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FROM BERGOT TO 'ERNUTIN'
AN HISTORICAL SKETCH



LECTURE MEMORANDA
A.M.A. MEETING
CHICAGO
1908

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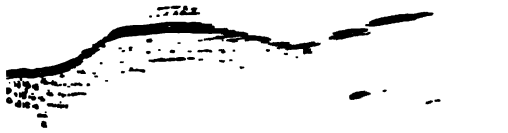
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SEAL OF CITY OF CHICAGO

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ERGOT OF RYE
From a recent drawing

FROM ERGOT TO 'ERNUTIN'
AN HISTORICAL SKETCH

LECTURE MEMORANDA
American Medical Association
CHICAGO
1908

Wellcome, Henrys,

BURROUGHS WELLCOME & CO.
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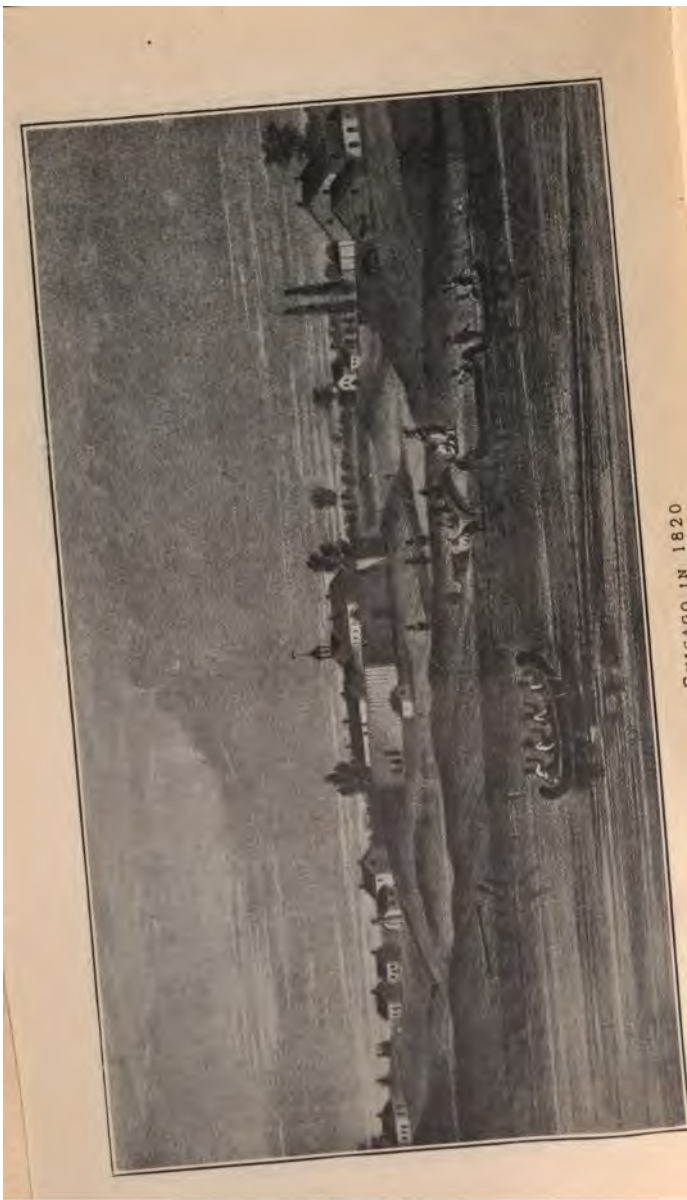
EARLY CHICAGO

The first drug store opened on the north side of the city



EARLY CHICAGO

"Where the brook and the river meet"



CHURCH IN 1820

FOREWORD

FOR many years I have been engaged in researches respecting the early methods employed in the healing arts, both amongst civilised and uncivilised peoples. It has been my object, in particular, to trace the origin of the use of remedial agents. Why were certain substances used in the treatment of various diseases? Was their adoption the result of study and practical observation, or was it more usually the result of accident? Were the alleged virtues purely imaginary and due to some superstitious suggestion? A consideration of such questions is always of interest, and sometimes adds to our knowledge.

There is a considerable amount of information scattered throughout the world in folk-lore, early manuscripts, and printed books, but the difficulties of tracing out and sifting the evidence are considerable. I anticipate that the historical exhibition of medical, chemical and pharmaceutical objects which I am organising, to be held in London (Eng.), will lead to the revealing of many facts, and the elucidation of many obscure points, in connection with the origins of various medicines.

I should greatly value any information sent me in regard to medical traditions or references to antient treatment in manuscripts, printed works, etc.; even though the items be ever so small, they may form important connecting links in the chain of historical evidence.

It is my intention ultimately to place before the profession, in a collected form, all the information I obtain.

I should be glad to receive any information respecting the early history of ergot and ergotism, also references to the use of ergot as a medicinal agent in antient times.

Being engaged on a further and more exhaustive investigation of this interesting drug, any notes on the subject would be greatly appreciated.

HENRY S. WELLCOME



SAINT ANTONY

Patriarch of the monks. His relics are said to have miraculously healed many sufferers from the "holy fire," which from the eleventh century was known as St. Antony's fire. He is depicted as standing in a flaming fire, symbolical of the disease with which his name was associated, and carries his staff or crutch.

From an MS. of the XV century



FROM ERGOT TO 'ERNUTIN'

AN HISTORICAL SKETCH

THERE are few more striking examples of the debt mankind owes to medical science than that instanced in the history of ergot. From a period of remote antiquity, it is now known to have been the cause of a terrible scourge that swept away many thousands of persons, but, within the last century and a half, science has robbed it of its terrors, and has transformed it into a remedial agent of great value in alleviating human suffering.

Man's debt
to science

Ergot is a peculiar form of the fungus *Claviceps purpurea*, Tulasne, being the sclerotium, or, as termed in the British Pharmacopœia, the compact mycelium or spawn which is developed in the ovaries of certain kinds of grasses. It is now obtained almost exclusively from rye (*Secale cereale*, L.), but the same or a similar fungus is produced in grasses belonging to many other genera.

The first sign of the formation of ergot on the rye is a white mould which settles on the bloom, and which is caused by the germination of the spores that have been carried by the wind on to the flowers. This mould penetrates the ovary, covering the pericarp with a soft, felt-like mass, and at the same time, a viscid substance called "honey-dew" is secreted, in each drop of which, when inspected under the microscope, a nest of conidia can be observed. These nests form into strings, and thus new masses (sphacelia) are produced. At this season, when germination takes place, there is on the ground, a small weevil, cantharis, *S. Ragonucha Melanuva fabricius*, which feeds on the honey-dew. By means of their legs and suckers they carry the conidia from one ear

How ergot
is formed

to another, and are thus the agents in infecting whole fields and districts. The fungus gradually develops and, by the month of June, a long, black, triangular "horn" grows out of the ear of the rye, sometimes as many as ten horns being found in one ear. This horn is the sclerotium, or final stage, in the development of the fungus.

THE BOTANICAL HISTORY OF ERGOT

The word ergot is derived from the French "*argot*," "the spur of a cock," which the fungus is supposed to resemble. It has been known throughout the countries of Europe by various names, derived either from its form, origin or qualities. In France it was known as *ergot*, *argot*, *bled avorte*, *bled cornu*, *bled farouche* or *rachitique*, *calcar*, *chambucle*, *clavus siliginis*, *clou de seigle*, *ebrun*, *faux seigle*, *mane*, *mère de seigle*, *secalis mater*, *seigle cornu* or *corrompu*, *seigle à eperon* or *ergotisé seigle ivre*, *seigle noir*, *secale cornutum*, *mater secalis* and *orga*. In Germany it was generally called *Mutterkorn*, *Hamelkorn*, or *Rockennutter*, and in England it was known as "spurred rye" or "horned rye."

Rye was one of the cereals indigenous to the Euphrates valley, and was called by the Chaldeans *Zennu*, but no mention of it occurs in the tablets at present known until about 1200 B. C.

In an inscription to Gudea on a Babylonian tablet, said to date from 2500 B. C., mention is made of "the women who gather noxious grasses, and who were expelled from the city with the exorcists and mutterers of charms."

On an Assyrian tablet, about 660 B. C., allusion is made to a "noxious pustule in the ear of grain," which may also probably refer to ergot.

In the *Yasna* part of the *Zend Avesta*, the sacred book of the Parsees, which is supposed to date from 400 B. C. to 300 B. C., there occurs the following passage: "Among the evil things created by Angro Maynes are noxious

grasses that cause pregnant women to drop the womb and die in child-bed." There is little doubt this alluded to the ergotted grasses which grow commonly in the East.

The earliest allusion to ergot is said to be in the works of Theophrastus (372-288 B.C.), who terms it *luxuries vegetum*.

Pliny (A. D. 23-79) also mentions a disease which at-

Earliest known allusion

tacked corn in moist places, which may probably refer to ergot. Galen (A. D. 130), in his work *De Alimenti Facultatibus*, appears to have been aware of the danger of using diseased grain for food, and it is probable that this vitiation of grain has existed from time immemorial.

The first clear account of ergot and its poisonous properties is given by

the Perso-Arabic physician, Abu Mausur Muwaffak (A. D. 950), and, according to Mezeray,

First account of its poisonous and medicinal properties

the toxic effects of spurred rye, when mixed with aliment, were also recognised by Sigebert de Gremblour in 1096, who observed that an epidemic followed the consumption of damaged crops.



The earliest known representation of Ergot of Rye (Hamelkorn) From a woodcut. 1674

In Syria, ergot appears to have been employed in folk-medicine from a period of antiquity, and was known by the curious but suggestive name of "Daughter of Blood." Adam Lonicer, of Frankfort, is the next who makes mention

of ergot; in 1582 he describes its appearance in the ears of rye, and, alluding to its medicinal effects, states, "It is regarded by women to be of remarkable and certain efficacy."

It is also very clearly described in the writings of Johannes Thallius, in 1588, who states, "In Thuringia this kind of blemish is commonly called mother of rye, rockenmutter. (They use it also to stop bleeding.) I state that I observed the same kind of blemish in the year LXXV. For I found on certain mountains of Stolberg many ears of this containing not only one long, black, faulty grain of this kind, but many of them, mos:

of them being curved in the shape of horns. At the time of florescence that year there were very heavy rains, and afterwards there came a period of very hot sunshine. Moreover, if anyone will carefully examine a single ear, the difference between the greater and lesser can easily be distinguished."

Thallius
notes its
hæmostatic
properties

In 1623, Caspar Bauhin, alluding to ergot, cites Pliny's reference, and calls it *Secale luxurians*, while John Ray, the English botanist, in his *Historia Plantarum*, published in 1693, repeats Bauhin's description in the following words:—

"During frequent rains the lower grains of the ears of rye, when ripening, become blackish-purple. Certain seeds are pushed a long way out of their husks or glumæ, and grow rather thick. Some of them are curved into horns, which all become black on the outside, but inside contain thick, white flour.

And this farinaceous substance, possessing the flavour of malt, is known by the Norici as *Mutterkorn*, i.e., mother of corn, and is considered an excellent remedy for *Lochiorum fluxum*. This kind of faulty rye is called by C. Bauhin, *Secale luxurians*, and by Lonicerus, *Clavi siliginis*. Whether these excrescences owe their origin to holes made by insects of some kind remains to be discovered."

Ray's allusion to the action of ergot on the uterus

This description is especially interesting as showing



ERGOT OF RYE

Showing formation and progress of growth, as described by Quekett, 1838

Fig. 1 Ovary of a young grain of rye

- a.* Ovary crowned with hairs *b*
- cc.* Feathery stigmas
- d.* Place of the embryo
- ee.* Scales
- ff.* Paleæ
- g.* Receptacle to which grain is attached

Fig. 2 Grain of rye matured, retaining the remains of the stigma and hairy crown

Fig. 3 Shows position of paleæ *ff*

Fig. 4 First appearance of growth of ergot in young grain

- a.* Ovary overrun with fungus
- b.* Fungus has cemented anthers and stigmas together
- ee.* Scales separated
- g.* Receptacle

Fig. 5 Depicts the ergot now grown to show itself just without the paleæ

- a.* Ergot beginning to turn purplish-black
- ee.* Scales spread open
- g.* Receptacle
- h.* Remains of hairy crown and stigmas

Fig. 6 The ergot matured on the ear of rye



the knowledge of ergot and its medicinal properties at the close of the seventeenth century.

Ergot was at first regarded as a complete fungus by De Candolle, in 1816, who called it *Sclerotium clavus*. The process of the formation of ergot and its nature was first scientifically studied and investigated by Villeneuve, in 1827, who described the spurred rye as follows: "The rye grain infected by the ergot fungus is first soft and pulpy; it soon emerges from the husk, becomes firm and lengthy, and of a reddish colour, which changes to violet-black. Its growth, which is often very rapid, sometimes is such that the affected grain is very often out of all proportion to the rest of the ear."

In 1838, Quekett read a paper before the Linnæan Society, on "Ergot of Rye," in which he traced the growth of ergot throughout its several phases. From his investigations, he concluded that ergot was a mass composed of the constituents of the diseased grain mixed with fungic matter, occupying the place of the healthy ovary. The researches of Tulasne, in 1853, were very complete and exhaustive, and these, supplemented by St. Wilson and Luerssen, practically determined our present botanical knowledge of ergot.

Tulasne showed that the fungus *Claviceps*, the mould *Sphacelia*, and spurred rye, were all different stages of the same plant. He states, "I found that the dark purplish-brown spur-shaped grains were the food-store of a fungus to which they bear a relation similar to that between the potato and the potato plant. In autumn, they fall to the ground, where they are protected from birds by their bitter taste and their colour resembling that of the soil. In spring, there arise from each 20 to 30 beautiful little pale violet fungi, the shape of round-headed pins, in the tops of which are a great number of flask-like cavities, filled with several dozen long hollow cells or

Villeneuve's
investiga-
tions

Tulasne's
researches

How
Tulasne
describes
ergot and
its forma-
tion



ERGOT OF RYE

Showing the ergot in various stages of development
From an engraving, 1838

bags, each of which contains eight slender spores; they proceed to grow out through the bags and flasks, and are then blown away by the wind. A few happen to stick in the honey-dew secreted by the flowers of grasses and grain, whereupon, particularly if they happen to fall upon the flowers of rye, they grow rapidly. Insects are thus attracted, and spores which were in them are carried to other plants.

"At the same time, the hypha penetrates the young rye grain and forms a network of dirty white fibrils outside it, throwing off fresh spores and honey-dew; the other part continues to run riot in the ovary of the rye, finally forming a compact mass of fibres; the outer layers condense into a hard purplish epidermis, and the spur is complete."

ERGOT AND ERGOTISM

The close of the seventeenth century saw the dawn of a new and important epoch in the history of ergot, when it first became seriously recognised as the cause of a pestilential disease which had ravaged the human race from the early ages. This malady, which is variously termed *ignis sacer* ("holy fire"), *ignis infernalis* ("Devil's fire"), St. Antony's fire and St. Martial's fire, is now known to have been due to the ingestion of ergotised grain, and therefore to have represented forms of the grain intoxication called ergotism.

From various records this disease appears to have occurred in two distinct forms, namely, the gangrenous and the convulsant. The gangrenous form of ergotism, in which the circulatory symptoms are most noticeable, has been the prevalent type of the pestilence in many epidemics. The convulsant form, where the nervous system is chiefly affected, has not attracted so much attention from historians. These two forms have generally raged over distinct areas, the type of *symptoms remaining* constant. The difference in

Gangrenous and convulsant forms of ergotism

symptoms noted in various epidemics is explained by the composition of the ergot, which, as will be shown later, may contain varying proportions of certain constituents.

Hippocrates, in his works, describes certain epidemics suggestive of ergot poisoning, particularly in his account of an epidemic which occurred in the years 347-346 B. C.; but, unfortunately, it is impossible to exactly identify the disease which the early Greeks and Romans called *ignis sacer*, or "holy fire."

Antient
allusions
to ergotism

According to Fuchs, the antient Greeks used the words "holy fire" to indicate several maladies, and the expression probably meant that these diseases were accompanied by burning pains, or that they perhaps spread rapidly like a fire.

There seems to be little doubt that the malady termed *ignis sacer*, by Celsus, was really acute eczema, and that the descriptions given by Virgil and Columella under the same name referred to anthrax.

The early Arabian writers allude to a disease called "Nar-Farsi" or "Atehi-Farsi" ("Persian Fire"); but these names are ascribed by Rhases, Avicenna and Albucasis to anthrax, measles, and sometimes to small-pox. The grievous disease which, at a later date, was known as St. Antony's fire, or St. Martial's fire, and which was probably regarded, even by physicians, as erysipelas, is now known to have been one of the forms of ergotism.

The occurrence of ergotism in epidemic form can be traced back in France with some degree of probability as far as A. D. 857.

Earliest
record of an
epidemic of
ergotism

An interesting record of the disease is to be found in the annals of the Convent of Xanten on the Rhine, which date from the ninth century. One hundred years later the people of Paris were flocking to the churches to pray for the cure of their sufferings from the "holy fire," and in the same century, A. D. 944,

MAP OF EUROPE

Showing the districts where, according to antient records, epidemics of ergotism occurred.

FRANCE

Artois, Paris, Lorraine, Gâtinais, Sologne, Burgundy, Lyons, Dauphiné, Perigord, Limousin, Angoumois, Landes, Aquitaine, Languedoc.

SWITZERLAND

Zurich, Berne, Lucerne.

BELGIUM

Flanders, Namur.

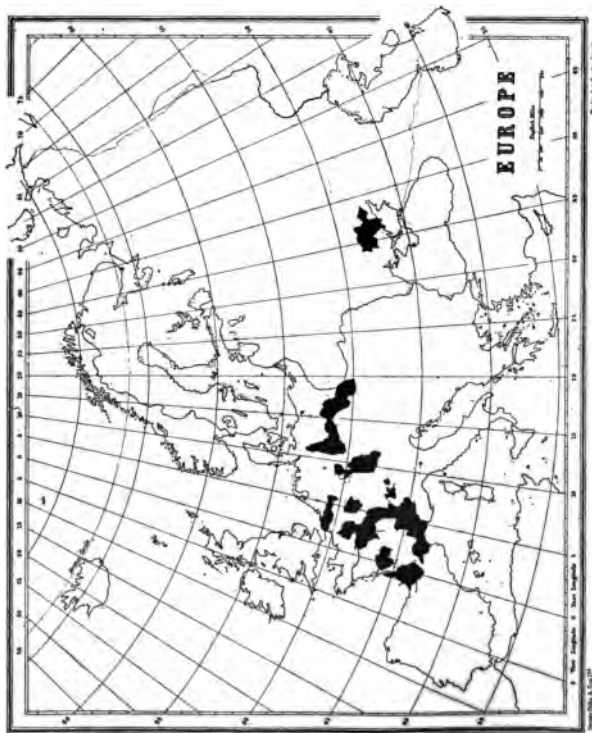
GERMANY

Marburg, Hesse, Freiburg, Würtemberg, Bohemia, Silesia, Lusatia, Voigtland.

RUSSIA

Ekaterinoslav, Kieff, Tomsk, Poltava.

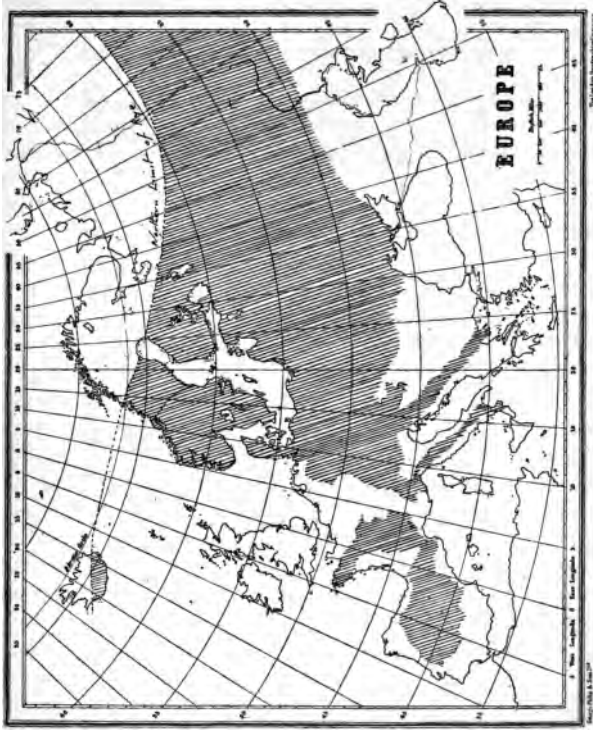
SWEDEN



MAP OF EUROPE

Showing countries in which rye is cultivated. The shaded portions show the localities where rye is mostly grown and used as food.

ICELAND
NORWAY
SWEDEN
FINLAND
RUSSIA
POLAND
AUSTRIA
BOSNIA
TURKEY
GERMANY
SWITZERLAND
ITALY
DENMARK
FRANCE
SPAIN
PORTUGAL



it is recorded by Mezeray that a terrible outbreak of the disease called *mal des ardents*, or "holy fire," broke out in Aquitaine, Limousin, Pèrigord and Angoumois, of which 40,000 persons died. The clergy received rich donations for their intercession. It is noted, however, that the priests themselves were sometimes attacked, since the people paid their tithes in bulky ergotised grain.

