | |
|--------------------|-----------------------|
| 1. Subscapularis. | 3. Scapulo-humeralis. |
| 2. Teres internus. | |

Subscapularis.

- Origin* From whole of subscapularis fossa.
- Insertion* To internal humeral trochanter.
- Action* To adduct arm and rotate it inwards.

Teres internus.

Origin From dorsal angle and posterior costa of scapula.
Insertion To the internal tuberosity of humerus.
Action To adduct and rotate humerus inwards.

Scapulo humeralis.

Origin From the postero-inferior part of scapula.
Insertion Just below the head of the humerus.
Action To tense the capsular ligament of shoulder joint.

BRACHIAL GROUP.

Ant. Div. { Flexor brachii.
 Coraco humeralis.
 Humeralis obliquus or externus.

Flexor brachii.

Origin From base of coracoid process of scapula over bicipital groove.
Insertion By a strong tendon to bicipital tuberosity of radius.
Action Flex elbow joint and extend the limb.

Coraco humeralis.

Origin From beak of coracoid process on scapula.
Insertion By one fleshy portion above internal tuberosity on humerus, and by the other below and anterior to it.
Action To adduct and extend the arm.

Humeralis externus.

Origin Postero and superior part below articular head of humerus.
Insertion By one tendon to inner head of radius. By the other to ulna.
Action Flex elbow joint.

Posterior Div. { Scapula-ulnaris. } Caput Magnum.
 Triceps extensor brachii. } " medium.
 Anconeus. } " parvum.

Scapulo-ulnaris.

Origin From dorsal angle of scapula by aponeurosis.
Insertion To inner part of apex of the olecranon.
Action Flex shoulder joint and extend the elbow.





Caput magnum.

Origin From dorsal angle and posterior costa of scapula.
Insertion To inner and superior part of olecranon,—bursa at apex.
Action Extend the forearm and flex shoulder joint.

Caput medium.

Origin From a ridge running from deltoid to neck of humerus at proximal end.
Insertion To the olecranon with the caput magnum.
Action To extend fore-arm.

Caput parvum.

Origin From the middle third on the inside of humerus.
Insertion To the olecranon by two tendons.
Action Extend fore-arm.

Anconeus.

Origin From the epitrochlea and capsular ligament.
Insertion To the external part of the olecranon.
Action To tense capsular ligament of elbow joint.

ANTITRACHIAL GROUP.

Extensors	{	1. Extensor metacarpi magnus
		2. " " obliquus.
		3. " pedis.
		4. " suffraginis.

Extensor metacarpi magnus.

Origin From the epitrochlea of the humerus, being joined by a strong tendon from flexor brachii; about lower third of radius it becomes tendinous and passes through a groove at the anterior distal end of radius. Here we find a bursa. Then the tendon passes over the knee, being bound down by the anterior annular ligaments.
Insertion To a tuberosity on the anterior part of metacarpal bone.
Action To extend carpus.

Extensor metacarpi obliquus.

Origin From external border of radius, passing obliquely over the tendon of the exterior metacarpal magnus, then through an oblique groove on the antero-internal part of radius.

Insertion To head of the inner metacarpal bone.
Action To extend the metacarpus and rotate it slightly.

Extensor pedis.

Origin From the epitrochlea and head of the radius. About inferior third of radius it becomes tendinous and bifid, passing through a groove on the antero-external part of radius at distal end, over the knee, bound down by the anterior annular ligaments. Below the knee it sends a small tendon to join the tendon of extensor suffraginis. It passes over the front of the fetlock joint, being attached to capsular ligament, below fetlock it is joined by the suspensory ligament and is attached also to the anterior part of 1st and 2nd phalanges.

Insertion To the pyramidal process of os pedis.
Action To extend the phalanges on each other and also the carpus.

Extensor suffraginis.

Origin From external part of the shaft and head of radius and the ulna, the tendon passing through a groove on the external part of the distal end of the radius, over the carpus on the external border being joined below the knee by two tendons one from the extensor pedis and the other from the trapezium, a check ligament.

Insertion To the head of the os suffraginis.
Action To assist the extensor pedis.

ANTITRACHIAL GROUP.

	1. Flexor metacarpi externus.
	2. " " medius.
	3. " " internus.
Flexors	4. " pedis perforatus.
	5. " perforans.
	5. Ulnaris accessorius.
	7. Radialis "

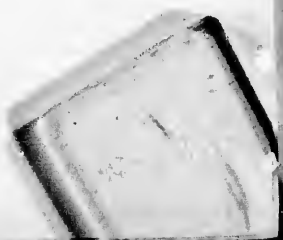
Flexor Metacarpi externus.

Origin From the epitrochlea terminating in two tendons.
Insertion One to the external splint bone, the other to the trapezium.
Action To flex carpus.

Flexor metacarpi medius.

Origin From the epicondyle and by another tendon from olecranon.
Insertion By one tendon to the supero-posterior part of trapezium.
Action To flex carpus.

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Flexor metacarpi internus.

<i>Origin</i>	From the epicondyle.
<i>Insertion</i>	To the head of inner splint bone.
<i>Action</i>	To flex carpus.

Flexor pedis perforatus.

<i>Origin</i>	From the epicondyle ; near the carpus it becomes tendinous and is joined by the superior check ligament from the radius, then it passes through a synovial sheath behind the carpus and is bound down by the posterior annular ligament ; below the knee it forms a synovial sheath for the tendon of the perforans. At the fetlock it forms a sheath through which passes the perforans tendon and finally divides into two portions below the pastern joint.
<i>Insertion</i>	To the ridge of supero-posterior part of os coronæ.
<i>Action</i>	To flex pastern and fetlock joints and partly the carpus.

Flexor pedis perforans.

<i>Origin</i>	From the epicondyle ; above the carpus it becomes tendinous and passes through the carpal sheath, and sheath below formed by the flexor pedis perforatus ; half way down the metacarpus it is joined by the tendons of the accessory flexors and by the inferior check ligament, then it passes through the sheath formed by the perforatus over the supero-posterior part of os coronæ when it expands laterally.
<i>Insertion</i>	To the semilunar ridge on the solar aspect of os pedis.
<i>Action</i>	To flex carpus and joints below the carpus.

Ulnaris accessorius.

<i>Origin</i>	From posterior border and summit of olecranon.
<i>Insertion</i>	It joins the tendon of the perforans below and near the carpus.
<i>Action</i>	To assist flexor perforans.

Radialis accessorius.

<i>Origin</i>	From posterior part of the shaft of the radius.
<i>Insertion</i>	It joins the tendon of the perforans.
<i>Action</i>	To assist flexor perforans.

GLUTEAL REGION.

- | | |
|----------------------|-----------------------------------|
| 1. Gluteus externus. | 5. Obturator externus. |
| 2. " Maximus. | 6. " internus. |
| 3. " internus. | 7. Pyriformis. |
| 4. Rectus parvus, | 8. Gemellus anticus and posticus. |

Gluteus externus.

- Origin* The anterior portion arises from the anterior spine of ilium ;
posterior from second and third sacral spines.
Insertion To the trochanter minor externus.
Action It abducts the thigh.

Gluteus maximus.

- Origin* From the iliac shaft, crest and spines ; the side of sacrum ;
the sacro-sciatic ligament, and the tendinous envelope of
the longissimus dorsi as far forward as last rib.
Insertion By two tendons, one to the summit of the trochanter
major ; the other to the roughened surface below the con-
vexity where there is a bursa interposed.
Action To extend the femur and assist in rearing.

Gluteus internus.

- Origin* From shaft of ilium, ischiatic spine, and capsular ligament.
Insertion To a roughened space inside the convexity of the trochanter
major.
Action To abduct and rotate the thigh.

Rectus parvus.

- Origin* From the brim of the acetabulum.
Insertion To the anterior and proximal end of the femur.
Action To tense the capsular ligament of the hip joint.

Obturator externus.

- Origin* From the inferior surface of pubis and ischium below
obturator foramen.
Insertion In the trochanteric fossa.
Action To rotate the femur outwards and adduct it.

Obturator internus.

- Origin* From above and around the obturator foramen, passing
through the lesser sciatic notch, where its tendon joins
the pyriformis.
Insertion To the trochanteric fossa.
Action To rotate femur outwards, and abduct it.

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Pyriformis.

<i>Origin</i>	From transverse processes of sacrum, and inner part of iliac shaft.
<i>Insertion</i>	Its tendon joins the obturator internus, and inserted in trochanteric fossa.
<i>Action</i>	To rotate femur.

Gemellus anticus and posticus.

<i>Origin</i>	By two tendons from the shaft of the ischium one on each side of the common tendon of the pyriformis and obturator internus, which it also joins.
<i>Insertion</i>	To the trochanteric fossa.
<i>Action</i>	To rotate the femur.

FEMORAL REGION.