"The cries of the sufferers were piteous," says the chronicler, "the stench of their limbs intolerable, and many were carried off in a night." Adhemar, a novice in a monastery in Angoulême, relates the same story in his chronicle. He states that the fire of the plague was noticed all over Limousin, and that a very large number of persons were afflicted by this disease, which burnt their bodies.

Radulf Glaber, in A. D. 994, alludes to the existence of a disease which he calls *ignis occultus*, or "hidden fire," which, having affected a limb, separated it from the body, after having burnt it; and "the burning of their fire," he states, "consumed many in one night."

Felibien, a chronicler of the tenth century, also records that during an outbreak of *ignis sacer*, according to a charter of Notre-Dame de Paris, "it was established that six lamps were to be lighted in the place where the patients were," from which it would appear that the sufferers were placed in some kind of special hospital.

It is recorded in the history of Metz, that in the year 1001, a terrible plague raged in that city, which the chronicler called "*mal des ardents*;" a so terrible disease that several lost arms and legs." Again, in 1039, we learn that "a deadly burning destroyed many, both rich and poor, and left others, for example, mutilated of their limbs. There was at the same time great scarcity of corn and wine."

Sigebert gives some interesting particulars about an epidemic in A. D. 1089, which he witnessed. "In lower

Sufferings
of the
victims

A hospital
for the
sufferers in
Paris



SAINT | MARTIAL

One of the earliest
Apostles sent to France,
and the first Saint asso-
ciated with the "holy
fire." He is here de-
picted healing a youth
who is probably suffering
from the disease.

From an MS. of the XIV century

Lorraine," he states, "a great number of people were afflicted by a gruesome disease which caused their limbs to become as black as coal, and from which the patients died miserably, or were reduced to an unhappy life, having lost hands and feet."

Sigebert's
record in
A.D. 1089

Mezeray records an outbreak in the year 1090, and for the first time alludes to the disease by the name of St. Antony's fire. He further notes the fact that in 1096, in the Province of Namur, the bread, after being baked, appeared as red as blood. "This," he observes, "may be caused by a kind of false corn, which gives this colour to bread."

First named
St. Antony's
fire

Altogether, six great outbreaks are recorded in the tenth century, seven in the eleventh, ten in the twelfth, three in the thirteenth, the mediæval series ending with one in the year 1373.

Outbreaks
in the
middle ages

This malady was of a nature to attract notice and to excite pity, and is frequently mentioned in the early French legends of the Saints. From the tenth to the twelfth century the term *ignis sacer* is generally used by chroniclers in referring to the epidemic, but after that period the names of "St. Antony's fire" or "St. Martial's fire" are mostly employed.

Several Saints appear to have been especially connected with *ignis sacer*, and after the eleventh century their names seem to have been directly associated with the disease. This association probably originated in their acts of personal healing, or in the professed efficacy of their relics in relieving the sufferers. St. Martial appears to have been the first to perform miracles of healing from this malady. He was one of the earliest apostles of France, whither he was sent from Rome with St. Dionysius, of Paris, about the year 250. He afterwards became the first Bishop of Limoges, where, on his death, his relics were religiously preserved. It is recorded that during the first epidemic

Saints
associated
with "ignis
sacer"

Saint
Martial

of the "holy fire", in Aquitaine the bishop carried the relics of St. Martial in procession. "When, indeed," says the chronicler, "the plague ceased at once." It may be remarked that the procession took place late in the spring, at which season the poisonous properties of ergot become attenuated.

St. Antony, who was associated with the disease which was afterwards known as St. Antony's fire, was the patriarch of the monks. His identification with the malady began, according to an Saint Antony ancient chronicler, in the year 1050, "when a pestilential erysipelas distemper, called 'the holy fire,' swept off great numbers in most of the provinces in France. Public prayers and processions were ordered against the scourge, and those who implored the Divine mercy through the intercession of St. Antony, especially before his relics, were speedily and miraculously healed. The church in which the relics The disease healed by his relics were deposited was that of La Motte of St. Didier, situated not far from Vienne, which was resorted to by great numbers of pilgrims, and the Saint's patronage came to be implored throughout the whole country against the disease, since which time it ceased, and was known thereafter as St. Antony's fire."

The story how St. Antony's relics were brought to Vienne, and how the Order of the Hospitallers of St. Antony came to be founded, is related by Aymar Falco, the historian, and is not without interest. He states that, when St. Antony died, it was his wish that his burial-place How St. Antony's relics were brought to Vienne should remain secret, and it was not until 170 years after his death that the place of his interment became known. He was found wrapped in a tunic, the material of which was quite different from ordinary stuff. There is no doubt that it was the garment which formerly belonged to the Hermit Paul. The remains so happily discovered were taken with great ceremony to Alexandria, and placed in the Church of St. John the Baptist.



SAINT ANTONY

The Saint is depicted standing in a flaming fire, symbolical of the disease with which his name was associated.

From an MS. of the XV century

A century later the invasion of the Saracens forced the Christians to remove the relics they possessed to different countries to protect them from the profanations of their enemies. The body of St. Antony was taken to Constantinople and placed in an old church at the gates of the city.

About this time a certain Jocelyn, a nobleman of Dauphiné, had vowed a pilgrimage to Jerusalem, but instead of going, occupied himself in the petty feuds common among the feudal lords of the period.

One day, being very severely wounded in a fight, he was carried for dead to a chapel of St. Antony and, reviving next morning, said he had had a vision of demons, one of whom tried to strangle him, while the rest stood ready to drag his soul to hell; but St. Antony appeared and, having driven away the devils, bade him at once fulfil his vow and, on his return, bring his relics to France, where they would receive greater honour than at Constantinople.

This he succeeded in doing (A. D. 1090), and was building a church for their reception at St. Didier la Motte, near Arles, when he died childless, and his estates passed to a relative, Guy Didier, who carried the relics about with him for the protection they brought him in battle. Pope Urban II heard of this in 1095, and, much scandalised at such indecency, ordered Guy to finish the church at once on pain of excommunication, and meanwhile to put the relics in charge of the Benedictines at the neighbouring Abbey of Mont-Majour. To this he consented, and the monks established a priory there, and the shrine rapidly became famous for the cure of diseases, especially ergotism.

Saint
Antony's
shrine

Amongst others came a rich man named Gaston, to pray for his son, who was sick. St. Antony is said to have appeared to him in a dream, and, after rebuking him for being more anxious about his son's body than his soul, said that God would grant his



The adoration of St. Antony by a sufferer from *Ignis Sacer*
(gangrenous ergotism)

From a woodcut of the XVI century

prayer, but required them both to devote themselves and their wealth to the service of the sick. Planting his staff in the ground, St. Antony bade him and his future companions wear a blue cross shaped like its head, or the letter T, on their shoulder. Thus were the Hospitallers of St. Antony founded, and this became their badge, and probably represents the crutch used by the mutilated victims of ergotism.

Gaston and his son, who were soon joined by others, built a hospital near the church for the reception of sick pilgrims, styling themselves Hospitallers. The community was recognised by Pope Urban in the same year, 1095, and may therefore claim to be the earliest of the Hospitaller Orders.

Foundation
of Hospi-
tallers of
St. Antony

The second Grand Master, Stephen (A. D. 1120), built a larger hospital owing to the increased number of patients. The Order of St. Antony grew rapidly, and spread through France, Germany and Scandinavia, and acquired great wealth. The parent house was engaged in active work as late as the sixteenth century, providing food for the still numerous victims of ergotism, and affording surgical aid to the maimed who were incapable of self-support.

In the eleventh and twelfth centuries, it was generally believed that if the sufferers from the "holy fire" could but reach the Abbey of St. Antony at Vienne, and remain there for about a week, they would be cured. Thus pilgrims made their way to Vienne from all parts of Europe, many of them, indeed, actually leaving their limbs there. Writing as late as 1702, a chronicler states, "one can still see in this abbey dried and blackened limbs kept from that time."

Faith in
St. Antony's
relics

In all probability, the epidemics of ergotism at this period were of the gangrenous type, for in a woodcut of the sixteenth century, represented on the opposite page, is depicted the Adoration of St. Antony by a sufferer



SAINT BENEDICT

Abbot and founder of the Abbey of Monte Casino, whose relics were believed to heal those afflicted with the "holy fire"

A watchman who has probably been crippled through ergotism is depicted in border

From an MS. of the XV century

who has lost his right foot, and who raises towards the Saint his left hand, which is represented as burning with a living flame. Beneath the original picture are the following lines:—

“ O Lord Great St. Antony,
Procure us by thy sovereign grace
The pity of God, and pardon of our sin
Preserve us from thy terrible fire.”

It is further interesting to note that the lambent flame and the crutch are used as symbols of St. Antony, and are represented in many pictures of him executed by the monks in the middle ages. In other miniatures he is depicted as standing in a flaming fire.

Symbols of
St. Antony

Tradition states that St. Benedict was associated with this malady. He was the Abbot and founder of the famous Abbey of Monte Casino, and was the patriarch of the Western monks. After his death his relics were visited by pilgrims suffering from the “holy fire,” from which they claimed to obtain relief.

Saint
Benedict

Ste. Geneviève, who was also connected with the disease, was the chief patroness of the city of Paris. She was born about the year 422 at Nanterre, a small village four miles from that city, and died about 512, being buried in the Church of St. Peter and St. Paul.

Sainte
Geneviève

The city of Paris is said to have frequently received proofs of Divine protection through her intercession, the most famous instance being the miracle of “*les ardents*,” or the “burning fever.” In 1129, in the reign of Louis VI., it is stated that “a pestilential fever, with a violent heat and pains in the bowels, swept off in a short time 14,000 persons; nor could the art of physicians afford any relief. Stephen, Bishop of Paris, with the clergy and people, implored the Divine mercy by fasting; yet the distemper did not abate till the shrine of Ste. Geneviève was carried in a solemn procession to the cathedral. During that



SAINTE GENEVIÈVE

Chief patroness of the city of Paris. Many sufferers from the "holy fire" are said to have been healed by touching her shrine

From an MS. of the XV century

ceremony many sick persons were cured by touching the shrine, and of all that then lay ill of distemper in the whole city only three died; the rest recovered, and no others fell ill."

A chapel near the cathedral, called antiently Ste. Geneviève the Little, erected near the house in which she died, was afterwards called, from this miracle, Ste. Geneviève des Ardents.

The scourge of the "holy fire" was most virulent at the time of the Crusades, towards the end of the eleventh and the early part of the twelfth centuries. Dauphiné was so smitten that Pope Urban the Second founded several hospitals of the Order of St. Antony in France.

Ergotism
in the time
of the
Crusades

Rabelais, who alludes to "St. Antony's fire" at the end of the introduction to Book II of his works, swears that his chronicles are the expression of truth, and threatens incredulous readers with numerous terrible diseases. He terminates his imprecations on the unbeliever with the following characteristic sentence:—

"May St. Antony's fire burn you, mauditerre return to you, Lancy and malubec afflict you; may you get caquesangue and ricqueracque, fire as fine as cowhair, with quicksilver in the foundation; and as Sodom and Gomorrah, may you fall into sulphur and fire, and in the depths, if you do not firmly believe all that I want to relate in this present chronicle."

Rabelais
and
St. Antony's
fire

He further states that at Lyons the doors of the houses in which the sufferers lived were painted red, emblematic of the fiery nature of the disease.

Ambroise Parè refers to "holy fire" as erysipelas, and says that the people called gangrene "St. Anthony's fire" or "St. Martial's fire." Germany, Flanders, Burgundy, Denmark, and other countries suffered terribly from these epidemics of ergotism, but England only slightly.

Epidemics
in Germany,
Flanders,
Burgundy
and
Denmark

The English epidemic is described as an "epidemic erysipelas, whereof many died, the parts being black and shrivelled up." Hugh of Lincoln (A. D. 1190) is said by his chronicler to have seen many who recovered from the fire at Mont St. Antoine in Dauphiné. "They were of all ages, and although terribly crippled, their health was, nevertheless, restored. Some lacked a forearm, others a leg, or even a leg and thigh up to the groin, but all their stumps were soundly healed." And so throughout the thirteenth, fourteenth and fifteenth centuries we have the same melancholy tale of the effects of this terrible scourge.

Effects of
ergotism

It was even noted that the disease was most destructive in the years of bad harvests and in times of famine, but no one connected the grain with the disease.

Curious
remedies
for St.
Antony's
fire

Many curious remedies were employed in the Middle Ages as cures for "St. Antony's fire" by those who had not sufficient faith in the sacred relics. A Danish manuscript of the fourteenth century gives the following recipe:—

"Against erysipelas.

"It is the 'bad fire' of bad blood. Take some hermodactyl, bones of the hen, and salt. Put together in a mortar and powder. Then wash the place of the irritation with strong vinegar and cover it with the powder. Take, too, a piece of malva, and boil the bark during two or three days. Take afterwards some earth from a molehill, and fill up the hole with all that, in order to let the flesh grow near the ulcer. After all this has been done, cover the limb to let it perspire, and the limb which falls must be placed in the sun or in the fire."

In another medical manuscript of the thirteenth century:—

"Of the plantain, his moisture is good, too, for fire in the ears and for 'bad fire.'



CHURCH OF STE. GENEVIÈVE DES ARDENTS, DESTROYED IN 1747



“Wormwood. If the leaves be cooked with oil, it is good against ‘bad fire’ and against what is burnt.

“Cypress mixed with barley flour and vinegar is good against ‘bad fire.’”

In a medical manuscript, dated 1534, is the following recipe for “bad and wild fire” :—

“If someone gets or suffers from the wild or ‘bad fire,’ which is called by many people St. Antony’s fire, let him take some sorrel and crush it in small pieces, for the juice appeases the warmth, and cures. He must drink the juice; and also the water boiled with this sorrel appeases very well the warmth and the internal fire.

A recipe
for the
“bad and
wild fire”

“Take the leaves and bark of the young plum-tree. Crush it in small pieces and make a plaster for the seat of the disease.

“Take the bark from the middle of the young oak, and some acorns or green acorns. Let them boil in vinegar, or water, and make with it a plaster for the same fire. This extinguishes it, and cures.

“Take some loriandre, crush it in small pieces, and make with it a plaster for the sore place, for it is very good.

“Take the root of the white lily. Roast and crush it with essence of rose, and make a plaster. On the fire and warmth let this plaster stay a long time, for it cures and is very useful. You can take also the root of the grass called ‘devil-bit.’ Crush it in small pieces, and place it on the same fire. It extinguishes well. You can crush the leaves of poppy with vinegar, and then place it on the part. It cures and extinguishes very well.”

The same writer adds:—“If the limb of a person is inflamed with evil fire, which many persons call St. Antony’s fire, let him plunge a towel into water of ribwort or plantain, for it extinguishes very well.”

In the vocabulary of the manuscript *ignis sacer* is described as "a disease called 'evil fire.'"

The estimates of mortality in the several epidemics of ergotism over a larger or smaller area of France range as high as forty thousand and fourteen thousand, which, however, must be taken as approximate. But in later times, upwards of five hundred deaths from ergotism have been accurately counted in a single outbreak within a limited district. The epidemics were observed to occur in particular seasons, sometimes twenty years or more elapsing before there was a recrudescence of the disease. Certain provinces were also found to be more frequently visited, notably those in the basin of the Loire, in Lorraine, and since mediæval times, especially, in the Sologne.

The disease was almost exclusively confined to the peasantry, and children in particular were affected.

The attack usually began with intense pains in the legs or feet, causing the victims to writhe and scream. A fire seemed to burn between the flesh and the bones, and at a later stage even in the bowels, the surface of the body being all the while cold as ice. Sometimes the skin of affected limbs became livid or black; now and then large blisters arose upon it, as in severe attacks of erysipelas. Gangrene of the extremities followed. A foot or a hand fell off, or the flesh of a whole limb was destroyed down to the bones by a process which began in the deeper tissues. The spontaneous separation of a gangrenous hand or foot was, on the whole, a good sign for the recovery of the patient.

Such was the *ignis sacer* ("holy fire"), St. Martial's fire or St. Antony's fire, which figures so prominently, and of which so many epidemics are recorded in the French mediæval chronicles.

The first suggestion that ergot was probably the cause of these epidemics was made in the year 1596,

Mortality
from the
epidemics

A con-
temporary
description
of the
disease

when a disease accompanied by spasms and convulsions broke out in Hesse and the neighbouring district. The Medical Faculty of Marburg, on careful investigation of all likely causes, were at length led to attribute the malady to the use of spurred rye, and in 1597 they published a tract in German on this subject, describing the symptoms, causes and methods of cure.

Ergot first identified as the cause of the disease

Sennertus, who seems to have derived his information from the Marburg report, gives the following particulars in his work on fevers: "Those who were seized with the disease scarcely ever recovered. Those who were disordered in their intellect remained so until their death. Although some lived for fifteen years after being attacked with this disorder, yet every year in the months of January and February they found themselves ill."

Thuillier, a physician to the Duke of Sully, was the first to call attention to the fact that ergot, or spurred rye, was accountable for the disease which had so devastated some parts of France in 1630. He observed that the intensity of the malady was in proportion to the amount of the vitiated grain consumed, and that the rye became spurred in damp and cold seasons. He proved the toxicity of ergot by experiments on lower animals, including birds; and his description, the result of his observation and experiment, is stated to be "the first scientific observation free from all superstition."

Thuillier's observations and experiments

Thus a great advance was made towards solving the mystery as to the cause of the epidemics.

Hoffmann states that St. Antony's fire was very prevalent in Voigtland during the years 1648, 1649 and 1675; and in 1660, 1670 and in 1674, it again ravaged some parts of Aquitaine, the Sologne and the district of Gâtinais.

Epidemics in the seventeenth century

In 1670, the Academy of Sciences in Paris, was informed of the singular effects attributed to the use of

bread made from spurred rye, which had been noted in the Sologne; and six years later, Dodart was commissioned to investigate the nature of the disease caused by ergot. In addition to other observations, he concluded that ergot was most active when it was new, and lost much of its virulence as it grew stale. He also described the symptoms of the disease with considerable accuracy.

In 1682, Dr. Bernier, a physician who had practised at Blois for twenty-eight years, published, in the *Journal des Scavans*, a short history of that city. After describing the Sologne, he refers to a "malignity which sometimes spreads itself over all the rye of this country, and which, breeding in the ears of corn certain black grains called in Sologne ergots, and in Gâtinais, *bled cornu*, does often cause dangerous diseases to the people of the country. But it is not certain that this proceeds from the soil or from the heat and moisture of the air, as was formerly said, but rather from certain hoar frosts which fall some years, and always towards the month of May."

About the same period, the Abbé Tessier noticed that the conditions preceding an outbreak of the disease were generally the same. (1) The district was damp and foggy; (2) the vegetable products were badly nourished and small; (3) the people were in bad health and reduced to want.

In 1709, an epidemic of ergotism swept over the cantons of Berne, Lucerne and Zurich, and an accurate account of the disease was recorded by Lange, who made careful experiments with the diseased grain. He found that it abounded mostly in rainy years, and when a hot summer followed a wet spring. He speaks of the excruciating pain which preceded and accompanied the gangrene, and traces the disease to ergot, which he calls "*clavis seccalinus*."

The epidemic in Switzerland spread to Dauphiné and Languedoc, and an account of it is recorded in the archives of the Abbey of St. Antoine at Vienne. It describes how the unfortunate victims were tortured for six months or more before death released them from their sufferings, and the physicians of the Abbey noted the devouring pain which burned the affected parts with intolerable agony, cold as they appeared to the touch. One chronicler describes the gangrene as of the black and dry variety, but another physician of the Abbey refers to many cases in which the gangrene was not altogether dry, but suppurated, and was accompanied by a terrible smell. Four hundred parishes were thus attacked in this part of France.

A description of the disease in the seventeenth century

In 1710, M. Noel, a surgeon of the Hôtel Dieu at Orleans, published an article in *L'Histoire de l'Académie Royale de Science*, in which he states that "within a year's time he had received into the hospital more than fifty patients afflicted *d'une gangrène sèche, noire et livide*." He adds that this disease affected men only, and that in general the women, except some very young girls, were quite free from it. The members of the Academy were of the opinion that the disease was produced by bad nourishment, particularly by the use of bread in which there was a great quantity of ergot.

Noel's observations

M. Fagon, the chief physician to the King of France at this time, describes ergot as "a king of monsters in vegetation, which a particular sort of rye, sown in March, is more apt to produce than what is sown in the autumn, and which often abounds in moist, cold countries, and in wet seasons."

Fagon's description of ergot

In 1710, after an outbreak of the disease in Russia, Peter the Great instructed Schober, a physician of that period, to make a study of it.

During the eighteenth century, Germany had several visitations of the disease. In the year 1702, an



ERGOT OF RYE

From a woodcut, 1682

- Fig. 1. Ear of rye containing ergot
 A—Middle sized ergot detached
 B—Small ergot detached
- Fig. 2. Ear containing grains composed of rye and ergot
 C—Grain composed of rye and ergot
- Fig. 3. Ear of stout rye containing only one large ergot
 D—A great ergot detached
 E—A great ergot broken transversely
- Fig. 4. An ear of wheat which bears one ergot
 F—An ergot of wheat out of the ear
 G—Ergot irregularly shaped

epidemic of ergotism broke out in Freiburg, and, in 1716, it is recorded by Vedelius as being prevalent in Saxony and Lusatia. In 1717, Vater states: "It appeared again in Germany, and five years later there was an outbreak in Silesia."