	Internal External Anterior Posterior	} Group
Adductors	(Sartorius. Gracilis. Pectineus. Adductor brevis. Adductor longus. Adductor magnus.)	} Triceps adductor Femoris.
Internal		

Sartorius.

<i>Origin</i>	From brim of pelvis near tendon of psoas parvus.
<i>Insertion</i>	To internal straight ligament of the patella.
<i>Action</i>	To adduct and flex femur.

Gracilis.

<i>Origin</i>	From inferior surface of ischio-pubic symphysis.
<i>Insertion</i>	To the internal straight ligament of the patella, and internal part of tibia ; its fascia aiding the biceps rotator tibialis to form fascia of this region.
<i>Action</i>	To adduct limb, and tense the fascia.

Pectineus.

<i>Origin</i>	By two tendons one on each side of the pubio-femoral ligament to the pubis.
<i>Insertion</i>	To a roughened surface between the internal trochanter of the femur and the nutrient foramen.
<i>Action</i>	To adduct and flex the thigh.

Adductor Brevis.

<i>Origin</i>	From the inferior surface of the pubis.
<i>Insertion</i>	To a square roughened surface on posterior, middle third of the femur.
<i>Action</i>	To extend, adduct and rotate the femur outwards.

Adductor longus.

<i>Origin</i>	From inferior and posterior part of the pubis.
<i>Insertion</i>	By two tendons one along with the brevis and by the other to the internal condyle of the femur along with the magnus.
<i>Action</i>	To adduct, flex and rotate femur outwards.

Adductor magnus.

<i>Origin</i>	By a slender band to coccygeal fascia, but chiefly from inferior surface and tuberosity of ischium.
<i>Insertion</i>	Along with the longus to the internal condyle of the femur.
<i>Action</i>	To adduct and extend the thigh, also to assist in rearing.

Anterior group	(Tensor fasciæ latæ.)	} Quadriceps cruralis.
	Rectus femoris.	
	Vastus externus.	
	" internus.	
	Crureus.	

Tensor fasciæ latæ.

<i>Origin</i>	From the anterior illiac spine the fleshy portion, and from it springs the aponeurotic portion divided into deep and superficial. The deep is attached to the external border of the femur along with the gluteus externus. The superficial spreads over the crural and triceps abductor.
<i>Insertion</i>	In its descent to be attached to the patella.
<i>Action</i>	To flex the femur and tense the fascia latæ.

Rectus femoris.

<i>Origin</i>	From two depressions one on each side of illiac shaft before the acetabulum.
<i>Insertion</i>	To upper part of the patella.
<i>Action</i>	To flex femur and extend the leg.

Vastus externus.

<i>Origin</i>	Below the trochanter major occupying the external and part of the anterior shaft of the femur.
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Insertion To upper and outer part of patella.
Action To extend the leg.

Vastus internus.

Origin From the internal aspect of the shaft of the femur.
Insertion To the upper and inner side of the patella.
Action To extend the leg.

Crureus.

Origin From the lower third of the anterior surface of the femur.
Insertion To upper surface of patella and capsular ligament.
Action To extend the leg and tense the capsular ligament.

EXTERNAL FEMORAL REGION.

Triceps abductor femoris.

Origin From the spine of the sacrum, coccygeal fascia and sacro-sciatic ligament, also from the ischial tuberosity.
Insertion To the external side of the patella, anteriorly to the tibial crest and posteriorly to the tibial fascia by strong aponeurosis.
Action To extend the femur and abduct the limb.

Posterior group. { Biceps rotator libialis.
 { Ischio femoralis.

Biceps rotator libialis or Semitendinosus.

Origin From the spine of the sacrum and sacro-sciatic ligament also from ischial tuberosity.
Insertion To the supero-internal part and crest of the tibia,
Action To extend the femur, and to flex and rotate the leg outwards.

Ischio-femoralis.

Origin From the inferior surface of the ischium in front of the tuberosity.
Insertion To the posterior surface of the femur just below the trochanter internus.
Action To extend and adduct the femur.

ANTERIOR TIBIAL GROUP.

Flexors	{	1. Flexor metatarsi.
Extensors		1. Extensor pedis. 2. Peroneus.

Flexor metatarsi.

Origin It consists of a fleshy and tendinous portion. The tendinous part arises from a depression between trochlea and condyle of the femur, in front of the astragalus it forms a ring, through which the tendon of the fleshy portion passes, in front of the tarsus it bifurcates and sends one slip to the large metatarsal bone and one inclines outward to the cuboid bone.

The fleshy portion lies in the external groove from head of tibia downwards, when it becomes tendinous it passes through the ring formed by the tendinous portion, then bifurcates sending one slip to the great metatarsal bone and the other winds inwards to be attached to the small cuneiform bone.

Action To flex the tarsal joint.

ANTERIOR TIBIAL—EXTENSORS.**Extensor pedis.**

Origin From the fossa between the trochlea and external condyle along with the flexor metatarsi; above the tarsus the belly terminates in a tendon, passes in front of the tarsus and bound down by the anterior annular ligament, about the middle of the metatarsus bone it receives the extensor brevis and the tendon of the peroneus; attached at fetlock and phalanges similar to the extensor pedis of fore limb.

Insertion To the pyramidal process of the os pedis.

Action To extend the entire digit, and flex the tarsal joint.

Peroneus.

Origin From the external lateral ligament of the stifle joint and the whole length of the fibula.

Insertion It joins tendon of extensor pedis.

Action To assist extensor pedis.

METATARSAL REGION.**Extensor pedis brevis.**

Origin From the infero anterior part of the astragalus.

Insertion It joins tendon of extensor pedis.

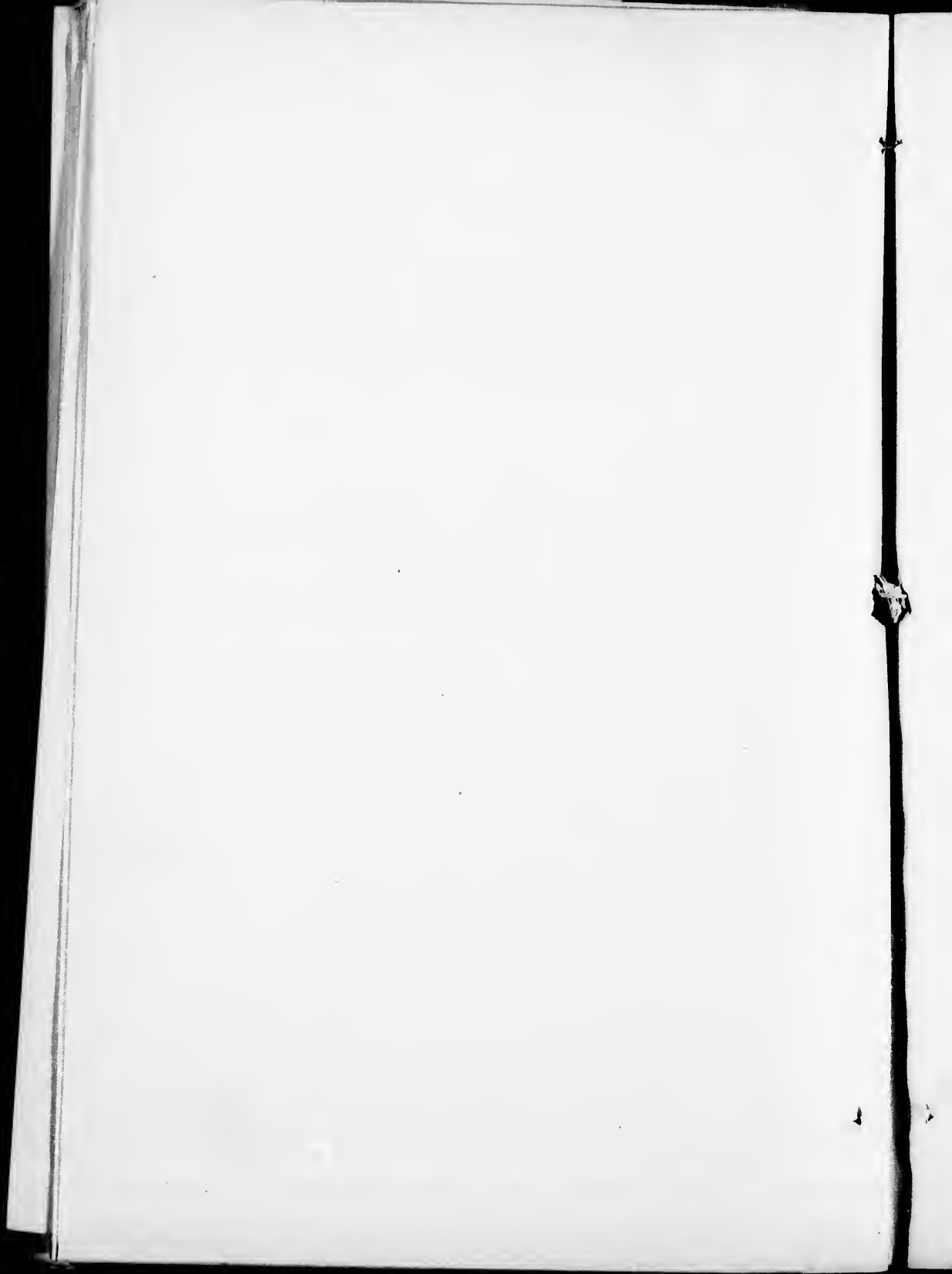
Action To assist the extensor pedis.