Ergotism in Germany in the eighteenth century

Shortly afterwards, an epidemic of the malady broke out in Saboth, which is described by Burghart; and another in Würthemberg, which is recorded by Schrine, who visited as many as five hundred patients. He vividly describes the symptoms and progress of the disease in the following words:—

"Beginning with a disagreeable titillation of the feet, as if ants had been creeping up them. This was soon followed by a violent pain in the stomach, by which both the hands and the head were affected. The titillating sensation was followed by a violent contraction not only of the hands and feet, but also of the toes. The patients exclaimed that their hands and feet were on fire, while their bodies were bedewed with copious sweats. After much pain, the head became heavy, and vertigo came on, with dimness of sight. Some either became totally blind or saw objects double. They staggered and lost their memory. Some became insane, others melancholic and comatose. In those above the age of fifteen epilepsy was liable to come on, and generally proved fatal."

Schrine's vivid description of ergotism

In addition to these sufferings, the patients were afflicted with a voracious appetite, almost impossible to satisfy. The pulse in every instance was normal and healthy. The disease lasted from two to eight, or even twelve, weeks with intermissions.

One of the most remarkable things connected with this malady was the varied and decided forms it took. Tissot gives an account of the spontaneous gangrene form, the first symptom of which was a numbness of the legs, followed by a pain, with slight swelling, but

Tissot's account of gangrenous ergotism

no inflammation. Then, in rapid succession, came coldness, lividness, mortification, and the dropping off of the legs. Among the patients afflicted in the Sologne, there was no fever, and the pains were slight. No remedies were applied, and the nose, fingers, hands, arms, feet and legs, when they became gangrenous simply dropped off.

The outbreaks in Germany, Sweden and Russia were to some extent of a different type from the epidemics of gangrene common in France. The sensory symptoms were followed by a disorder of the motor system and spasms of the limbs, very often passing into contractions of the joints, which no force could unbend, and sometimes accompanied by convulsive fits of the whole body, in which the disease was often mistaken for epilepsy. This was the type called convulsive ergotism, or, in Germany, *Kriebelkrankheit*.

From 1746 to 1747 there were severe outbreaks of ergotism in Sweden, Russia, the Sologne, the Landes, Artois, Flanders and other places. In this epidemic, the pain seems to have been terribly violent, so that the victims in their agony hurled themselves against the walls, or even threw themselves into the water.

About the middle of the eighteenth century, there was a slight outbreak of ergotism in England. On the 10th of January, 1762, a family living in Wattisham, in Suffolk, consisting of the father, mother and six children, were attacked almost simultaneously with the symptoms of gangrenous ergotism, several of them eventually losing a portion of their limbs. The disease began with intense pains in the legs, and contractions of the hands and feet. It was proved that they had not been using rye flour, but that their bread for a short time before had been exclusively made from damaged wheat, grown in the neighbourhood, and kept apart from the farmer's good corn, so as not to spoil his samples. It had been

Severe
outbreak
in 1746-7

Slight out-
break in
England

sent to the mill just before Christmas, and had been used by some others besides the family, who developed the symptoms of ergotism.

There is little doubt that the chief reason of our immunity, in England, from epidemic ergotism has been owing to the fact that the grain was better grown in this country, and that rye was a comparatively rare crop, and seldom used for food, wheat bread being generally preferred.

England's
immunity

It was not until the end of the eighteenth century that the scientific world really awoke to the fact that there was a direct connection between the various forms of the disease which had attacked the peasantry in many countries and the vitiated rye crops; although the country people themselves and several observant medical men living in the affected districts had been alive to the fact for a considerable period.

Ergot
recognised
as the cause
of the
epidemics

According to Haser, it was not until the year 1771 that the identity of the old *ignis sacer* with the modern gangrenous ergotism was made clear.

About 1783, Saillant, at the instance of the Royal Society of Medicine of France, undertook an investigation to determine whether ergot of rye was capable of producing dry gangrene or not, a question on which many observers of the period, such as Langius, Perrault, Dodart and others differed. He studied very closely on the spot the symptoms of the two distinctive forms of ergotism, and has left a valuable clinical description of the disease, and the methods of treatment used at the time.

"Ignis
sacer"
identified
with
ergotism

"The dry gangrene," he states, "is characterised by the mortification of some one of the extremities, sometimes all of them. Often it is preceded by a redness, which, however, is not inflammatory, and by some vesifications. The limb swells, becomes painful, and has a sensation sometimes of cold, but more frequently of insupportable heat. The vessels are obliterated, the

phlegm becomes black and hard, and the patient at the point of death is happy if, from a spontaneous separation of the gangrenous part, he can survive with the loss of his extremities.

“ The first symptoms of this disease are not alarming. The pulse continues for some time nearly in the natural state, and is gradually weakened in proportion to the violence of the disease. The blood appears black and thick, and the urine in a rational condition. The belly is hard and tense, but the appetite continues, and digestion goes on as in health. It is only towards the end, and even on the approach of death, that diarrhoea usually comes on. After death, on examination of the body, the intestines and other viscera are often found strewed over with gangrenous spots.

“ The cure of this disease is sometimes accomplished in the beginning by profuse sweats and by a good diet. The medical treatment consists in evacuating the *primæ viæ*, in giving internally laxative apozems, diuretics and antiseptics, while recourse is had externally to those topical applications which are proper for resisting gangrene, for favouring the separation of the diseased part without amputation, and for aiding suppuration.”

After this description of dry gangrene, he proceeds to give an account of the convulsive epidemic affection :—

“ In that disease,” he observes, “ there is not any gangrene—the violent convulsions are its essential characteristic. It has no regular course, but returns by paroxysms, and while it is in reality less dangerous than the dry variety, it yet makes its attack with much more alarming appearances. The patient at one time feels as if he were burnt with devouring fire, and soon after is sensible to cold similar to what arises from the application of water. These symptoms are accompanied by loss of appetite, nausea and vomiting, which are soon succeeded by inexpressible pain. The patient, without *shedding tears*, utters lamentable cries; and the affected members are either contracted with extreme violence or

remain stretched out with inflexible rigidity. The pains soon abate, when the patient is able to stretch the contracted membranes or to bend those that have been stretched, but they return in a fresh accession with the same severity. The patient is no sooner out of the fit than he is tormented with a voracious appetite, and he digests with sufficient ease all sorts of aliment. In particular years there succeeds swelling of the feet and hands, and the fingers have been covered with vesicles full of serosity, the discharge of which, however, does not procure any relief. The disease, after several accessions, terminates itself by sweat or diarrhœa, which is more violent when patients eat little than when they eat a great deal. But for the most part there remains for the space of some weeks several inconveniences, such as vertigo, *tinnitus aurium*, deafness, loss or diminution of sight or the like. If the affection continues long and degenerates into epilepsy, and if during the affection there shall occur a mental disorder, it in general continues for life. If there occurs an obstruction of the liver there in general supervenes a spitting of blood, sometimes followed by phthisis, by epilepsy, palsy, or, in fine, apoplexy.

“ This disease attacks most frequently those who are plethoric, and in that case the convulsions are the most violent. But those of the phlegmatic temperament are most subject to comatose affections after it.

“ Some have observed blood issue from the nose and mouth, but they have not observed any alteration in the viscera, excepting that the lungs were much inflated and distended with blood. In other cases the liver and gall bladder have been much distended with the bile, and an erysipelatous inflammation has been observed over the whole surface of the abdominal and even the thoracic viscera.

“ Antispasmodics joined to diaphoretics appear to be the only remedies useful against this disease. Narcotics have seemed only to aggravate the affection, but

bleeding and purgatives have been employed with some advantage in the beginning of the disease, according to the circumstances and temperament of the patient."

The result of the modern study of outbreaks of ergotism, including the minute record of individual cases, shows that there is no hard and fast line between the gangrenous and the convulsive forms; that the French epidemics, although, on the whole, marked by the phenomena of gangrene, have not been wanting in functional nervous symptoms, and that the German or northern outbreaks have often been of a mixed type.

Ergotism has by no means ceased in Europe. It is, however, now almost confined to the Russian Empire, in many parts of which it seems to be endemic. From 1785 to 1786, Kieff was ravaged by an epidemic, and between that period and 1838 there were eight distinct outbreaks of the disease in Russia. The year 1845 was very fertile in ergotism, and in 1881 there was a severe outbreak in Ekaterinoslav. In 1883 there was a further outbreak in Tomsk, in which thirty-six out of three hundred patients died, and as recently as 1888 there were many cases of the gangrenous type in the Government of Poltava, in which many of the sufferers lost a foot or a hand. Ergotism has also been observed in Abyssinia.

The comparative disappearance of this terrible scourge may be attributed to scientific investigation, to improvement in the social conditions of the people, and to the cultivation of rye and other cereals on drier soil under more favourable climatic conditions.

Many were the conjectures which were made by the early observers as to the cause of ergotism. Linnæus erroneously alleged that the malady was due to the radish (*Raphanus*), and thus his authority led to the name *Raphania* being given to ergotism. It does not appear, however, that Linnæus had ever visited the ravaged

Modern
study
of
ergotism

Ergotism
not yet
extinct

Linnæus
erroneously
ascribes
ergotism
to the
radish

districts, and it has since been shown that the *Raphanus* is never poisonous.

Modern science has shown us that ergotism is due to one or more poisonous principles, which are elaborated by the fungus *Claviceps purpurea*, and that contributory causes are starvation, misery and ill-health. Epidemics thrive only under conditions which are favourable to the growth of this parasite; that is, after a damp season, and particularly when a hot and dry summer has followed a very rainy spring, especially when the grain has been grown in marshy districts, and in the shade.

Modern
investi-
gations

It has been conjectured that the two varieties of ergotism, the gangrenous and the convulsant, are caused by the varying amount of the active constituents present in ergot, and that the variability and strength of the preparations of ergot are due to the fact of the inconstant nature of the active principles present in the crude drug.

THE THERAPEUTIC HISTORY OF ERGOT

It is very probable that the physiological effects of ergot on the uterus were known to the "wise women" who performed the functions of the midwife from a period of great antiquity, and a secret of such value (from more than one point of view) would no doubt be most jealously guarded, and be handed down only by word of mouth.

It has been stated that its use was known to the "wise women" of the Highlands of Scotland at a very early period. They usually ordered it to be swallowed whole, in its natural state, giving from five to nine grains for a dose, but laying special stress on the point that the dose must first always be in odd numbers.

Knowledge
of its
therapeutic
properties
in early
times

The earliest known allusion to the action of ergot

on the uterus was made by Lonicer, in 1582, and again by Camerarius, in 1688, who records that women in certain parts of Germany were in the habit of employing spurred grain to accelerate parturition. Ray, in 1693, also refers to ergot as being considered an excellent remedy for "*Lochiorum fluxus*." No further reference seems to have been made to its medicinal properties until the year 1747, when Rathlauw, a Dutch surgeon, is believed to have used it in midwifery cases. That he undoubtedly used some medicinal agent of great obstetric value is evidenced by his own report of his methods:

"I avail myself of a medicament," he states, "the second dose of which has never failed, in my experience, to excite true pains, or to change false ones to true, so that the efforts of the mother acting better on the child, the mouth of the womb dilates more. On different occasions, when only good pains were lacking, I have conducted to a happy end, by this means and without the help of any instrument, some most difficult labours."

Levret and others conclude that the drug so successfully used by Rathlauw was ergot of rye, and the former severely censures him for having kept secret the particulars of a method of treatment so useful to humanity.

About 1747, Salerne experimented with ergot on pigs, ducks and fowls, and, finding that they died of gangrene, he corroborated the statement of a previous observer, that fresh ergot was most virulent, and that after some months it gradually lost its poisonous properties.

From that period there is no further mention of it being so used, until Parmentier, who had been investigating the subject, in an interesting letter in the *Observations sur la Physique*, gives the following account of its employment.

Earliest known allusion to uterine action

Rathlauw used a drug supposed to have been ergot

Salerne's experiments

Parmentier on ergot in 1774

Letter from M. Parmentier, Apothecaire Major de l'Hôtel Royal des Invalides, to the Abbé Rosier, 1774 :—

“ In the number of letters, Sir, that I have had the honour of receiving on the subject of ergot, I have found nothing contrary to the opinion of M. Model on the origin and effects of this peculiar excrescence of rye. I am even bold enough to assert that they all confirm, as do my own experiences, that the accusations made on this subject have absolutely no foundation. However, as it is only after a long train of evidence that the opinion of the celebrated chemist of St. Petersburg will triumph, I think that I ought in the meantime to communicate to you certain observations, the singularity of which have appeared to me to be worthy of the attention of doctors and physicians. Here is what Madame Dupille,—whose chief occupation seems to be the alleviation of suffering,—here is, I say, what she had the goodness to write to me concerning ergot :—

‘ I read, Sir, in the last *Mercur*, of June, 1774, an extract from your works with respect to ergoted rye. A few years ago I heard mentioned the danger of this grain, and the terrible diseases it was said to have caused in Alsace, if I remember rightly, or in the neighbourhood. This information surprised me greatly, for from childhood I had known that it possessed a certain property from which I had never seen ill effects, nor had my mother, who had it taken to women who were in labour. I do not know from whom she learned this recipe. She had no other knowledge of medicine (nor have I) than the desire to help the needy. This is how she used to administer it, and how I myself have administered it on several occasions to various women, among others to the wife of the farmer of Bertichere, near Chaumont-Vexin, where I stay sometimes ; she found that it did her much good.

‘ I pound this grain, which is commonly called *faux seigle*, to as fine a powder as possible. I then take a

thimbleful of it, and make the patient swallow it in a spoonful of water or wine or broth, whichever is nearest to hand.

'The woman who has swallowed it ought to be delivered in a quarter of an hour. I only administer it, according to my mother's directions, when labour is too slow. The women who have taken it have never been ill afterwards.

'This, Sir, is all that I know, from my own experience and my mother's, about ergoted rye. If it can be of any use to you in your work I shall be delighted. Your essay has greatly reassured me with regard to the effects of this grain, which I feared to administer after all I had heard, and gives me the satisfaction of being able in a quarter of an hour to relieve from her pain a woman who is worn out by long and difficult labour: for my mother has assured me, and I myself have seen them delivered in a quarter of an hour.'

"I think I ought to add, Sir, that in several herborising expeditions which I have made to the outskirts of Paris, I have had occasion to remark this year that the ergot was much more common in the pieces of rye; that these were richer, and the ears not so full; that it is always on the edges of the pieces that it is found most abundantly; and that, finally, even before the complete maturing of the rye, this ergot at harvest time is so loose in the husk that the slightest movement of the sickle is sufficient to detach it, so that it is rarely that even a few grains of it reach the barn."

In 1777, Desgranges, a surgeon of Lyons, having met with several midwives at that period, both in Lyons and the surrounding district, who, from a traditional knowledge were accustomed to employ, with no little mystery, the spurred rye in cases of lingering labour, at length made a great many trials of it, which for the most part were successful. He published several accounts of his observations and results in various journals, in

Desgranges
strongly
advocates
the use of
ergot

which he specified, with great care, the peculiar circumstances in which ergot might be employed, and those cases also where it was contra-indicated. In spite of prejudices and opposition, he continued strongly to advocate its use, and to his perseverance we no doubt owe, to a very large extent, the use of ergot as a medicinal agent to-day.

When first announced in France, the use of spurred rye was known only in the department of the Rhone and some other departments on the frontier. But soon after the publication of its properties by Desgranges, it came to be used throughout the country.

Dittmer states that ergot was employed in different parts of Germany, and particularly in the environments of Ludwigsburg, in Würthemberg, where it was known and used by the midwives. It was soon tried in Italy by Bigeschi, of Florence, and Pistre, of Ferrara, who published directions to midwives for using it, and in France was advocated by Bourdot and Goupil of Paris, also Chevreuil of Angers. In Germany, its use was supported by Orjolle and Huchede, and in England, by Clarke, Davies and Merriman.

In America, it appears somewhat doubtful whether its first introduction was due to Hosack or to Stearns. There is reliable evidence that Hosack was the first physician in America to employ ergot to arrest uterine hæmorrhage. On the other hand, it appears that Stearns was the first to use it in that country for accelerating delayed parturition. His suggestion is embodied in the following letter to a Mr. S. Akerly, written by Stearns from Saratoga County, on January 25, 1807:—

“In compliance with your request, I herewith transmit you a sample of the *Pulvis parturiens* which I have been in the habit of using for several years with the most complete success. It expedites lingering parturition and saves to the

The use
of ergot
spreads over
Europe

The use of
ergot in
America

Letter
written by
Stearns

accoucheur a considerable portion of time without producing any bad effects on the patient. The cases in which I have generally found this powder useful are when the pains are lingering and have wholly subsided, or in any way incompetent to exclude the fœtus. Previous to its exhibition it is of the utmost importance to ascertain the presentation, and whether any preternatural obstruction prevents the delivery, as the violent and almost incessant action which it induces in the uterus precludes a possibility of turning. The pains induced by it are peculiarly forcing, though not accompanied by that distress and agony of which the patients frequently complain when the action is much less.

“ My method of administering it is either in decoction or powder. Boil half a drachm of the powder in half a pint of water and give one-third every twenty minutes till the pain has commenced. In powder I give from five to ten grains. Some patients require larger doses, though I have generally found these sufficient; if the dose is large it produces nausea and vomiting.

“ In most cases you will be surprised with the suddenness of its operation; it is, therefore, necessary to be completely ready before you give the medicine, as the urgency of the pains will allow you but a short time afterwards. Since I have adopted the use of this powder, I have seldom found a case to detain me more than three hours. Other physicians who have administered it concur with me in the success of the operation.

“ The *modus operandi* I feel incompetent to explain. At the same time that it augments the action of the uterus it appears to relax the rigidity of the contracted muscular fibres. May it not produce the beneficial effects of bleeding without inducing that extreme debility which is always consequent upon copious depletion. This appears to be corroborated by its nauseating effects upon the stomach, and the known sympathy between the viscus and the uterus.

"It is a vegetable, and appears to be a spurious growth of rye. On examining a granary where rye is stored you will be able to procure a sufficient quantity from among that grain. Rye which grows in low wet ground yields in greatest abundance."

It is said that Stearns' attention was first called to ergot by observing its effects on some cattle that had eaten portions of the infected grain.

It is claimed that when he first used ergot he did not know of its previous employment for the same purpose in Europe, and Bigelow states, in *The New England Journal of Medicine and Surgery*, that it is to the best of our knowledge exclusively an American practice. So it is evident that its use in Europe at the end of the eighteenth century had not at that time spread to America. It is worthy of remark that in Stearns' letter, which has been quoted here, he never mentions ergot by name, and it is therefore quite probable that he was in ignorance of it, and may have at first heard of its administration in childbirth from some midwife of the backwoods in the course of his practice.

In June, 1813, Prescott, of Massachusetts, who followed Stearns as a pioneer in the use of ergot in America, published a dissertation on "The natural history and medicinal effects of the *Secale cornutum* or ergot," in which he treats of its operation exclusively upon the uterus.

He states: "I cannot say with Stearns, 'I have never been disappointed in my expectations of its effect.'" He administered ergot in the form of a decoction composed of half a drachm to four ounces of water, of which one-third was given for a dose.

A somewhat amusing use of ergot, which was made by a medical practitioner, is recorded in a letter which appeared in the *Lancet* in 1829. It states that an old woman brought to the doctor a favourite Malay hen, which to her great grief had been ten days in laying an egg.

Stearns
claims to
be the
discoverer
of its
properties

Prescott's
experience

How a
physician
tested
ergot

The practitioner thought here was a chance to try the effects of the new ecboic, and immediately thrust 30 grains down the fowl's throat, after which, he states, "the hen quickly laid, but whether *post hoc* or *propter hoc* let others determine."

EARLY METHODS OF ADMINISTERING ERGOT

The earliest known method of administering ergot was in its natural state in the form of fine powder. In this manner it was given by Desgranges and Stearns, and was called by the latter *Pulvis parturiens*, and was also known as *Pulvis partum accelerans*. By Desgranges it was termed "poudre obstetrical," and by Bordot "poudre ocyotique." By some it was recommended to be given in "good generous wine"; by others "mixed with milk or cloves or with the distilled waters of nutmeg or mint." Balardini advises that it should be swallowed with white wine, while Bordot frequently prescribed it in combination with powdered nutmeg and sugar. The dose given varied according to the circumstances of the case, and the susceptibility of the patient. The maximum prescribed by Stearns was ten grains, but it was frequently given by other practitioners in 90-grain doses, in a wineglassful of barley water, cinnamon or orange water.

Goupil relied on the following formula:—

℞ Secalis Nigri Pulv.,	dr. i.
Syrupi Simplicis,	oz. ʒ.
Ol. Menthae Essent.,	gutt. iij.
Misce in mortario.	

To be given in doses of a spoonful at intervals of ten minutes

Stearns and Gill suggested the admixture of opium with ergot in the proportion of one grain of the former to thirty of the latter.

Another early method of administration chiefly employed in America, was in the form of an infusion, commonly called "Tea of black rye." It was thus

used largely by American midwives who prepared it by infusing one drachm of the powdered ergot in a wineglassful of boiling water and allowing it to stand until it became cold. The liquid was then strained and divided into two equal portions. The first was administered when necessary, and the second after the interval of one hour if required. This infusion was recommended by Chevreuil and Akerly, although Walter considered it too weak, and suggested using an infusion double that strength.