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POSTERIOR TIBIAL GROUP.

Extensors.	{ Gastrocnemius externus. Plantaris.
Flexors	{ Gastrocnemius internus. Flexor pedis perforans. " " accessorius. Popliteus.

Gastrocnemius externus.

<i>Origin</i>	By two heads, one above and external, the other below and internal to the supracondyloca fossa.
<i>Insertion</i>	To the posterior summit of the olecranon a bursa being interposed between it and the anterior part.
<i>Action</i>	To extend the tarsal joint.

Plantaris.

<i>Origin</i>	From external part of the head of the fibula.
<i>Insertion</i>	Along with gastrocnemius externus to the olecranon.
<i>Action</i>	To extend the tarsal joint.

FLEXORS.

Gastrocnemius internus.

<i>Origin</i>	From the supracondyloid fossa—at first under the externus then winds round its inner side and surmounts it, at the calcaneum it forms a cap giving slips of insertion to the bone, and then continued down the posterior part of limb under the name of the perforatus tendon to be disposed
<i>Insertion</i>	of similarly to the perforatus in foreleg. We find a bursa between the internus and externus which is one of the seats of capped hock. Another between internus and skin (bursa mucosæ) another seat of capped hock.
<i>Action</i>	To flex fetlock and pastern joint and extend tarsus.

Flexor pedis perforans.

<i>Origin</i>	From the posterior part of tibia and fibula by a fleshy belly above tarsus it becomes tendinous and passes through a groove on the inner side of the calcaneum being bound down by fibrous tissue in a synovial sheath. the seat of thorough-pin. It then descends behind the metatarsal bone, where it is joined by the check ligament and also flexor pedis accessorius—passes down in the same manner as the perforans of the anterior limb.
<i>Insertion</i>	To the semilunar ridge on the solar aspect of the os pedis.
<i>Action</i>	To flex the phalanges.

Flexor pedis accessorius.

- Origin* from the external tuberosity of the tibia and slightly from the tibia passes through a groove on the inside of the tarsal joint.
- Insertion* It joins the tendon of the flexor perforans about one-third from point of calcaneum.
- Action* To assist flexor pedis perforans.

Popliteus.

- Origin* From a fossa on external condyle of the femur.
- Insertion* To the triangular surface above the oblique line on the supero-posterior part of the tibia.
- Action* To flex the leg and tense the capsular ligament of stifle joint.

TONGUE.**EXTRINSIC.****Genio-hyo-glossus.**

- Origin* From maxillary symphysis to hyoid bone and radiating fibres buried in the substance of the tongue.
- Action* To protrude the tongue.

Hyo glossus longus.

- Origin* From the corner of os hyoides external part.
- Insertion* To the substance of the tongue.
- Action* To retract the tongue.

INTRINSIC MUSCLES.**Linguals.**

Made up of different layers forming substance of the tongue.

LARYNX.**Extrinsic.**

(1) Sterno-thyro-hyoideus, and (2) Hyo-thyroideus.

Larynx—intrinsic.

- | | |
|-----------------------------|------------------------|
| 1. Cryco-thyroideus. | 4. Thyro-arytenoideus. |
| 2. " arytenoideus posticus. | 5. Arytenoideus. |
| 3. " " lateralis. | |

The name will give the origin and insertion of these.

ANUS.

- | | | |
|-------------------|-------------------|-----------------|
| 1. Sphincter ani. | 2. Retractor ani. | 3. Levator ani. |
|-------------------|-------------------|-----------------|
- Sphincter ani* Around termination of the rectum, to close anus.
- Retractor ani* From a rough margin behind the acetabulum.
- Insertion* To the lateral aspect of the anus.
- Action* To retract the anus.
- Levator ani* Joins rectus to the coccyx above.

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