Another form of administering ergot was the decoction which was made of the same strength as the infusion, but was boiled for a quarter of an hour, and then allowed to cool. This was known as *Decoctum parturiens*.

Madame Lachapell gave ergot in the forms both of infusion and decoction, and administered the liquid, without straining, in doses of two drachms.

Foote's method was to boil up the entire grain and give the resulting decoction, in tablespoonful doses, at short intervals. Desgranges recommended roasting the powdered ergot gently before the fire, and also states that he gave the black external part only in doses of four to six grains, without any of the inner substance, and that these small doses proved equal in effect to one drachm of the entire grain. Villeneuve mentions that he found ergot useful as an enema, when it could not be borne by the stomach, and in this way it might be used in much larger quantities. He employed from two to three drachms of the powder, boiled in half a pint of water, and strained off for use. Should the first enema fail, the second or third might be given.

A formula much used in France, devised by Pierquin, was known as "ocytic potion." It was made as follows:—

℞ Spurred Rye,	1 drachm.
Simple Syrup,	3 ounces.
Tincture of Opium,	20 drops.
Essence of Bergamot,	ʒ.ʒ.

The hypodermic injection of extract of ergot was first employed for aneurisms by Professor **Ergot first used hypodermically** Langenbeck, of Berlin, in 1869, but, owing to the irritation set up, this form of administration was not met with favour.

THE COLLECTION OF ERGOT

Ergot is chiefly exported from Russia, Austria, Germany and Spain.

Rye is practically the staple cereal of Russia, and from the annual crop, which is very large, a considerable amount of ergot is collected. The sowing time is during July and August, and the grain is harvested in June and July. During threshing time the ergot is separated out and collected, then simply dried in the air. After drying it, the peasant collectors pack the ergot in small parcels which they dispose of to the dealers, by whom it is carried to the towns and resold to the exporters and druggists. Tomsk, Omsk, Samara, Viatka, Siberia and Bessarabia are the principal Russian trading centres for the drug.

The increase in the quantity of ergot exported from Russia has been very great in recent years. In 1900, 45'04 tons of the value of 19,650 roubles were exported from the country, while in 1906, 215'30 tons of the value of 162,233 roubles was the total amount.

All investigators agree that the great value of ergot depends on the freshness of the drug, and that if the fungus is collected two or three weeks before the rye is fully ripe its action is much greater.

Keller gives the following statement of the alkaloidal value of ergot grown in different countries of Europe:—

Russian contains 0'245 per cent. alkaloid; Austrian, 0'225 per cent.; Spanish, 0'205 per cent.; German, 0'13 to 0'157 per cent.; Swiss, 0'095 per cent.

After examination by Keller's process, Dohme

gives the following percentages of cornutine in the samples taken by him: Spanish, 0.29; Russian, 0.18; German, 0.15.

CHEMICAL HISTORY

The somewhat mysterious origin of ergot appears to have attracted many investigators, but, owing mainly to lack of knowledge at the period in which they worked, the earlier observers only succeeded in isolating some of its inert constituents. The physiologically active preparations they were able to obtain were simply crude resinous mixtures, which their discoverers regarded as acids or alkaloids according to their methods of preparation.

Pettenkofer, when examining ergot in 1814, obtained some crystals which he thought resembled those of morphine. Vanquelin next made a chemical examination in 1816, and he was followed by Combes, who, in 1826, asserts that he found starch, but could not separate any active principle; and down to about 1830 nothing was known of its chemical composition.

The first reliable investigation of ergot was made in 1831, by Wiggers, who found it contained 35 per cent. of oil and a crystalline wax-like substance, which he termed cerin; he also proved that starch and hydrocyanic acid were absent, and described a resin, soluble in alcohol but insoluble in ether and water, which he termed ergotin. From feeding experiments on cocks he concluded that the toxic properties of ergot were wholly due to the resin.

Wiggers'
investiga-
tions

In 1840, the Pharmaceutical Society of Paris offered a prize for the best essay on ergot of rye, and a research was made by Bonjean, who stated that he found that ergot owed its activity to two principles, one of which he contended was a powerful poison and the other a "salutary medicine." The former he called "Oil of Ergot" and the latter

Bonjean's
researches

"Ergotin," and for his research he was awarded a gold medal. Ergotin soon came into general use as a remedial agent in various diseases, such as hæmoptysis, dysentery, hæmorrhoids, etc., and in 1855 was largely employed during the Crimean War with apparent success in chronic diarrhœa following cholera.

In France ergotin became the fashion, and appears to have been regarded about that time as a panacea for the majority of ills. It was exhibited in the form of ergotin dragees, ergotin injections, ergotin lemonade, which was recommended for scurvy, and in many other forms.

The first approach toward the isolation of a pure active principle from ergot was made by Tanret, who in 1875 described the crystalline alkaloid "ergotinine," and an amorphous alkaloid which he regarded as a mere physical modification of the crystalline. Independently and almost simultaneously, Kraft also isolated the amorphous alkaloid, and by naming it hydro-ergotinine, suggested its relation to the crystalline ergotinine.

Tanret
isolates
ergotinine

According to Kobert's investigations, in 1890, the most active constituent of ergot is cornutine, which, together with sphacelinic acid, is contained in an alkaloid extract after the removal of oil by ether. He also stated that no aqueous extract of ergot is of any therapeutic value after being made nine months, but Kobert's observations were not only questioned, but totally contradicted by Tanret.

Kobert's
cornutine

According to Keller's investigation, in 1896, ergot contained but one base, and Kobert's cornutine, Tanret's ergotinine, and Dragendorff and Podwyssotski's picrosclerotine were simply different forms of the same body.

Keller's ob-
servations

In 1897, Jacoby gave the name of sphacelotoxin to a substance of a resinous nature which he obtained from ergot, and which he regarded as a specifically active constituent of the drug.

Although a good deal of clinical evidence was adduced to support Tanret's view that in ergotinine he had isolated the active therapeutic principle of ergot, the experiments conducted by Kobert and others showed the pure crystalline alkaloid to be inert. Recently this apparent discrepancy has been explained by the isolation by Barger and Carr, in the Wellcome Physiological Research Laboratory, of the highly active alkaloid, ergotoxine, which, although itself amorphous, can, in the form of its crystalline salts, be prepared in a state of chemical purity. It has since been shown that ergotoxine is the hydrate of Tanret's crystalline ergotinine, and that either can easily be converted into the other, and also that the active principles prepared both by Kobert and Jacobj, owe their activity to the presence in them of ergotoxine.

Ergotoxine discovered in the Wellcome Physiological Research Laboratory

Both laboratory experiment and the results of clinical trial have already made it evident that ergotoxine in suitable doses produces the effects for which ergot is prescribed.

The great value, however, of this principle as a medicinal agent is due to the fact that the dose can be regulated with a degree of accuracy which has been impossible in the past when only extracts and similar preparations of the crude drug were available.

Its great value as a medicinal agent

The results obtained with the official liquid extract, and with other preparations of ergot hitherto in use, have been variable and uncertain. This has been due to ignorance of the properties and active constituents of the drug, which has of necessity prevented the elaboration of correct pharmaceutical methods.

Unreliability of former crude preparations

The isolation of the active alkaloid ergotoxine now renders possible, for the first time, the production of an ergot preparation of definite strength. A chemical

method of standardising such a product has not yet been devised, but the activity, as represented by the ergotoxine content, can be gauged with extreme accuracy by physiological tests.

Various methods of physiologically standardising ergot have been suggested. The production of gangrene in the cock's comb, described by various observers since the seventeenth century, has been used as a test of activity. This test tells little more than that a certain specimen of ergot is or is not active. No accurate standardisation of pharmacological or therapeutic value is possible by means of this test.

The rise of blood-pressure following the intravenous injection of a standard dose of ergot is also suggested as an indication of activity. Such a method alone is neither accurate nor complete. It furnishes at most a rough test of the activity of such a preparation as the official liquid extract.

Preparations containing ergotoxine can, however, be accurately assayed, by physiological means, for their ergotoxine content. This is rendered possible by observation of the characteristic action of the alkaloid on the terminal motor elements of the sympathetic nervous system.

The importance of this is evident. The activity of ordinary preparations cannot be gauged. Different specimens have been shown to vary from inertness to an activity which is believed to be the cause of the sporadic cases of ergot-gangrene which have been reported as following medicinal doses.

With the discovery of ergotoxine, and the consequent improvement in preparations, the confidence of the practitioner in ergot is restored. He is now able to prescribe a standardised product of exact strength, in accurate doses, and obtain definite results.

Accurate
standardi-
sation
impossible
by old
methods

Importance
of
ergotoxine
to the
physician

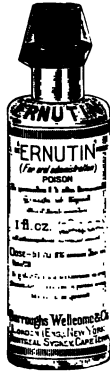
A CHRONOLOGICAL TABLE OF THE CHIEF EVENTS
IN THE HISTORY OF ERGOT

B. C.	
2500	Probable allusion to ergot on Babylonian tablet.
660	Probable allusion to ergot on Assyrian tablet.
300 ca.	Probable allusion to ergot in the Hindu Yasna.
A. D.	
857 ca.	First recorded epidemic of ergotism.
944	Epidemic of ergotism in Aquitaine, Limousin, Angoumois and Perigord.
950	Allusion to the poisonous properties of ergot made by Abu Mausur Muwaffak.
957	Epidemic of ergotism in Paris.
1039	Epidemic of ergotism in Metz.
1089	Epidemic of ergotism in Lorraine.
1096	Siebert records an epidemic following the consumption of damaged crops.
1129	Epidemic of ergotism in Paris.
1582	Lonicer alludes to ergot, describes its appearance in the ears of rye, and first notes its uterine properties.
1588	Thallius describes ergot and mentions its hæmostatic properties.
1596	First suggestion that ergot was probably the cause of the epidemics of <i>ignis sacer</i> .
1630	Thuillier calls attention to the fact that ergot was the cause of the epidemics.
1648-75	Ergotism prevalent in Voigtland.
1660-74	Ergotism prevalent in Aquitaine, Gattinain and the Sologne.
1682	Bernier notes the fact that ergot was the cause of dangerous diseases in the Sologne.
1688	Camerarius records the medicinal use of ergot by women.
1693	Ray describes the growth of ergot and alludes to its medicinal effects.
1702	Epidemic of ergotism in Freiburg.
1709	Epidemic of ergotism in Berne, Lucerne and Zurich.
1710	Epidemic of ergotism in Russia.
1716	Ergotism prevalent in Saxony and Lusatia.
1717	Epidemic of ergotism in Germany and Silesia.
1746-7	Severe outbreaks of ergotism in Sweden, Russia, Sologne, Les Landes, Artois and Flanders.
1747	Rathlauw stated to have used ergot in midwifery practice.
1762	A case of ergotism in England.
1771	The identity of <i>ignis sacer</i> with gangrenous ergotism established.
1774	Parmentier investigates ergot.
1785	Epidemic of ergotism in Kief.
1807	Stearns publishes his experience of the use of ergot in America.
1814	Pettenkofer makes a chemical examination of ergot.
1816	Vanguelin makes a chemical examination of ergot.
1831	Wiggers describes a resin which he terms "ergotin."
1840	Bonjean investigates ergot and extracts oil of ergot and ergotin.
1845	Outbreak of ergotism in Russia.
1875	Tanret describes ergotinine, and Kraft isolates hydro-ergotinine.
1890	Kobert investigates ergot and isolates cornutine and sphacelinic acid.
1896	Keller investigates ergot.
1897	Jacobj isolates sphacelotoxin.
1907	Barger and Carr discover ergotoxine.



TRADE MARK 'ERNUTIN' BRAND PRODUCTS
Present the active therapeutic principles of Ergot

THE various extracts and preparations of ergot in ordinary use consist almost entirely of inert or harmful matters having little or none of the therapeutic action desired. Those preparations which exhibit the characteristic effects of ergot on the blood-pressure and the uterus, in laboratory experiment or clinical use, owe their activity to certain specific active principles, the effect of which is in such preparations obscured and complicated by the depressor constituents.



'Ernutin'
for oral use

'ERNUTIN' products present the active therapeutic principles of ergot, chief of which is the alkaloid ergotoxine, in a state of purity which hitherto has never been approached. The action of ergotoxine on the sympathetic nervous system, as indicated by H. H. Dale in his papers on this subject (*Journal of Physiology*, vol. xxxii. p. 58 [*Proc. Phys. Soc.*, 1905]; vol. xxxiv. p. 163, 1906), affords a standard for the measurement of activity. 'Ernutin' products are physiologically standardised by observation of the effects on the vasomotor functions of the sympathetic nervous system.

Method of
standardisation

'Ernutin' (Oral) is issued in 1 oz. and 30 c.c. bottles

'ERNUTIN' (HYPODERMIC) is issued in boxes containing six hermetically-sealed phials of min. 10 and 0.6 c.c., and, being sterile, is eminently suitable for hypodermic or intra-muscular injection. The action of 'Ernutin' is of great value in cases of post-partum hæmorrhage, and it has shown its efficiency in cases in which, following the administration of chloroform, the hæmorrhage has been troublesome.



'Ernutin' Hypodermic
Box of six phials
Measurements, $2\frac{1}{2} \times 1\frac{1}{2} \times 1\frac{1}{4}$ in.

For hypodermic or intra-muscular injection

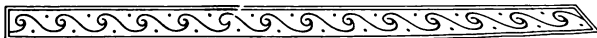
prevent the recurrent hæmorrhage which has been described as occurring as a result of anæsthetisation with chloroform for post-partum operations. When an immediate effect is desired, intra-muscular injection is preferred.

As 'ERNUTIN' (HYPODERMIC) is a very potent preparation, its administration must be carefully guarded. It is suggested that the initial dose be five minims, and that any subsequent dose required should depend upon the ascertained reaction of the patient.

'Ernutin' preparations should be protected from light

(See also page 108)

For full particulars of the pharmacology and therapeutics of 'Ernutin,' see special booklet





MILITARY MEDICINE CHEST—1588

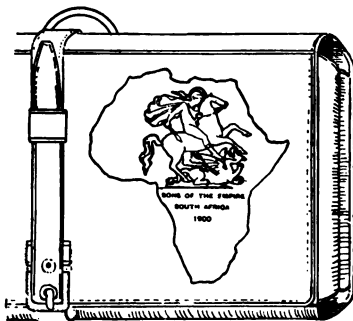
Fabricius, a noted Swiss physician of the XVI. century, recommended that the military chest should be furnished with no less than 362 varieties of medicine, some of which contained as many as 64 ingredients. The complexity of arrangement, the huge bulk and great weight, the liability to breakage, and the complicated inconvenience of medicine chests persisted until the introduction of 'Tabloid' Medical Equipments.



HISTORICAL MEDICAL EQUIPMENTS

IN the middle ages, owing to the great variety and bulky nature of the remedial agents used, the medicine chests employed in military campaigns assumed enormous proportions, and it was not until the middle of the nineteenth century that progress was made towards reducing the bulk of campaigning medical outfits. Even in the twentieth century, owing to the large doses of liquid medicine employed, medicine chests had to be either of enormous and unwieldy size or,

**Bulky yet
inadequate
equipments**



One of the 'TABLOID' BRAND MEDICINE CASES specially designed for, and supplied to, the troops from the various British Colonies, for use in the South African Campaign.

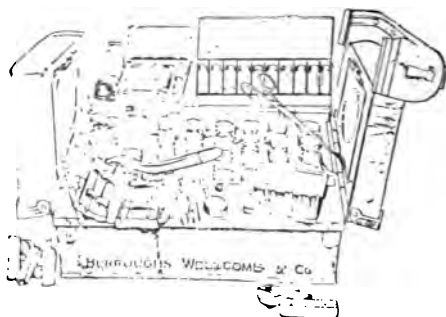
if small, they could contain only the most meagre supplies. Medical equipments of the present day have been improved in two distinct directions—diminished bulk and purity and efficacy of content.

Early explorers, particularly in Africa, found the

difficulties of procuring suitable portable medical supplies practically insuperable, and the horrors of disease and death associated with their expeditions were almost beyond description.

When I think [said the late Sir H. M. STANLEY, in the course of one of his lectures] of the dreadful mortality of Capt. TUCKER'S expedition in 1816, of the NIGER Expedition in 1841, of the sufferings of BURTON and SIEKEL, and of my own first two expeditions, I am amazed to find that much of the mortality and sickness was due to the crude way in which medicines were supplied to travellers. The very recollection causes me to shudder.

Early
expeditions.
Mortality
due to
crude
medicine



One of the 'TABLOID' BRAND MEDICINE CHESTS carried by the late Sir H. M. STANLEY through "Darkest Africa," and brought back, after three years' journey, with the remaining contents unimpaired.

That a very marked change has taken place can be gathered from a more recent speech of this eminent explorer, in which he said:—

In my early expeditions into Africa, there was one secret wish which endured with me always, and that was to ameliorate the miseries of African explorers. How it was to be done I knew not; who was to do it, I did not know. But I made the acquaintance of Messrs. BURROUGHS WELLCOME & CO. As soon as I came in sight of their preparations and their works, I found the consummation of my secret wish. On my later expeditions I had

B.W. & Co.
solved the
problem

all the medicines that were required for my black men, as well as my white men, beautifully prepared, and in most elegant fashion arranged in the smallest medicine chest it was ever my lot to carry into Africa.

In his books, *Founding the Congo Free State* and *In Darkest Africa*, the late Sir H. M. STANLEY wrote in the very highest terms of 'Tabloid' Medical Equipments.

Amongst other cases used during STANLEY's travels, is the famous "Rear-Guard" 'Tabloid' Medicine Chest, which remained in the swampy forest regions of the Aruwihimi for nearly four years, and more than once was actually submerged in the river. When it was brought back to London, the remaining contents were tested by the official analyst of *The Lancet* (London, Eng.), who reported that the 'Tabloid' medicaments had perfectly preserved their efficacy.

Contents of Stanley's "Rear-Guard" Chest tested by "The Lancet"

The late Surgeon-Major PARKE, Stanley's Medical Officer, in his *Guide to Health in Africa*, writes:—

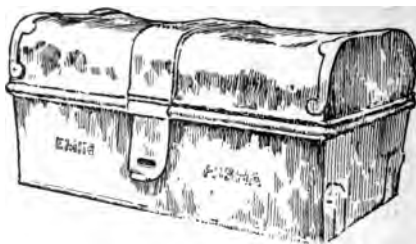
The medicinal preparations which I have throughout recommended are those of BURROUGHS WELLCOME & Co., as I have found, after a varied experience of the different forms in which drugs are prepared for foreign use, that there are none which can compare with them ['Tabloid' products] for convenience of portability in transit, and for unfailing reliability in strength of doses after prolonged exposure.

"None can compare for unfailing reliability, portability and convenience"

At this point it is of interest to turn to the 'Tabloid' Medicine Chest, here illustrated, which was discovered near Kenia, in the Aruwihimi Dwarf Country. It was the last case supplied to EMIN PASHA, GORDON's Governor of the Equatorial Sudan. It was taken by Arabs when he was massacred in 1892, and was recaptured by BARON DHANIS, Commandant of the Congo Free State troops, after the battle of Kasongo. This chest was subsequently stolen by natives, and

Emin Pasha

finally recovered by an officer of the Congo Free State, and returned to BURROUGHS WELLCOME & Co.



EMIN PASHA'S 'TABLOID' BRAND MEDICINE CHEST

The following is a copy of EMIN PASHA's letter written to BURROUGHS WELLCOME & Co. on receiving the chest :—

Gentlemen,—I found the medicine chest you forwarded me fully stocked. I need not tell you that its very completeness made bound my heart. Articles like those could not be made but at the hand of the greatest artists in their own department. If any one relieved from intense pain pours out his blessings, they will come home to you.

I should like to expatiate somewhat longer on the intrinsic value, but sickness preventing me to do so. I wish you to believe me,

Yours very faithfully

Dr Emin Pasha

A history of all the 'Tabloid' Equipments associated with African exploration would, of itself, make a large volume, and it is only possible to make brief mention of a few other instances of their use.

That 'TABLOID' EQUIPMENTS excel for military purposes has been abundantly demonstrated during various British and foreign military campaigns. The following is an extract from the **Official Government Report**, made by the **CHIEF MEDICAL OFFICER** of the last **BRITISH**

**Military
expeditions**

MILITARY EXPEDITION to ASHANTI, on the 'Tabloid' Brand Medical Equipment which was supplied by BURROUGHS WELLCOME & CO.:—

The supply of medicines, both as to quality and quantity, left nothing to be desired. There was no scarcity of anything. The 'Tabloid' medicines were found to be most convenient and of excellent quality. To be able to take out at once the required dose of any medicine, without having to weigh or measure it, is a convenience that cannot be expressed in words. Time is saved to an extent that can hardly be realised, and so is space, for a fitted dispensary, or even a dispensary table is unnecessary. The quality of medicines was so good that no other should be taken into the field. The cases supplied are almost ideal ones for the Government. They are light, yet strong, and the arrangement of the materials and medicines is as nearly perfect as possible.

No delay to weigh or measure

Quality so good, no other should be taken into the field

It is instructive to compare the experience of this expedition with that of the WOLSELEY ASHANTI EXPEDITION of 1873, fitted out according to old-time methods. The suffering and loss of life were then terrible, for want of suitable medical equipments.

Without exception, 'Tabloid' Medical Equipments have been used in all the campaigns of the last twenty-five years, and have played an important part in combating the diseases which seem inseparable from an army in the field.

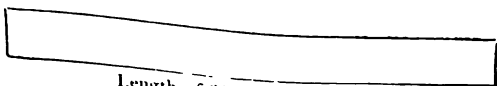
During the American war with Spain, in Cuba and the Philippines, 'Tabloid' Medical Equipments were specially ordered for, and used by, the U. S. Army and Navy.

The expedition which, under the command of LORD KITCHENER, defeated the Khalifa and reconquered the Sudan, was supplied with 'Tabloid' Medical Equipments.

An illustration of one of the 'Tabloid' Medical Equipments specially designed for, and supplied to,



Size of one product of 'Tabloid'
Cinchona Tincture, min. 30

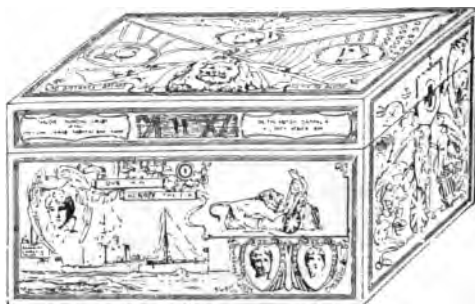


Length of 30 min. tube of same
diameter as 'Tabloid' product

the British Colonial Forces for use in the recent South African Campaign will be found on *page 65* Similar cases were designed for, and supplied to, the CITY OF LONDON IMPERIAL VOLUNTEERS and the IMPERIAL YEOMANRY.

The equipment of the American Hospital Ship *Maine* and the valuable services it rendered in connection with the campaigns in South Africa and in China, are so recent as to be within the memory of all. The whole of the medical outfit was supplied by BURROUGHS WELLCOME & Co.

Hospital
Ship
"Maine"



One of the 'TABLOID' BRAND MEDICINE CHESTS specially designed for, and supplied to, the Hospital Ship *Maine*.

Referring to this equipment, *The Lancet* (London, Eng.) reported:—

The whole of the medical outfit has been supplied by Messrs. Burroughs Wellcome & Co. One of the medicine

chests supplied by this firm is in tooled leather, designed by Mr. Henry S. Wellcome.

The following description of this case may be of interest :—

The chest is made of oak covered with Carthaginian cowhide, tooled by hand, with chaste designs successfully representing in allegory the alliance of Great Britain and America in the succour of the wounded. On the top panel appear the Union Jack and the Stars and Stripes entwined, portraits of Queen Victoria, George Washington and President McKinley, also representations of the British Lion and American Eagle. The front panel bears portraits of Lady Randolph Churchill (Mrs. George Cornwallis-West), the hon. secretary and the hon. treasurer of the fund ; a picture of the ship itself ; a scene representing the British Lion, wounded by an arrow which lies at his side, being ministered to by Britannia and Columbia. A frieze is formed by a representation of an American Indian wampum, upon which Brother Jonathan and John Bull are depicted hand-in-hand. The panel at each end of the chest represents Britannia and Columbia supporting a banner bearing the Red Cross, and on the panel at the back the British Regular and Colonial Lancers are shown charging a Boer force. Keble's line, " No distance breaks the tie of blood," and Bayard's phrase, " Our kin across the sea," are inscribed on the chest. This beautiful cabinet contains a number of smaller cases fitted with 'Tabloid' and 'Soloid' products and 'Tabloid' Hypodermic Outfits, and is in itself a compact and complete dispensary.

In the hitherto unsuccessful endeavours to reach the Poles, and in the exploration of Arctic and Antarctic lands, 'Tabloid' Medicine Chests Arctic exploration have taken a pioneer position, and continue to hold supremacy.

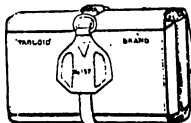
The 'Tabloid' Belts and other Medical Equipments supplied to NANSEN for his journey in the *Fram*, and those used by the JACKSON-HARMSWORTH ARCTIC



One of the 'TABLOID' BRAND MEDICINE BELTS carried by NANSEN on his Arctic Expedition.

EXPEDITION, have been added to the historic collection of BURROUGHS WELLCOME & Co.

The ITALIAN ARCTIC EXPEDITION, commanded by the DUKE OF THE ABRUZZI, found that, despite the fact that the northern latitude of $86^{\circ} 33' 49''$ was reached, the 'Tabloid' Medicine Chests and Cases with which the expedition was equipped were brought back with their remaining contents quite unaffected by the rigour of the climate.



One of the 'TABLOID' BRAND MEDICINE CASES carried by the DUKE OF THE ABRUZZI's Polar Expedition.

COMMANDER PEARY, to whose record stands the achievement of reaching the farthest northern latitude, writing from Etah, Greenland, reports:—

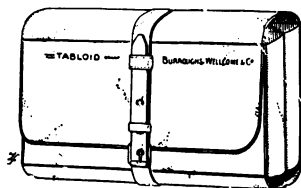
Burroughs Wellcome & Co. 'Tabloid' Medicine Cases and supplies have proven invaluable.



One of the 'TABLOID' BRAND MEDICINE CHESTS used by COMMANDER R. E. PEARY

The entire medical outfit of the National Antarctic Expedition was furnished by Burroughs Wellcome & Co., and on the return of the *Discovery*, with the members of the expedition on board, the medical officer made a highly satisfactory report on the 'Tabloid' Medical Equipment.

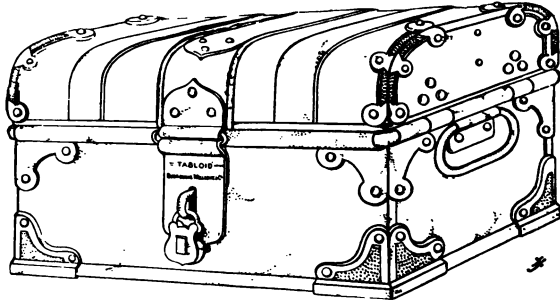
In August, 1901, the *Discovery* left England, and in the following January crossed the limit of the Antarctic



One of the 'TABLOID' BRAND MEDICINE CASES carried by the National Antarctic Expedition.

Circle. Having passed the farthest eastward point attained by Ross sixty years before, the explorers

discovered a new land, which they named King Edward VII Land. One of the most noteworthy



One of the 'TABLOID' BRAND MEDICINE CHESTS carried by the National Antarctic Expedition.

features of the expedition was the arduous sledge journey undertaken by the commander, Captain SCOTT, accompanied by Lieutenant SHACKLETON and Dr. WILSON. This journey over the ice occupied three months, and the record latitude of $82^{\circ} 17'$ South was reached.

On sledge journeys the question of weight is of great moment. The traveller, on such occasions, must carry but the barest necessities, and of these the lightest procurable. The medicine chest is an important item, for upon the efficacy of its contents the lives of the explorers may depend. Every drug carried must be of the utmost reliability, in the most compact state, and capable of withstanding an extremely low temperature.

That 'Tabloid' Medical Equipments fulfil all requirements has been proved again and again. They enable the traveller to carry a comparatively large supply of medicines, and may be used under conditions which

would render the carriage and administration of ordinary preparations impossible.

To the enthusiasm of Sir CLEMENTS MARKHAM, K.C.B., then President of the Royal Geographical Society, the successful organisation of the expedition is largely due. Referring to the 'Tabloid' Medical Equipment of the *Discovery*, he reports:—

National Antarctic Expedition

1, Savile Row,

Burlington Gardens, W.

The Medical Equipment of the Exploring Ship of the National Antarctic Expedition was entirely supplied by Messrs Burroughs, Wellcome & Co., and, proved in every way most satisfactory.

The few other drugs and preparations which were taken with the Expedition were only supplied for purposes of experiment, and, can in no way be regarded as part of the medical equipment.

Clements Markham

27. April 1905



S.S. "DISCOVERY"
NATIONAL ANTARCTIC EXPEDITION
The entire medical equipment of this Expedition was
furnished by Burroughs Wellcome & Co.

DR. KÆTTLITZ, the Senior Medical Officer to the expedition, reports:—

Discovery ANTARCTIC EXPEDITION

The Medical Equipment of the *Discovery* Exploring Ship, of the National Antarctic Expedition, was entirely supplied by Messrs. Burroughs Wellcome & Co., mostly in the form of 'Tabloid,' 'Soloid' and 'Enule' preparations.

The preparations proved, in every way, most satisfactory, and there was no deterioration of any of them, in spite of the conditions of climate and temperature to which they were exposed. The few other drugs and preparations which were taken with the expedition were only taken for purposes of experiment.

The cases supplied by Burroughs Wellcome & Co. to us have also been found satisfactory; the small leather one was very useful upon sledge journeys, being light and compact. The No. 250 'Tabloid' Case was used for some weeks at the camp eleven miles north of the ship, when the whole ship's company was engaged in sawing and blasting the ice, and it was found very convenient.

The other cases were useful in our cabins, etc., for a handy supply.

Reinold Kættitz

The relief ship *Morning* was also provided with a 'Tabloid' Medical Equipment, and the Medical Officer, Dr. GEORGE DAVIDSON, sends the following report:—

ANTARCTIC RELIEF SHIP *Morning*

I wish very heartily to express my perfect satisfaction with the medical equipment which was supplied to the Antarctic Relief Ship *Morning* by Burroughs Wellcome & Co. When I say that it was compact, yet complete, that everything was just to hand, that during a period of two years and three months I was never at a loss to find just the medicine

I wanted, and that without delay, I need say no more to emphasise the extraordinary convenience which a 'Tabloid' and 'Soloid' outfit is to a ship such as ours, whether at sea or in the ice. I found the 'Tabloid' and 'Soloid' products to remain unchanged throughout the whole period of my commission, and to equal in efficacy the best medical preparations I have yet had occasion to use. It is impossible to realise without experience how much can be condensed by this mode of exhibition in a very small space. I strongly advise all intending explorers to betake themselves to Burroughs Wellcome & Co. for their medical equipment, and they will not be disappointed.

George A. Davidson

From Dr. EDWARD WILSON, also, who was in charge of some of the sledge journeys from the *Discovery*, the following report has been received:—

Discovery ANTARCTIC EXPEDITION

Though there was but little serious illness on the *Discovery* during the recent Antarctic Expedition, the 'Tabloid' preparations and the cases were put to a fairly rigorous test, not only in the ship, but on the various sledge journeys that were undertaken, during which they experienced temperatures as low as 68° below zero, and much rough handling, without any loss in efficiency and usefulness. Certain of the 'Tabloid' Ophthalmics were freely used for snow blindness, and were found to be most convenient.

Edward A. Wilson .

Mr. JULIUS PRICE, the special artist and correspondent of the *Illustrated London News*, reports that he carried his 'Tabloid' Medicine Case over 30,000 miles through Arctic regions, across Siberia, through China, Japan and America. Despite the severe wear and tear of this great journey, the case has suffered little, and the remaining contents are quite unaffected by exposure to every variety of climate.

30,000 miles.
Arid desert
and humid
swamps.
Extreme
heat and
cold

Two typical reports on 'Tabloid' Equipments are appended:—

Extract from the report of R. F. RAND, Esq., M.D., F.R.C.S., Principal Medical Officer, British South Africa Company:—

We have had Burroughs Wellcome & Co.'s 'Congo' Chests, fitted with 'Tabloid' medicines, in daily use during the occupation of this country. They have proved of inestimable service.

Extract from the report of the late W. H. CROSSE, M.D., M.R.C.S., Principal Medical Officer, British Royal Niger Company:—

All these 'Tabloid' drugs are so good it is impossible for me to speak more highly of one than another. They are all of the very best quality, each drug is accurately described, and reliable. To the traveller these preparations are simply invaluable, and I would strongly advise every one coming out to the Tropics to get a full supply of 'Tabloid' medicines.

BURROUGHS WELLCOME & Co. have for many years made a special study of the requirements of travellers and expeditions, not only in respect of compactness, portability and permanence, but also in the selection of remedies necessary to combat the maladies prevalent in every clime, from the Arctic to the Antarctic.

Study of medicines suitable for every climate

'Tabloid' Brand Medicine Cases contain, in a small space, a complete outfit of pure drugs in doses of extreme accuracy. They can be carried in the pocket, in the carriage or motor-car, or on the cycle, their contents being always ready for use in emergencies. They are specially valuable to the country practitioner, who is often called upon to cover long distances, and who would experience great difficulty in carrying or obtaining supplies of such medicines as he may desire to administer promptly, were it not for the convenience and portability of 'Tabloid' Brand Medicine Cases.

Emergency Cases for pocket, cycle, motor or carriage



THE SMALLEST MEDICINE CHEST IN THE WORLD

This tiny gold medicine chest is fitted with twelve square medicine chest bottles containing 300 doses of 'Tabloid' Brand Medicaments, equivalent to 15 pints of fluid medicine.

HYPODERMIC POCKET-CASES 'TABLOID' BRAND

[B. W. & Co.]

Special Designs, the property of Burroughs Wellcome & Co.

The word 'Tabloid' is a brand which designates fine products issued by Burroughs Wellcome & Co. This brand should always be specified when ordering.

'Tabloid' Hypodermic Pocket-Cases provide complete armamentaria for hypodermic work. Primarily intended for emergency purposes, such essentials as compactness and convenience in use have received the fullest attention, and with unique result. A full equipment of hypodermic drugs of utmost reliability and accuracy of dosage, together with syringe and needles, may, by means of a 'Tabloid' Hypodermic Outfit, be carried easily in the waistcoat pocket.

For the
waistcoat
pocket

Hypodermic 'Tabloid' Brand Pocket-Cases are prepared in gold, silver, gun-metal, nickel-plated metal, or aluminium, and in a great variety of fancy leathers. Each contains a B. W. & Co. Hypodermic Syringe with needles, and from five to fifteen tubes of 'Tabloid' Brand Hypodermic products, etc.

NO. 7. HYPODERMIC 'TABLOID' BRAND POCKET-CASE



No. 7. HYPODERMIC 'TABLOID' BRAND
POCKET-CASE

Measurements, $3\frac{1}{2} \times 3\frac{1}{2} \times \frac{3}{4}$ in.

With special detachable aseptic frame of novel design, and revolving rack (nickel-plated). Fitted with twelve tubes of 'Tabloid' Hypodermic products, nickel-plated syringe, one exploring and two regular steel needles. This case, after the removal of the tubes of Hypodermic products, may be sterilised with ease. In Gun-metal, Aluminium, or Silver.

NO. 9. ASEPTIC HYPODERMIC 'TABLOID' BRAND POCKET-CASE



NO. 9. ASEPTIC HYPODERMIC 'TABLOID' BRAND POCKET-CASE

Measurements, $3\frac{1}{2} \times 1\frac{3}{4} \times \frac{3}{4}$ in.

In nickel-plated metal. Fitted with the B. W. & Co. All-Glass Aseptic Hypodermic Syringe with detachable nickel-plated finger-grip, and two regular steel needles enclosed in a protective tube. A hinged rack carries eight tubes of 'Tabloid' Hypodermic products. Complete in doeskin cover.

NO. 10. ASEPTIC HYPODERMIC 'TABLOID' BRAND POCKET-CASE



NO. 10. ASEPTIC HYPODERMIC 'TABLOID' BRAND POCKET-CASE

Measurements, $2\frac{1}{2} \times 1\frac{3}{8} \times \frac{3}{8}$ in.

This case is a model of compact completeness. It is made of nickel-plated metal, each edge and corner being smoothly rounded. It contains the B. W. & Co. All-Glass Aseptic Hypodermic Syringe, with detachable nickel-plated finger-grip, and two regular steel needles enclosed in a protective tube. Each part of the syringe is separately held in a holdfast clip. The tubes of 'Tabloid' Hypodermic products, five in number, are carried in a hinged rack, which securely holds them when the case is closed, and which, when swung outwards, allows of the easy withdrawal of the desired tube. Complete in doeskin cover.

NO. 21. HYPODERMIC 'TABLOID' BRAND POCKET-CASE

Measurements, $4 \times 3\frac{1}{2} \times 1\frac{1}{2}$ in. Fitted with nine tubes of 'Tabloid' Hypodermic products, nickel-plated hypodermic syringe with two steel needles, a small phial, glass-stoppered and capped, for sterilised water, capsule of ether, etc. In Morocco and other fine leathers.

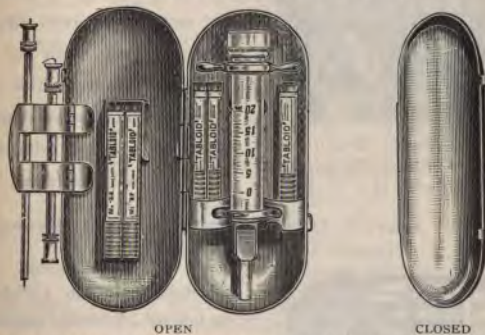
NO. 23. ASEPTIC HYPODERMIC 'TABLOID' BRAND
POCKET-CASE



NO. 23. ASEPTIC HYPODERMIC 'TABLOID' BRAND POCKET-CASE
Measurements, $3\frac{1}{2} \times 3\frac{1}{2} \times \frac{3}{4}$ in.

In Gun-metal, Aluminium, or Silver, with special detachable nickel-plated aseptic frame and revolving rack. Contents same as those of No. 21 Case, with the addition of a steel exploring needle. This case, after the removal of the tubes of 'Tabloid' Hypodermic products, may be sterilised with ease.

NO. 32. ASEPTIC HYPODERMIC 'TABLOID' BRAND
POCKET-CASE (The Mussel Shell)



NO. 32. ASEPTIC HYPODERMIC 'TABLOID' BRAND POCKET-CASE
(The Mussel Shell)
Measurements, $3\frac{3}{4} \times 1\frac{3}{4} \times \frac{3}{4}$ in.

Made of nickel-plated metal, occupies very little space, and is conveniently shaped for the pocket. Fitted with nickel-plated hypodermic syringe, one exploring and two regular steel needles, and five tubes of 'Tabloid' Hypodermic products. This case is also supplied fitted with the B. W. & Co. All-Glass Aseptic Hypodermic Syringe, etc., (as illustrated) but without 'Tabloid' Hypodermic products. Complete in leather or deskin cover. Also made in Silver, and can be fitted with silver-framed syringe.

OPHTHALMIC POCKET-CASES 'TABLOID' BRAND

[B. W. & Co.]

Special Designs, the property of Burroughs Wellcome & Co.

The word 'Tabloid' is a brand which designates fine products issued by Burroughs Wellcome & Co. This brand should always be specified when ordering.

'Tabloid' Ophthalmic Pocket-Cases are the most compact and complete equipments for ophthalmic work. In a space of two or three cubic inches they contain supplies of active and accurately-divided ophthalmic drugs, solution dropper, camel-hair brushes, etc.

Width of
two fingers

NO. 91. ASEPTIC OPHTHALMIC 'TABLOID' BRAND POCKET-CASE



No. 91. ASEPTIC OPHTHALMIC
'TABLOID' BRAND POCKET-CASE

Measurements, $2\frac{1}{4} \times 1\frac{1}{4} \times \frac{3}{8}$ in.

In nickel-plated metal. Fitted with nine tubes of 'Tabloid' and 'Soloid' Ophthalmic products, in nickel-plated rack, solution dropper, mortar, pestle and two camel-hair brushes. This case, after the removal of the contents, may be sterilised with ease. Complete in doeskin cover.

NO. 92. ASEPTIC OPHTHALMIC 'TABLOID' BRAND POCKET-CASE (The Mussel Shell)



No. 92. ASEPTIC OPHTHALMIC
'TABLOID' BRAND POCKET-CASE
(The Mussel Shell)

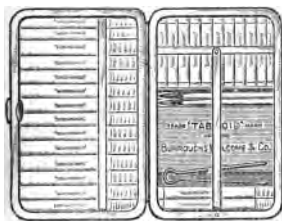
Measurements, $2\frac{1}{2} \times 1\frac{1}{2} \times \frac{3}{8}$ in.

In nickel-plated metal. Fitted with seven tubes of 'Tabloid' Ophthalmic products, mortar, pestle, vulcanite rod, solution dropper and two camel-hair pencils. Enclosed in a doeskin cover. The shape and size of this case make it specially suitable for carrying in the waistcoat pocket. After removal of the contents, the case can be readily sterilised.

HYPODERMIC AND OPHTHALMIC
POCKET-CASES
'TABLOID' BRAND
[B. W. & Co.]

NO. 80. HYPODERMIC AND OPHTHALMIC 'TABLOID' BRAND
POCKET-CASE

(The "British Army Regulation")



NO. 80. HYPODERMIC AND OPHTHALMIC 'TABLOID' BRAND POCKET-CASE
(The "British Army Regulation")

Measurements. $\frac{3}{4} \times 2\frac{1}{4} \times \frac{1}{2}$ in.

In Aluminium. Contains sixteen tubes of 'Tabloid' Hypodermic products, eleven tubes of 'Tabloid' Ophthalmic products, two camel-hair brushes, a pair of minute forceps, and a booklet giving a summary of the chief uses of the products. Being easily carried in the waistcoat pocket, this case is extremely well adapted for emergency use.



MEDICINE POCKET-CASES
'TABLOID' BRAND
[B. W. & Co.]

Special Designs, the property of Burroughs Wellcome & Co.

The word 'Tabloid' is a brand which designates fine products issued by Burroughs Wellcome & Co. This brand should always be specified when ordering.

'Tabloid' Medicine Pocket-Cases are compact equipments of pure, active drugs, divided, ready for administration, into accurate doses. They enable physicians to have always with them an equipment of reliable medicines specially for emergency use. 'Tabloid' Pocket-Cases are recognised as an essential in the physician's equipment for country districts and when travelling.

For
emergen-
cies

NO. 115. 'TABLOID' BRAND MEDICINE POCKET-CASE



NO. 115. 'TABLOID' BRAND MEDICINE POCKET-CASE

Measurements, $8\frac{1}{2} \times 3\frac{1}{2} \times 1\frac{1}{2}$ in.

Contains ten $\frac{1}{2}$ oz. phials filled with 'Tabloid' Brand products, etc. In Seal, Pigskin, Cowhide, Morocco and other fine leathers.

NO. 117. 'TABLOID' BRAND MEDICINE POCKET-CASE



NO. 117. 'TABLOID' BRAND MEDICINE POCKET-CASE

Measurements, $7\frac{1}{2} \times 4 \times 3$ in.

This case is somewhat larger and more comprehensive than the No. 115 Case. It contains sixteen $\frac{1}{2}$ oz. phials of 'Tabloid' Brand products, etc. In Cowhide, Pigskin, Crocodile, Morocco and other fine leathers.

NO. 124. 'TABLOID' BRAND MEDICINE POCKET-CASE



NO. 124. 'TABLOID' BRAND MEDICINE POCKET-CASE

Measurements, $5\frac{1}{2} \times 4 \times 1\frac{1}{2}$ in.

Fitted with from sixteen to twenty-four tubes of 'Tabloid' Brand products, according to size of products. In Seal, Crocodile, Morocco and other fine leathers. This case was specially designed for conveniently carrying in the breast pocket, on ordinary occasions, a stock of medicines sufficient to meet a variety of circumstances.

NO. 125. 'TABLOID' BRAND MEDICINE POCKET-CASE



NO. 125. 'TABLOID' BRAND MEDICINE POCKET-CASE

Measurements, $5\frac{1}{2} \times 4 \times 1\frac{1}{2}$ in.

Specially fitted for emergency purposes with fourteen tubes of 'Tabloid' Brand products, and a removable tray containing an equipment of twelve tubes of 'Tabloid' Hypodermic products, B. W. & Co. nickel-plated hypodermic syringe and two regular steel needles. In Cowhide and other fine leathers.

NO. 141. 'TABLOID' BRAND MEDICINE POCKET-CASE



NO. 141. 'TABLOID' BRAND MEDICINE POCKET-CASE

Measurements, $7\frac{1}{2} \times 4 \times 2\frac{1}{2}$ in.

In Morocco leather. Fitted with fifteen $\frac{1}{2}$ oz. phials of 'Tabloid' Brand products, and a leather-covered metal compartment, containing small boxes for the physician's use in distributing the contents of the case. Similar in design to No. 117 Case.

For full particulars of these and numerous other examples, see General Price List.

CYCLE- AND CARRIAGE-CASES, MEDICAL
EQUIPMENT CHESTS, ETC.

'TABLOID' BRAND

[B. W. & Co.]

Special Designs, the property of Burroughs Wellcome & Co.

The word 'Tabloid' is a brand which designates fine products issued by Burroughs Wellcome & Co. This brand should always be specified when ordering.

'Tabloid' Cycle- and Carriage-Cases and Medical Equipment Chests contain 'Tabloid,' 'Soloid' and other fine products of B. W. & Co., minor surgical instruments and sundry emergency dressings. A great variety is prepared to meet the requirements of medical men in home practice, according to the extent and the special character of their needs. For those who cycle, cases are made in various designs, one for attaching to the handle-bar of the cycle, another for attaching to the stay-bar, and others for the pocket.

For
general
practi-
tioners

'Tabloid' Medical Equipment Chests and Cases provide complete portable dispensaries for practitioners in distant stations, missionaries, explorers and expeditions of all kinds. For such purposes they are the only really satisfactory form of medical equipment, and have been adopted universally. In addition to full supplies of accurately-dosed, permanent and reliable drugs, these equipments contain minor surgical instruments and dressings.

For
physicians,
explorers,
missions,
etc.

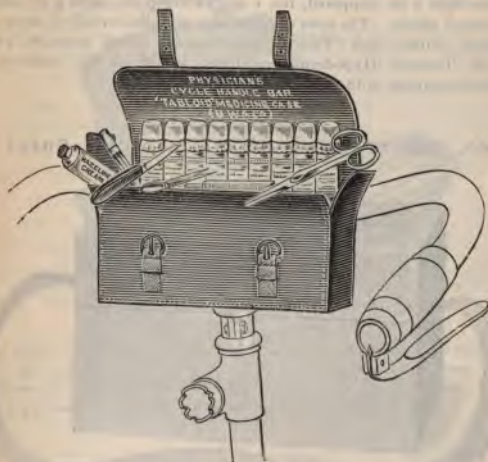
NO. 137. 'TABLOID' BRAND MEDICINE SADDLE-CASE



NO. 137. 'TABLOID' BRAND
MEDICINE SADDLE-CASE

In Cowhide or Pigskin. Measurements, $7\frac{1}{2} \times 4\frac{1}{2} \times 2\frac{1}{2}$ in. Fitted in the same way as No. 117 Case with sixteen $\frac{1}{2}$ oz. phials of 'Tabloid' Brand products, etc. (This case is also supplied fitted with feather-weight containers. No. 139 Case. Measurements, $7\frac{1}{2} \times 4\frac{1}{2} \times 2\frac{1}{2}$ in.)

NO. 200. PHYSICIAN'S CYCLE HANDLE-BAR 'TABLOID'
BRAND MEDICINE CASE



NO. 200. PHYSICIAN'S CYCLE HANDLE-BAR 'TABLOID' BRAND
MEDICINE CASE

In black enamelled Cowhide. Measurements, $8\frac{1}{2} \times 2\frac{1}{2} \times 4\frac{1}{4}$ in. Fitted complete with nine $\frac{1}{2}$ oz. phials of 'Tabloid' Brand products, minor surgical instruments and sundry emergency dressings. Weight, empty, $8\frac{1}{4}$ oz.; full, about $1\frac{1}{2}$ lb.

NO. 202. PHYSICIAN'S CYCLE STAY-BAR 'TABLOID' BRAND
MEDICINE CASE

In black enamelled Cowhide. Measurements, $10 \times 2\frac{3}{4} \times 5$ in. Fitted complete with twelve $\frac{1}{2}$ oz. phials of 'Tabloid' Brand products, minor surgical instruments and dressings. Similar in design to No. 200 Case.

NO. 209. 'TABLOID' BRAND MEDICINE CASE

In Morocco leather, Cowhide or Pigskin. Measurements, $10 \times 5 \times 6\frac{1}{2}$ in. Contains nine 1 oz., twenty-four $\frac{1}{2}$ oz. and thirteen 2 dr. phials of 'Tabloid' and 'Soloid' Brand products; medicine measure, extra pockets, and loops for instruments; twelve tubes of 'Tabloid' Hypodermic products, B. W. & Co. nickel-plated hypodermic syringe, two regular steel needles, etc.

NO. 219. 'TABLOID' BRAND MEDICINE CASE

In Morocco leather. Measurements, $13\frac{1}{2} \times 6 \times 6\frac{1}{2}$ in. Metal frame. Contains eight 2 oz. stoppered, ten 1 oz., twelve 6 dr., eight 4 dr. and ten 2 dr. corked phials. The rows of phials are arranged to fall so as to show the labels. Fitted with 'Tabloid' and 'Soloid' Brand products, twelve tubes of 'Tabloid' Hypodermic products, B. W. & Co. nickel-plated hypodermic syringe, with two regular steel needles, etc.

NO. 208. 'TABLOID' BRAND MEDICINE CHEST



NO. 208. 'TABLOID' BRAND MEDICINE CHEST

Made of dressed and varnished Raw-hide; very light, portable and durable. Measurements, $15\frac{1}{2} \times 5\frac{1}{2} \times 9$ in. Fitted with twelve 4 oz. stoppered bottles of 'Tabloid' and 'Soloid' Brand products, minor surgical instruments and dressings, etc.

A similar chest is also made in a smaller size (No. 206 Chest—as carried by Mr. Thos. Stevens). Measurements, $14\frac{1}{2} \times 4\frac{1}{2} \times 7\frac{1}{2}$ in. Fitted with twelve 2½ oz. stoppered bottles of 'Tabloid' and 'Soloid' Brand products, etc.

NO. 220. 'TABLOID' BRAND MEDICINE CASE

In Morocco or Cowhide. Measurements, $14 \times 5\frac{1}{2} \times 9\frac{1}{2}$ in. Phials arranged in tiers to display labels. Contains eight 2 oz. stoppered, twelve 1 oz., fourteen 6 dr. and sixteen 4 dr. phials of 'Tabloid' and 'Soloid' Brand products, twelve tubes of 'Tabloid' Hypodermic products, B. W. & Co. nickel-plated hypodermic syringe, two regular steel needles, *space and loops for instruments*, etc. Similar in design to No. 223 Case.

NO. 221. 'TABLOID' BRAND MEDICINE CASE



NO. 221. 'TABLOID' BRAND MEDICINE CASE

In *extra finish* Cowhide, Morocco, Crocodile or Pigskin. Measurements, $14 \times 5\frac{1}{2} \times 9\frac{1}{2}$ in. Fitted in the same way as No. 220 Case, with the addition of nine 2 dr. phials of 'Tabloid' and 'Soloid' Brand products, and a glass-stoppered and capped ether bottle.

NO. 230. 'TABLOID' BRAND MEDICINE CASE



No. 230. 'TABLOID' BRAND MEDICINE CASE

beyond the reach of professional aid. Conveniently shaped for packing in trunk or bag.

A Morocco leather or Cowhide case, which, when closed, measures $8 \times 5\frac{1}{2} \times 2\frac{1}{2}$ in. Fitted with ten phials of 'Tabloid' and 'Soloid' Brand products, minor surgical instruments and dressings.

It provides a small but very comprehensive medical and surgical outfit. The physician will find this an extremely serviceable case for a patient travelling abroad, where at times he may be

NO. 231. 'TABLOID' BRAND MEDICINE CASE
(As suggested by Sir W. MOORE)



In black japanned metal. Measurements, $10\frac{3}{4} \times 7\frac{1}{2} \times 3$ in. Contains fifteen 1 oz. corked phials, and one 4 oz. corked bottle; minor surgical instruments and dressings. Complete with 'Tabloid' Brand products, etc., as recommended in Sir W. Moore's *Manual of Family Medicine for India*.

NO. 231. 'TABLOID' BRAND MEDICINE CASE

NO. 254. 'TABLOID' BRAND MEDICINE CHEST (The Indian)



In japanned metal. Measurements, $9\frac{1}{2} \times 7 \times 6\frac{1}{2}$ in. Contains sixteen $1\frac{1}{2}$ oz. glass-stoppered bottles, and six 4 dr. phials of 'Tabloid' and 'Soloid' Brand products, instruments and tray carrying sundry dressings, etc. Weight about 12 lb. As carried by the late G. W. Steevens, the war correspondent.

NO. 254. 'TABLOID' BRAND MEDICINE CHEST
(The Indian)

NO. 227. 'TABLOID' BRAND MEDICINE CASE

In Cowhide or Pigskin. Measurements, $6\frac{1}{2} \times 3\frac{1}{4} \times 3$ in. Made of two metal cups and frames covered with leather. Arranged to contain twenty $1\frac{1}{2}$ dr., twelve 1 dr. and fourteen $\frac{1}{2}$ dr. tubes of 'Tabloid' and 'Soloid' Brand products. Weight about 2 lb. 6 oz.

NO. 229. 'TABLOID' BRAND MEDICINE CASE

Measurements, $8\frac{1}{2} \times 5\frac{1}{4} \times 3\frac{3}{4}$ in. Made of two metal cups and frames covered with Cowhide. Arranged to contain forty 4 dr. phials of 'Tabloid' and 'Soloid' Brand products. Weight about 4 lb. 13 oz.

NO. 250. 'TABLOID' BRAND MEDICINE CHEST

(As supplied to the late Sir H. M. STANLEY, EMIN PASHA, Military Expeditions, Missionaries, etc.)



NO. 250. 'TABLOID' BRAND MEDICINE CHEST

In japanned sheet-steel. Measurements, $15\frac{3}{4} \times 10\frac{1}{2} \times 8\frac{1}{4}$ in. Contains six 5 oz. and thirty $3\frac{3}{4}$ oz. glass-stoppered bottles of 'Tabloid,' 'Soloid' and other fine products of B. W. & Co., in movable teak-wood tray. The lid (in two sections) is arranged to hold supplies of 'Tabloid' Bandages and Dressings, minor surgical instruments and other accessories. Weight, when fitted, about 40 lb.

This Chest, and No. 251 Chest, are the standard equipments for large expeditions and stations.

NO. 251. 'TABLOID' BRAND MEDICINE CHEST

(As supplied to the JACKSON-HARMSWORTH POLAR EXPEDITION, THE NATIONAL ANTARCTIC EXPEDITION, etc.)

In Aluminium. Measurements, $15\frac{3}{4} \times 10\frac{1}{2} \times 8\frac{1}{4}$ in. Contains forty $3\frac{3}{4}$ oz. feather-weight bottles of 'Tabloid,' 'Soloid' and other fine products of B. W. & Co. In other respects it is fitted in the same way as the No. 250 Chest. Weight, when complete, about 27 lb.

NO. 256. 'TABLOID' BRAND MEDICINE CHEST

(As supplied to the DUKE OF THE ABRUZZI'S POLAR EXPEDITION)

In Aluminium. Measurements, $10\frac{1}{2} \times 6 \times 7\frac{1}{2}$ in. Fitted with eighteen $3\frac{1}{2}$ oz. feather-weight containers of 'Tabloid' and 'Soloid' Brand products, and a tray containing minor dressings and sundries.

A similar chest is supplied in black japanned metal, and is known as No. 255 Chest. The contents are the same as No. 256 Chest, with the exception that the 'Tabloid' and 'Soloid' Brand products are in glass-stoppered bottles.

NO. 257. 'TABLOID' BRAND EMERGENCY BELT

Measurements, $43 \times 4\frac{1}{2}$ in., with buckles and shoulder straps; seven waterproof pouches, fitted as follows: Aluminium case of surgical instruments; aluminium case containing Hypodermic Syringe and 'Tabloid' Hypodermic products; twenty-three feather-weight tubes of 'Tabloid' and 'Soloid' Brand products; combined mortar and medicine cup; emergency dressings, etc.

NO. 258. 'TABLOID' BRAND MEDICINE CASE (The Settler's)



In black japanned metal. Measurements, $8\frac{1}{2} \times 4\frac{1}{2} \times 5\frac{1}{2}$ in. Contains twelve $1\frac{1}{2}$ oz. bottles of 'Tabloid' and 'Soloid' Brand products, 'Hazeline' Cream, 'Tabloid' Bandages and Dressings, adhesive plaster and other accessories. A very compact and useful case, adapted for settlers' or planters' use, and for stations, farms or camps in outlying districts.

NO. 258. 'TABLOID' BRAND MEDICINE CASE (The Settler's)

NO. 259. 'TABLOID' BRAND MEDICINE CASE (now known
as NO. 715 'TABLOID' BRAND FIRST-AID). (See page 96)

ANTIDOTE CASE 'TABLOID' BRAND

[B. W. & Co.]

Special Design, the property of Burroughs Wellcome & Co.

The word 'Tabloid' is a brand which designates fine products issued by Burroughs Wellcome & Co. This brand should always be specified when ordering.

A compact equipment, containing apparatus and drugs ready for immediate use in the treatment of poisoning.

NO. 300. 'TABLOID' BRAND ANTIDOTE CASE



No. 300. 'TABLOID' BRAND ANTIDOTE CASE

Measurements, 12 x 6 x 3 in. Fitted with stomach siphon-tube, catheter, B. W. & Co. nickel-plated hypodermic syringe, two needles, 'Tabloid' Hypodermic products, 'Vaporole' Amyl Nitrite, and toxicological chart; also eighteen ½ oz. phials and three tubes of 'Tabloid' Brand antidotes, etc., etc.

ANALYSIS CASES 'SOLOID' BRAND

[B. W. & Co.]

Special Designs, the property of Burroughs Wellcome & Co.

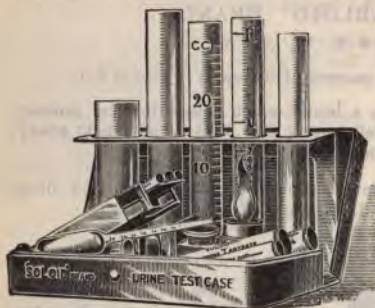
The word 'Soloid' is a brand which designates fine products issued by Burroughs Wellcome & Co. This brand should always be specified when ordering.

NO. 510. 'SOLOID' BRAND URINE TEST CASE

The clinical importance of urine analysis is fully recognised. This case provides, in a most compact and convenient form, all the requirements for making an examination of urine at the bedside. Owing to their purity and accuracy, the 'Soloid' Brand products contained in this case make reliable test solutions without further weighing.

Urine
analysis
instantly at
the bedside

In polished nickel-plated metal, easily kept aseptic. It contains



No. 510. 'SOLOID' BRAND URINE TEST CASE

Measurements, $5\frac{1}{2} \times 2\frac{1}{2} \times 1\frac{1}{4}$ in.

Acid. Each portion of the apparatus can also be obtained separately. Complete in doeskin cover.

No. 500. 'SOLOID' BRAND WATER ANALYSIS CASE

This convenient hand-case supplies all the apparatus, reagents, etc., necessary for examining samples of drinking water at the source of supply, and for drawing up the usual reports concerning suitability of the water for domestic purposes.

Measurements, $12\frac{1}{2} \times 10\frac{1}{2} \times 4\frac{3}{4}$ in. It contains a nickel evaporating dish, Erlenmeyer flask, tripod, spirit lamp, 100 c.c. and other graduated cylinders, capsules of 'Soloid' Nessler's Solution, 'Soloid' Brand products of Meta-phenylenediamine Sulphate, Potassium Chromate, Potassium Ferrocyanide, Potassium Permanganate, Silver Nitrate, Soap, Sodium Acid Sulphate, Zinc Dust, etc.



No. 500. 'SOLOID' BRAND WATER ANALYSIS CASE

For fuller particulars of these and other examples, see General Price List

a complete set of material for making an examination of urine, both qualitative and quantitative, for albumin, sugar, etc. The outfit includes a urinometer, Esbach's albuminometer, a graduated measure, pipette, test-tubes and stand, test-papers, spirit lamp, analysis charts, and a good supply of the ever-ready 'Soloid' reagents, including Fehling's Test, Indigo Test, Picric Acid, Potassium Ferrocyanide and Citric

BACTERIOLOGICAL CASE

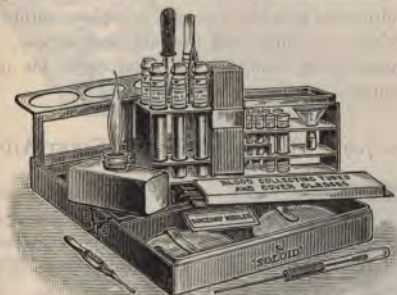
'SOLOID' BRAND

[B. W. & Co.]

Special Design, the property of Burroughs Wellcome & Co.

The word 'Soloid' is a brand which designates fine products issued by Burroughs Wellcome & Co. This brand should always be specified when ordering.

No. 505. 'SOLOID' BRAND BACTERIOLOGICAL CASE



No. 505. 'SOLOID' BRAND BACTERIOLOGICAL CASE

Measurements, 6 x 3½ x 1½ in.

This case enables medical men to carry out examinations that formerly were usually submitted to laboratory workers. Owing to its small size and light weight it can readily be carried in the pocket to the patient's bedside, to obtain a blood specimen or a throat swab. The case is made of polished metal, easily kept aseptic, and contains:

Three stoppered bottles, containing—

Methyl alcohol, dr. 1½

Absolute alcohol, dr. 1½

Distilled water, dr. 1½

A rod-stoppered bottle of Canada balsam

A graduated pipette

Two forceps

Twelve microscopical slides

A spirit lamp

A glass funnel

Two watch glasses

A metal case of needles (straight

No. 9)

A packet of filter papers

A supply of blood-collecting pipettes

Fifty cover-slips

A glass rod for powdering microscopical stains, etc.

A sterile swab

A tube each of the following 'Soloid' stains—

Eosin, Methyl Violet,

Fuchsin, Romanowsky

Stain, Eosin - Methylene

Blue, Methylene Blue,

Hæmatoxylin (Delafield),

Toison Blood Fluid.

'TABLOID' BRAND FIRST-AID

(FOR AUTOMOBILES, AIRSHIPS, YACHTS, CARAVANS,
ETC.)[SM B. W. & Co.]

Special Designs, the property of Burroughs Wellcome & Co.

The word 'Tabloid' is a brand which designates fine products issued by Burroughs Wellcome & Co. This brand should always be specified when ordering.

These equipments provide compact, complete outfits of emergency medicines, dressings and first-aid accessories. Portable and convenient, they comprise an ideal outfit for motorists, cyclists, aeronauts, yachtsmen and explorers.

No. 707. 'TABLOID' BRAND FIRST-AID



No. 707. 'TABLOID' BRAND FIRST-AID

In rex red, royal blue, or Brewster green enamelled metal, or in aluminised metal. Measurements, $6\frac{1}{2} \times 3\frac{1}{4} \times 2$ in. Contains six tubes of 'Tabloid' and 'Soloid' Brand products, 'Borofax,' Carron Oil, 'Tabloid' Bandages and Dressings, plaster, protective skin, pins, etc., etc.

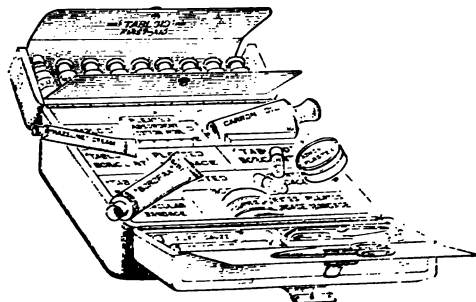
No. 712. 'TABLOID' BRAND FIRST-AID



No. 712. 'TABLOID' BRAND FIRST-AID

In rex red, royal blue, or Brewster green enamelled metal, or in aluminised metal. Measurements, $6\frac{1}{2} \times 4\frac{1}{4} \times 2$ in. Contains six tubes of 'Tabloid' and 'Soloid' Brand products, 'Borofax,' Carron Oil, 'Tabloid' Bandages and Dressings, plaster, protective skin, pins, etc., etc.

No. 702. 'TABLOID' BRAND FIRST-AID



No. 702. 'TABLOID' BRAND FIRST-AID

In rex red, royal blue or Brewster green enamelled leather. Measurements, $7 \times 5\frac{1}{2} \times 2\frac{1}{2}$ in. Contains eight tubes of 'Tabloid' and 'Soloid' Brand products, 'Borifax,' 'Hazeline' Cream, Sal Volatile, Carron Oil, 'Tabloid' Bandages and Dressings, tourniquet, oiled gauze, plaster, protective skin, pins, scissors, etc., etc.

No. 715. 'TABLOID' BRAND FIRST-AID

(Formerly known as No. 259. 'TABLOID' BRAND
MEDICINE CASE.)



No. 715. 'TABLOID' BRAND FIRST-AID

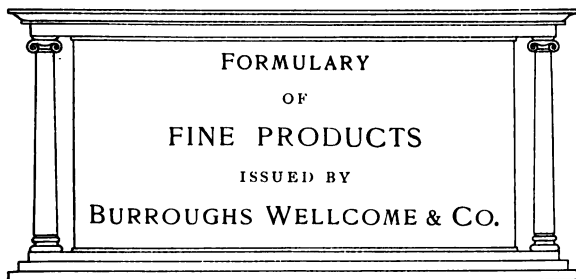
In rex red, royal blue, or Brewster green enamelled metal, or in aluminized or black japanned metal. Measurements, $7\frac{1}{2} \times 4\frac{1}{2} \times 2\frac{1}{2}$ in. Contains eight tubes of 'Tabloid' and 'Soloid' Brand products, 'Borifax,' Sal Volatile, Carron Oil, 'Tabloid' Bandages and Dressings, plaster, gauze, oiled gauze, etc., etc.

A SUGGESTION



In view of the many cases of substitution that have come under our notice, we suggest that physicians, when ordering our products, will secure an additional safeguard for their patients by specifying that they are to be dispensed in original bottles. When dispensing original packages, chemists rightly replace the maker's label by the physician's written directions.

BURROUGHS WELLCOME & Co.



For full details, see General Price List

'Alaxa,' Aromatic Liqueur of Cascara Sagrada

(*Trade Mark*)

DOSE

An aromatic liqueur which presents the tonic, laxative properties of cascara sagrada in a pleasant and acceptable condition.

One-half to two teaspoonfuls.

Alkaloids, 'Wellcome' Brand (*see page 171*)

Ammonium Chloride Inhaler, 'Vereker' (*see page 115*)

Analysis Cases, 'Soloid' Brand (*see page 95*)

Anæsthetics, Local (*see 'Tabloid' Hypodermic Anæsthetic Compounds, page 111*)

Antidote Case, 'Tabloid' Brand (*see page 95*)

'Aol,' a derivative of *Santalum album* (*see 'Tabloid' (Trade Mark) Brand products, page 137*)

Bacteriological Case, 'Soloid' Brand (*see page 97*)

Bandages, Pleated Compressed, 'Tabloid' Brand
(*see page 104*)

'Bivo' Beef and Iron Wine

DOSE

(*Trade Mark*)

A pure detannated wine, each tablespoonful of which contains, in an agreeable and highly-concentrated condition, the stimulating properties of fresh beef, with the equivalent of half a grain of iron, in a readily assimilable form.

One teaspoonful for children, to one tablespoonful for adults.

Pharmacopœial preparations are U.S.P. unless otherwise stated

'Borofax' Brand Boric Acid Ointment*(Trade Mark)*

An emollient, possessing antiseptic and sedative properties.

'Brockedon' Products

Burroughs Wellcome & Co. are the successors to, and sole proprietors of, the business of Brockedon, who, in 1842, ORIGINATED COMPRESSED MEDICINES in the shape of bi-convex discs—issued under the designation of COMPRESSED PILLS.

'Brockedon' Brand Bicarbonate of Soda, in boxes of three sizes

“ “ “ “ Potass “ “
 “ “ Chlorate “ “ “ “

Chemicals, 'Wellcome' Brand (*see page 171*)**CHESTS AND CASES (B. W. & Co.)**

A comprehensive selection of chests and cases are prepared and issued under the 'Tabloid' and 'Soloid' Brands, fitted with medicines for every variety of climate, from the fully-equipped chests containing supplies sufficient for medical officers to expeditions, etc., down to the compact pocket-cases suited to the needs of the private practitioner.

*For complete list and exact descriptions, see General Price List***Analysis Cases, 'Soloid' Brand** (*see page 95*)**Antidote Case, 'Tabloid' Brand** (*see page 95*)**Antiseptic Cases, 'Soloid' Brand**

Fitted with from four to eighteen containers of 'Soloid' Brand antiseptics.

Bacteriological Case, 'Soloid' Brand (*see page 97*)**First-Aid, 'Tabloid' Brand** (*see pages 98-99*)**Hypodermic Pocket-Cases, 'Tabloid' Brand** (*see pages 81-83*)**Medicine Chests and Cases, 'Tabloid' Brand** (*see pages 85-94*)**Urine Test Case, 'Soloid' Brand** (*see page 95*)**Compound Menthol Snuff (B. W. & Co.)** (*see page 117*)*Pharmaceutical preparations are U.S.P. unless otherwise stated*

DRESSINGS, PLEATED COMPRESSED

TRADE MARK 'TABLOID' BRAND

The word 'TABLOID' is a brand which designates fine products issued by Burroughs Wellcome & Co. To ensure the supply of these pure and reliable preparations, this brand should always be specified when ordering.

The introduction of Pleated Compressed Bandages and Dressings marks an important advance in the preparation of surgical accessories. These bandages and dressings are made of material of the best quality, and are subjected to **Important advance** great pressure under which each assumes a rectangular shape. After compression, each is enclosed automatically in an impervious covering of parchment paper.

The requirements of modern surgical treatment are so imperfectly fulfilled by many of the cheaper commercial dressings that the superiority of the pleated products of Burroughs Wellcome & Co. is at once evident. Their important advantages may be thus summarised:—

1. Only materials of exceptional quality are used in their manufacture, and their general excellence commends them to critical users.
2. They occupy the smallest possible space and yet can be unfolded as easily as those previously in use.
3. They are kept free from all risk of contamination.
4. The antiseptic dressings are evenly charged with medicament.
5. By reason of their extreme compactness they are by far the best for the hand-bag, cycle-, or saddle-case.

The illustration on next page graphically demonstrates the saving in space which is effected when Pleated Bandages and Dressings are carried. The relative sizes of an ordinary and a Pleated Bandage are striking. The flat sides of Pleated Bandages enable them to be packed in a fraction of the space required by those previously in use.

Pharmacopœial preparations are U.S.P. unless otherwise stated.

Dressings, Pleated Compressed, 'Tabloid' Brand—continued

These dressings are also issued *sterilised* in special impervious coverings. The requirements of modern surgical



The ordinary open-weave
bandage of commerce
6 yards \times $2\frac{1}{2}$ in.



'Tabloid' Pleated
Compressed Bandage
6 yards \times $2\frac{1}{2}$ in.

One-half actual size

treatment, so imperfectly fulfilled by many of the cheap commercial dressings, are ideally met by these sterilised pleated products.

The following are issued :—

Absorbent Wool between Gauze, Pleated Compressed, 'Tabloid' Brand—

In 2 ounce packets, in packages of 1 dozen.

Bandages, Pleated Compressed, 'Tabloid' Brand—

Open Weave, 1 in. \times 6 yards, in packages of 1 dozen

„ „ $2\frac{1}{2}$ in. \times 6 yards „ „ „ „

Flannel, $2\frac{1}{2}$ in. \times 5 yards „ „ „ „

Triangular (Esmarch's Pictorial), „ „ 1 dozen

packets of 2 bandages

These triangular bandages are of great service in first-aid or other emergency work. For the benefit of those who are unable to obtain skilled assistance, illustrations showing the various uses to which the bandage may be put, are imprinted on the fabric itself.

Carbolised Tow, Pleated Compressed, 'Tabloid' Brand—

In 2 ounce packets, in packages of 1 dozen.

Pharmacopœial preparations are U.S.P. unless otherwise stated

Dressings, Pleated Compressed, 'Tabloid' Brand—continued**Cotton Wool, Pleated Compressed, 'Tabloid' Brand—**

Absorbent,	$\frac{3}{4}$ ounce, in packets of 4, in packages of 1 dozen
"	1 ounce packets, in packages of 1 dozen
"	2 " " " "
Boric,	1 " " " "
"	2 " " " "
Double Cyanide, 3%	1 " " " "
" "	2 " " " "
Iodoform,	1 " " " "
"	2 " " " "

Gauze, Pleated Compressed, 'Tabloid' Brand—

Absorbent,	3 yards, in packages of 1 dozen
Boric,	3 " " " "
Double Cyanide, 3%	3 " " " "
Iodoform,	3 " " " "
"	1 yard " " "
"	1 in. \times 6 yds. " " "
Sal Alembroth, 1%	3 yards " " "

Lint, Pleated Compressed, 'Tabloid' Brand—

Plain,	1 ounce packets, in packages of 1 dozen
"	2 " " " "
Boric,	1 " " " "
"	2 " " " "
Carbolised	1 " " " "

DRESSINGS, SURGICAL

TRADE MARK 'WELLCOME' BRAND

(NOT COMPRESSED)

Cotton Wool, Double Cyanide, 3%—

In 8 ounce and 16 ounce packets.

Ear Drums, Artificial (Dr. Ward Cousins' design)—

A perfect protective to the inner ear. Made in four sizes.

Pharmaceutical preparations are U.S.P. unless otherwise stated

TRADE MARK **'ELIXOID' BRAND PRODUCTS**

The word 'ELIXOID' is a brand which designates fine products issued by Burroughs Wellcome & Co. This brand should always be specified when ordering.

'ELIXOID' BRAND—

„ **Ammonium Valerianate—**

Each fluid drachm contains ammonium valerianate, gr. 2.
Bottles containing 8 fluid ounces.

„ **Formates Compound—**

Each fluid ounce contains calcium formate, gr. 12;
sodium formate, gr. 6; magnesium formate, gr. 6.
Bottles containing 4 fluid ounces.

„ **Glycerophosphates—**

Each fluid ounce contains calcium glycerophosphate, gr. 4;
sodium glycerophosphate, gr. 2; potassium glycerophosphate, gr. 2; and magnesium glycerophosphate, gr. 1.
Bottles containing 4 fluid ounces.

„ **Pine Tar Compound—**

Each fluid drachm contains tar, balsam of tolu, and 'Pinol,' with terpin hydrate, gr. 1/8; tincture of virginian prune, min. 1-1/2; and fluidextract of ipecacuanha, min. 1/6.
Bottles containing 4 fluid ounces.

Also various other preparations issued under the 'Elixoid' Brand.

TRADE MARK **'ENULE' BRAND RECTAL SUPPOSITORIES**

The word 'ENULE' is a brand which designates fine products issued by Burroughs Wellcome & Co. This brand should always be specified when ordering.



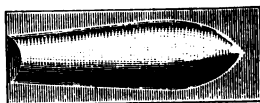
'Enule' Brand Rectal Suppository after removal of sheath.
This shape originated by Burroughs Wellcome & Co.

The 'Enule' rectal suppository possesses conspicuous advantages over those of the ordinary conical shape, which are difficult to introduce, and are sometimes even expelled. 'Enule' suppositories are encased in sheaths of pure tinfoil, easily stripped off at the moment of using. They

Pharmacopial preparations are U.S.P. unless otherwise stated

'Enule' Brand Rectal Suppositories—continued

contain accurate doses of pure drugs, their active principles are evenly diffused throughout the mass, and they will retain the full activity of the medication for a long period of time.



'Enule' Brand Rectal Suppository showing sheath of pure tinfoil. This shape originated by Burroughs Wellcome & Co.

PROF. CASPARI, in his *Treatise on Pharmacy*, says:—

"The usual shape of rectal suppositories is that of a cone with a rounded apex, but the difficulty of readily introducing them into the rectum has led to the designing of a new shape by H. S. Wellcome, of London, the great advantages of which become apparent when it is remembered that the bulbous end is inserted into the rectum, and, that as soon as the greatest diameter has been passed, expulsion of the suppository is impossible, by reason of the very contractile force of the sphincter muscle, which renders retention of the ordinary conical shape often so difficult."

Expert
opinion

Each kind is packed in boxes of a dozen (of one strength)

'ENULE' BRAND—		DIRECTION
„ Belladonna Extract	gr. 1/4 and gr. 1/2	One as required
„ Bismuth Subgallate	gr. 10	One as required
„ Cocaine Hydrochloride	gr. 1/2	One as required
„ Gall and Opium	... ..	One as required
℞ Acidi Tannici	... .. gr. 3	
Ext. Opii	... .. gr. 1/4	
„ Glycerin (Anhydrous)	95% Children's and Adults' sizes	One as required
„ 'Hazeline' Compound	Containing 'Hazeline,' extract of hamamelis and zinc oxide. (See also 'Hazeline' Suppositories).	One as required
„ Lead and Opium	... ..	One as required
℞ Plumbi Acetatis	... .. gr. 3	
Pulv. Opii	... .. gr. 1	
„ Meat (Predigested)	Children's and Adults' sizes	One as required

Containing gr. 8½ and gr. 15, respectively, of concentrated peptone from choice fresh beef.

Pharmacopœial preparations are U.S.P. unless otherwise stated.

'Enule' Brand Rectal Suppositories—*continued*

'ENULE' BRAND— <i>continued</i>		DIRECTION
.. Milk (Predigested)	Children's and Adults' sizes	One as required
Containing gr. 10 and gr. 18, respectively, of concentrated peptone from new milk.		
.. Morphine and Belladonna ... ..	...	One as required
℞ Morphinae Hydrochloridi ...	gr. 1/4	
Ext. Belladonnae	gr. 1/2	
.. Morphine Hydrochloride	gr. 1/4, gr. 1/2 and gr. 1	One as required
.. Opium Extract ...	gr. 1	One as required
.. Quassin (Amorphous)	gr. 1/2	One on each of at least twelve successive nights
The bitter principle of quassia wood, used in the treatment of threadworm, especially in children.		
.. Quinine Bisulphate	gr. 5	One as required
.. Santonin	gr. 3	One as required
.. Soap Compound ... ..	...	One as required
℞ Saponis Animalis	gr. 7	
Sodii Sulphatis Exsiccati ...	gr. 7	

Also various other products issued under the 'Enule' Brand

'Enule' Brand Rectal Suppositories must be kept in a cool and dry place.

TRACE BRAND 'ERNUTIN' BRAND PRODUCTS

'Ernutin' products are physiologically standardised, presenting the active therapeutic principles of ergot, chief of which is the alkaloid ergotoxine, in a state of purity which up to the present has never been approached. It is the result of extensive researches in the Wellcome Physiological Research Laboratories.

'Ernutin'—(For oral administration), in amber-coloured stoppered bottles of 1 ounce and 30 c.c.

Pharmaceutical preparations are U.S.P. unless otherwise stated

'Ernutin' Brand Products—continued

'Ernutin' (Hypodermic)—For hypodermic and intramuscular injection. In amber-coloured hermetically-sealed phials, each containing min. 10 and 0.6 c.c. respectively. Boxes of 6.

First-Aid, 'Tabloid' Brand (*see pages 98-99*)

Gauze, Pleated Compressed, 'Tabloid' Brand (*see page 105*)

TRADE MARK 'HAZELINE' BRAND PREPARATIONS

		DOSE
'Hazeline' Brand of distilled <i>Hamamelis virginiana</i> .	An anodyne and styptic fluid obtained by distillation from the fresh young twigs.	dr. 1 to dr. 3
'Hazeline' Cream, in collapsible tubes and glass pots.	Combines the anodyne astringent properties of 'Hazeline' with the emollient action of the finest lanoline.	—
“'Hazeline' Snow,” (<i>Trade Mark</i>) in glass pots.	A non-greasy preparation, owing its astringent, soothing and healing properties to the presence of a high proportion of 'Hazeline.'	—
'Hazeline' Suppositories	Contain pure 'Hazeline'	One as required
	(<i>See also 'Enule' 'Hazeline' Compound</i>)	

Also various other products issued under the 'Hazeline' Brand

HYPODERMIC APPARATUS

Needles for B. W. & Co. Syringes—

(*For full list, see B. W. & Co.'s General Price List*)

Pharmacopœial preparations are U.S.P. unless otherwise stated.

Hypodermic Apparatus—continued

SYRINGES

All-Glass Aseptic Hypodermic Syringe, The B. W. & Co.

Barrel, piston and nozzle consist entirely of glass. The solid piston obviates use of packing. May be instantly taken apart for rendering aseptic. Two sizes, min. 15 and min. 20, with two steel needles. A detachable finger-grip (nickel-plated) for this syringe can be supplied.

(If desired, platino-iridium needles can be fitted)

Hypodermic Syringe, The B. W. & Co.

Solid Silver. Nozzle detachable, so that the solution of a 'Tabloid' Hypodermic product may be effected in the barrel. With two platino-iridium needles, in case. Capacity, min. 20.

Hypodermic Syringe, The B. W. & Co.

Nickel-plated. With two needles. Capacity, min. 15 or min. 20.

(If desired, platino-iridium needles can be fitted)

Serum Syringe, The B. W. & Co. All-Glass Aseptic

The working parts are composed entirely of glass, the needle being attached to the nozzle by a flexible rubber joint which guards against fracture. In five sizes, 2 c.c., 3 c.c., 5 c.c., 10 c.c. and 25 c.c., with two steel needles, in metal case.

(If desired, platino-iridium needles can be fitted)

Serum Syringe, The B. W. & Co. Nickel-plated

In metal case, complete, with two platino-iridium needles, capacity 5 c.c. or 10 c.c.

HYPODERMIC PRODUCTS

TRADE MARK 'TABLOID' BRAND

The word 'TABLOID' is a brand which designates fine products issued by Burroughs Wellcome & Co. This brand should always be specified when ordering.

"They are quite free from objectionable and irritative salts."
—*British Medical Journal*.

"They are very soluble and not at all irritating."—*Lancet*.

'Tabloid' Hypodermic products accurately contain the stated weight of pure medicament. They are rapidly soluble, of

Pharmacopœial preparations are U.S.P. unless otherwise stated

Hypodermic Products, 'Tabloid' Brand—continued

uniform activity, and they keep perfectly. They are packed in tubes containing 20, with the exception of those marked with an asterisk, which are in tubes of 12.

PREPARATION	STRENGTH	DOSE
'TABLOID' BRAND		
(Hypodermic)—		
„ Aconitine Nitrate ...	... gr. 1/640	gr. 1/640
„ *Anæsthetic Compound, A ...	...	As required
℞ Cocainæ Hydrochloridi...	gr. 1/10	
Morphinæ Hydrochloridi	gr. 1/50	
Sodii Chloridi ...	gr. 1/5	
„ *Anæsthetic Compound, B ...	...	As required
℞ Cocainæ Hydrochloridi...	gr. 1/5	
Morphinæ Hydrochloridi	gr. 1/50	
Sodii Chloridi ...	gr. 1/5	
„ *Anæsthetic Compound, C ...	...	As required
℞ Eucainæ Lactatis ...	gr. 7/16	
Sodii Chloridi ..	gr. 3-1/2	
„ Apomorphine Hydrochloride	gr. 1/20	} gr. 1/20 to gr. 1/10
„ „ „	gr. 1/15	
„ „ „	0.005 gm.	
„ „ „	gr. 1/10	
* { Apomorphine Hydrochloride	gr. 1/10	} One
{ Strychnine Hydrochloride	gr. 1/60	
„ Atropine Sulphate ...	... gr. 1/150	} gr. 1/200 to gr. 1/100 (in- creased)
„ „ „ ...	... gr. 1/100	
„ „ „ ...	... 0.001 gm.	
„ „ „ ...	... gr. 1/60	
„ *Caffeine Sodio-salicylate	... 0.03 gm.	} gr. 1/2 to gr. 4
„ * „ „ „	... gr. 1/2	
„ Cocaine Hydrochloride	... gr. 1/10	} gr. 1/10 to gr. 1/2
„ „ „	... 0.01 gm.	
„ „ „	... gr. 1/6	
„ * „ „	... 0.015 gm.	
„ * „ „	... gr. 1/4	
„ * „ „	... 0.02 gm.	
„ * „ „	... gr. 1/2	
„ Codeine Phosphate ...	... gr. 1/4	gr. 1/4 to gr. 2
„ *Cotarnine Hydrochloride	... gr. 1/4	gr. 1/4 to gr. 1/2

* In tubes of 12 only (all others contain 20)

Pharmacopæial preparations are U.S.P. unless otherwise stated

Hypodermic Products, 'Tabloid' Brand—continued

PREPARATION	STRENGTH	DOSE
'TABLOID' BRAND (Hypodermic)—		
,, Curare ... ..	... gr. 1/12	gr. 1/12 to gr. 1/2
,, Digitalin (Amorphous)	... gr. 1/100	} gr. 1/500 to gr. 1/30
,, " (Crystalline)	0.0005 gm.	
,, { Digitalin (Amorphous)	... gr. 1/100	} One
,, { Strychnine Sulphate	... gr. 1/100	
,, Ergotinine Citrate ... ..	... gr. 1/200	} gr. 1/200 to gr. 1/50
,, " " "	0.0005 gm.	
,, " " " ... ..	... gr. 1/100	} One
,, * { Ergotinine Citrate ... ..	... gr. 1/100	
,, * { Morphine Sulphate ... ..	... gr. 1/6	
,, * { Ergotinine Citrate ... ..	... gr. 1/100	} One
,, * { Strychnine Sulphate...	... gr. 1/20	
,, * Ergotoxine ... ..	... gr. 1/100	gr. 1/100 to gr. 1/50
,, * { Ergotoxine ... ..	... gr. 1/100	} One
,, * { Morphine Sulphate ... ..	... gr. 1/6	
,, * { Ergotoxine ... ..	... gr. 1/100	} One
,, * { Strychnine Sulphate...	... gr. 1/20	
,, Eserine (<i>see Physostigmine</i>)		
,, * Eucaïne Hydrochloride ... ..	... gr. 1/3	} gr. 1/3 to gr. 2
,, * " " " ... ..	... gr. 1	
,, * Eucaïne Lactate ... ..	... gr. 1/3	} gr. 1/3 to gr. 2
,, * " " " ... ..	... gr. 1	
,, Homatropine Hydrochloride...	gr. 1/250	gr. 1/250 to gr. 1/20
,, Hydrargyri Chloridi Corrosivi (<i>see Mercuric Chloride</i>)		
,, Hydrargyri Succinimidi (<i>see Mercuric Succinimide</i>)		
,, Hyoscine Hydrobromide ... ..	... gr. 1/200	} gr. 1/200 to gr. 1/100 (in-
,, " " " ... ..	... gr. 1/100	
,, * " " " ... ..	... gr. 1/75	} creased)
,, * Hyoscine Compound, A ... ..	... ..
B Hyoscinae Hydrobromidi ... ..	... gr. 1/100	
Morphinae Sulphatis ... ..	... gr. 1/6	
Atropinae Sulphatis ... ..	... gr. 1/180	

* In tubes of 12 only (all others contain 20)

Pharmaceutical preparations are U.S.P. unless otherwise stated

Hypodermic Products, 'Tabloid' Brand—continued

PREPARATION	STRENGTH	DOSE
'TABLOID' BRAND (Hypodermic)—		
„ *Hyoscine Compound, B	One
℞ Hyoscine Hydrobromidi	... gr. 1/100	
Morphine Sulphatis	... gr. 1/4	
Atropine Sulphatis	... gr. 1/150	
„ *Hyoscyamine Sulphate	... gr. 1/80	} gr. 1/200 to gr. 1/100 (in- creased)
„ * " "	... gr. 1/20	
„ Mercuric Chloride	... 0.001 gm.	} gr. 1/60 to gr. 1/30
„ " "	... gr. 1/60	
„ " "	... gr. 1/30	
„ Mercuric Succinimide...	... gr. 1/5	gr. 1/6 to gr. 1/4
„ Morphine Bimeconate	... gr. 1/8	} gr. 1/8 to gr. 1/4 (in- creased)
„ " "	... gr. 1/6	
„ " "	... gr. 1/4	
„ " "	... gr. 1/3	
„ Morphine Hydrochloride	... 0.01 gm.	} gr. 1/8 to gr. 1/4 (in- creased)
„ " "	... gr. 1/6	
„ " "	... 0.015 gm.	
„ " "	... gr. 1/4	
„ " "	... 0.02 gm.	
„ * " "	... gr. 1/3	
„ * " "	... gr. 1/2	
„ { Morphine Hydrochloride	... gr. 1/6	} One
{ Atropine Sulphate	... gr. 1/70	
„ Morphine Sulphate	... gr. 1/12	} gr. 1/8 to gr. 1/4 (in- creased)
„ " "	... gr. 1/8	
„ " "	... 0.01 gm.	
„ " "	... gr. 1/6	
„ " "	... 0.015 gm.	
„ " "	... gr. 1/4	
„ " "	... 0.02 gm.	
„ " "	... gr. 1/3	
„ * " "	... 0.03 gm.	
„ * " "	... gr. 1/2	
„ * " "	... 0.05 gm.	
„ * " "	... gr. 1	

* In tubes of 12 only (all others contain 20)

Pharmacopœial preparations are U.S.P. unless otherwise stated

Hypodermic Products, 'Tabloid' Brand—continued

PREPARATION	STRENGTH	DOSE
'TABLOID' BRAND		
(Hypodermic)—		
" { Morphine Sulphate gr. 1/12	} One of required strength
" { Atropine Sulphate ...	... gr. 1/250
" { Morphine Sulphate ...	... gr. 1/8
" { Atropine Sulphate ...	... gr. 1/200
" { Morphine Sulphate ...	... gr. 1/6
" { Atropine Sulphate ...	... gr. 1/180
" { Morphine Sulphate gr. 1/4	} One of required strength
" { Atropine Sulphate ...	... gr. 1/150
" { Morphine Sulphate ...	... gr. 1/3
" { Atropine Sulphate ...	... gr. 1/120
" { Morphine Sulphate ...	... gr. 1/3
" { Atropine Sulphate ...	... gr. 1/60
" * { Morphine Sulphate gr. 1/2	} One
" { Atropine Sulphate ...	... gr. 1/100
" { Morphine Sulphate gr. 1/4	} One
" { Strychnine Sulphate ...	... gr. 1/60
" Morphine Tartrate gr. 1/4	gr. 1/8 to gr. 1/4 (in- creased)
" Physostigmine Salicylate (Eserine Salicylate) gr. 1/100	} gr. 1/100 to gr. 1/25
" Picrotoxin ...	... gr. 1/60
" Pilocarpine Nitrate gr. 1/10	} gr. 1/20 to gr. 1/2
" " " ...	... 0.01 gm.
" " " ...	... gr. 1/6
" * " " ...	... gr. 1/3
" * " " ...	... gr. 1/2
" * Potassium Permanganate gr. 2		gr. 1 to gr. 5
" * Quinine Bihydrochloride gr. 1	} gr. 1 to gr. 5
" * " " ...	... gr. 3
" * " " ...	... gr. 5
" * Quinine Bisulphate gr. 5	gr. 1 to gr. 5
" * Quinine Hydrobromide 0.03 gm.	} gr. 1/2 to gr. 2
" * " " ...	... gr. 1/2
" * " " ...	... 0.05 gm.

* In tubes of 12 only (all others contain 20)

Pharmaceutical preparations are U.S.P. unless otherwise stated

Hypodermic Products, 'Tabloid' Brand—continued

PREPARATION	STRENGTH	DOSE
'TABLOID' BRAND		
(Hypodermic)—		
„ *Quinine Lactate gr. 1	} gr. 1 to gr. 5
„ * „ „ ...	... gr. 5
„ *Sparteine Sulphate gr. 1/2	gr. 1/2 to gr. 1
„ Strophanthin gr. 1/500	gr. 1/500 to gr. 1/100
„ Strychnine Hydrochloride gr. 1/200	} gr. 1/150 to gr. 1/10
„ „ „ ...	... gr. 1/100
„ „ „ ...	... gr. 1/30
„ Strychnine Nitrate 0.0005 gm.	} gr. 1/150 to gr. 1/10
„ „ „ ...	... 0.001 gm.
„ „ „ ...	... gr. 1/15
„ „ „ ...	... gr. 1/10
„ Strychnine Sulphate gr. 1/150	} gr. 1/150 to gr. 1/10
„ „ „ ...	... gr. 1/100
„ „ „ ...	... gr. 1/60
„ „ „ ...	... gr. 1/50
„ „ „ ...	... gr. 1/40
„ „ „ ...	... gr. 1/30
„ Trinitrin (Nitroglycerin) gr. 1/250	} gr. 1/250 to gr. 1/50
„ „ „ ...	... gr. 1/100

Also various other Hypodermic products issued under the
'Tabloid' Brand

Hypodermic Veterinary Products, 'Tabloid' Brand

(See General Price List)

Inhaler (B. W. & Co.)

Ammonium Chloride Inhaler, 'Vereker.'

Delivers neutral vapours of Ammonium Chloride.

TRADE MARK **'KEPLER' MALT EXTRACT AND
COMBINATIONS**

SPECIAL CAUTION.—Many attempts are made to imitate 'Kepler' Malt Products, and it is necessary to take precautions against substitution, since malt preparations vary greatly in medicinal value. Verbal instructions are not safe. To prevent fraud it is best to write prescriptions for original bottles.

DOSE.—Of all 'Kepler' preparations, one teaspoonful to one tablespoonful.

* In tubes of 12 only (all others contain 25)

Pharmacopœial preparations are U.S.P. unless otherwise stated

'Kepler' Malt Extract and Combinations—continued

PREPARATION AND STRENGTH

'KEPLER' BRAND MALT EXTRACT—

A most reliable and highly-concentrated extract, prepared from the finest winter-malted barley. Its medicinal value depends not only on its high diastatic power but also on the albuminoids, phosphates, etc., which contains.

Ditto with BEEF AND IRON

Ditto with CASCARA SAGRADA

Each fluid ounce contains extract of cascara sagrada, gr. 6

Ditto with HÆMOGLOBIN

Ditto with IRON

Each fluid ounce contains soluble iron pyrophosphate, gr. 4

Ditto with IRON AND QUININE CITRATE

Each fluid ounce contains iron and quinine citrate, gr. 7-1/2

Ditto with IRON IODIDE

Each fluid ounce contains iron iodide, gr. 2

Ditto with IRON, QUININE AND STRYCHNINE (Easton)

Each fluid ounce contains iron phosphate, gr. 1/2; quinine phosphate, gr. 3/8; strychnine phosphate, gr. 1/64

Ditto with PEPSIN

Each fluid ounce contains pure pepsin, gr. 4

Ditto with PHOSPHORUS

Each fluid ounce contains pure phosphorus, gr. 1/64

'KEPLER' SOLUTION (OF COD LIVER OIL IN MALT EXTRACT)—

Cod Liver Oil is the premier fatty food. It is unequalled for its power of supplying fat to the body, and for the readiness with which it is oxidised. Moreover, it enables the tissues to live and develop, to repair waste, and to effectively resist disease.

The great usefulness of cod liver oil has been largely discounted by the unpleasant effects—nausea, eructations and alimentary disturbance—which often follow the administration of even the purest oil.

'Kepler' Solution of Cod Liver Oil in Malt Extract is unique in its palatability and in the ease and completeness with which it is assimilated. It presents the

apocrietal preparations are U.S.P. unless otherwise stated

'Kepler' Malt Extract and Combinations—continued**'KEPLER' SOLUTION (OF COD LIVER OIL IN MALT EXTRACT)—continued**

purest cod liver oil incorporated in the best malt extract. The oil is thoroughly diffused in the 'Kepler' Malt Extract, and this molecular incorporation renders its digestion easy and its assimilation certain. So palatable is 'Kepler' Solution that children and fastidious patients take it readily, whilst it is absorbed without difficulty by the most tender organism. The high food value of this product is shown by rapid increase in the strength and weight of the patient.

Initial doses should be small and only gradually increased.

Ditto with IRON IODIDE

Each fluid ounce contains iron iodide, gr. 2

Ditto with PHOSPHORUS

Each fluid ounce contains phosphorus, gr. 1/64

Also various other preparations issued under the 'Kepler' Brand

Lint, Pleated Compressed, 'Tabloid' Brand (*see page 105*)

Malt Extract (*see 'KEPLER,' page 115*)

Medicine Chests and Cases, 'Tabloid' Brand (*see pages 85-94*)

Menthol Compound Plasters (B. W. & Co.)

Menthol Snuff, Compound (B. W. & Co.)

An extremely effective and convenient combination of ammonium chloride, menthol, eucaïne lactate (1/3 per cent.), etc., issued in enamelled tins, after the manner of old-fashioned black and gold snuff-boxes.

Methyl Alcohol (Pure)

For use in microscopic staining. In hermetically-sealed glass phials, each containing 15 c.c.

Pharmacopœial preparations are U.S.P. unless otherwise stated.

PASTILLES, TRADE MARK 'TABLOID' BRAND

The word 'TABLOID' is a brand which designates fine products issued by Burroughs Wellcome & Co. This brand should always be specified when ordering.

'Tabloid' Pastilles ensure the gradual and prolonged application to the throat and mouth of medicaments, which are presented in a most pleasant condition; they are also employed in certain cases to obtain the general effect of the drug. By their use, astringents, antiseptics, anæsthetics, expectorants and laxatives can be conveniently exhibited. The basis of the pastille is demulcent, increasing the efficacy of the active ingredients.

'TABLOID' BRAND—

- „ Ammonium Chloride and Liquorice
Each contains ammonium chloride, gr. 1
- „ Cocaine Hydrochloride, gr. 1/10
- „ Codeine, gr. 1/8
- „ Codeine and Benzoic Acid Compound
 - ℞ Acidi Benzoici gr. 1/2
 - Codeinæ gr. 1/10
 - Menthol gr. 1/10
 - Pulv. Ipecacuanhæ gr. 1/10
 - Cocainæ Hydrochloridi gr. 1/40
 - Gummi Rubri gr. 1/2
- „ Glycerin
- „ Glycerin and Black Currant
- „ Glycerin, Tannin and Black Currant
Each contains tannin, gr. 1/2
- „ Glycerin, Tannin, Capsicum and Black Currant
Each contains tannin, gr. 1/2, and the equivalent of tincture of capsicum, min. 0.40, equal to capsicum, gr. 3/80.
- „ Laxative Fruit
Each contains extract of senna fruit, gr. 5, pleasantly flavoured. The 'Tabloid' Pastille is extremely palatable, and facilitates the administration, to children and fastidious patients, of an efficient laxative.
- „ Lemon Juice
- „ Linseed, Liquorice and Chlorodyne
Each contains morphine hydrochloride, gr. 1/120
- „ Meat
- „ Menthol, gr. 1/8
- „ Menthol and Eucalyptus
 - ℞ Menthol gr. 1.20
 - Olei Eucalypti min. 1/2

Pharmacopœial preparations are U.S.P. unless otherwise stated

Pastilles, 'Tabloid' Brand—continued**'TABLOID' BRAND—**

- „ Morphine and Ipecacuanha
 ℞ Morphinæ Hydrochloridi ... gr. 1/36
 Pulv. Ipecacuanhæ ... gr. 1/12
- „ Pectoral
 Contain ammoniated liquorice, squill, tolu, senega, ipecacuanha,
 wild cherry, etc.
- „ Pine Tar Compound
- „ 'Pinol,' min. 1
- „ Red Gum and Cocaine
 ℞ Gummi Rubri ... gr. 1
 Cocainæ Hydrochloridi ... gr. 1/20
- „ Rhatany (Krameria), Menthol and Cocaine
 ℞ Extract Krameriaæ ... gr. 2
 Menthol ... gr. 1/20
 Cocainæ Hydrochloridi ... gr. 1/20

Also various other Pastilles issued under the 'Tabloid' brand

'Phenofax' Brand Carbolic Acid Ointment

(Trade Mark) 'PHENOFAX' is an antiseptic sedative dressing which presents 4 per cent. of pure phenol in a bland basis and is notable for its sedative effect on the skin and mucous surfaces. It disinfects, allays pain, and encourages granulation.

PHOTOGRAPHIC CHEMICALS

TRADE MARK **'TABLOID' BRAND**

The word 'TABLOID' is a brand which designates fine products issued by Burroughs Wellcome & Co. This brand should always be specified when ordering.

'Tabloid' Photographic Chemicals are much more convenient than ordinary chemicals; their superior quality and accurate weight ensure the best results. They entirely obviate the trouble of weighing small quantities of chemicals and the disappointments occasioned by the deterioration of stock solutions. They enable the tourist to carry all the requisite materials for developing, fixing, etc., with convenience, comfort and safety. At home they save time and trouble.

Pure and
reliable

Pharmacopœial preparations are U.S.P. unless otherwise stated

Photographic Chemicals, 'Tabloid' Brand—continued**Developers**

The developers are packed in cartons, each containing 'Tabloid' Reducing Agent, and the 'Tabloid' Accelerators specially prepared for use with that reducing agent.

**'TABLOID' BRAND
(Photographic)—**

- „ Amidol Developer
- „ Edinol Developer
- „ Eikonogen Developer
- „ Glycin Developer
- „ Hydroquinone (Quinol) Developer
- „ Metol Developer
- „ Metol-Quinol Developer
- „ Ortol Developer
- „ Paramidophenol Developer
- „ Pyro Developer
- „ Pyro-Metol Developer (*Imperial Standard Formula*)
- „ *Pyro-Soda Developer (*Ilford Formula*)
- „ 'Rytol' (*Trade Mark*) Universal Developer

* In ordering this special developer, it is always necessary to quote "Ilford formula."

Accessories**'TABLOID' BRAND
(Photographic)—**

	STRENGTH
„ <i>Alkali—</i>	
'Tabloid' Sodium Carbonate	gr. 44
„ <i>Density Reducers—</i>	
'Tabloid' Ammonium Persulphate	gr. 11
'Tabloid' Potassium Ferricyanide	gr. 2
„ <i>Hardeners—</i>	
'Tabloid' Alum	gr. 10
'Tabloid' Alum and Citric Acid Compound	
(Chrome alum, gr. 5; citric acid, gr. 5; and sodium sulphite, gr. 20)	
„ <i>Hypo Eliminator—</i>	
'Tabloid' Hypo Eliminator	

vacopical preparations are U.S.P. unless otherwise stated

Photographic Chemicals, 'Tabloid' Brand—continued**Accessories—continued****'TABLOID' BRAND****(Photographic)—**

STRENGTH

,, *Intensifiers—*

'Tabloid' Chromium Intensifier

'Tabloid' Mercuric Iodide and Sodium Sulphite

,, *Preservatives—*

'Tabloid' Potassium Metabisulphite ... gr. 10

'Tabloid' Sodium Sulphite, Dried, gr. 5 } Equals gr. 10
of crystals,, *Restrainers—*

'Tabloid' Ammonium Bromide ... gr. I

'Tabloid' Potassium Bromide ... gr. I

'Tabloid' Sodium Citrate ... gr. I

Fixer**'TABLOID' BRAND****(Photographic)—**,, Sodium Thiosulphate (Hypo), Dried, } Equals gr. 44
gr. 28.5 } of crystals**Sensitiser****'TABLOID' BRAND****(Photographic)—**,, Potassium Ammonium Chromate ... gr. 24
(for sensitising carbon tissue)**Toners****'TABLOID' BRAND****(Photographic)—**,, Gold Chloride, gr. $\frac{1}{2}$, with Borax, gr. 15 (B 1)

,, " " " " Sodium Bicarbonate, gr. 15 (B 2)

,, " " " " Sodium Phosphate, gr. 15 (B 3)

,, " " " " Sodium Tungstate, gr. 15 (B 4)

,, " " " " Sodium Formate Compound (B 5)

,, " " " " Sulphocyanide Compound (B 6)

,, " " " " Thiosulphate Compound

(combined Bath for toning and fixing P.O.P.) (B 10)The above are supplied in cartons containing sufficient
for the preparation of six toning baths of 5 to 10*Pharmacopœial preparations are U.S.F. unless otherwise stated*

Photographic Chemicals, 'Tabloid' Brand—continued**Toners—continued****'TABLOID' BRAND****(Photographic)—**

ounces or more. For convenience they may be ordered by their numbers, thus :—'Tabloid' Gold Toning, B 1, B 2, etc.

„ Copper Ferrocyanide Toning Compound (*for toning Bromide Prints and Lantern Slides*)

„ Platinum Toning Compound (*for toning Matt P.O.P.*)

„ Sepia Toner (*for Bromide Prints and Lantern Slides*)

Also various other Photographic products issued under the 'Tabloid' Brand

PHOTOGRAPHIC EXPOSURE RECORD AND DIARY, WELLCOME'S

The most useful pocket-book for the photographer. Contains ruled pages for recording exposures, a diary for the year, also numerous technical articles and tables, and an exposure calculator which tells the correct exposure under any circumstance by *ONE turn of ONE scale*, etc., etc.

UNITED STATES EDITION. Bound in red cloth.

Also issued :

SOUTHERN HEMISPHERE AND TROPICAL EDITION, for all countries south of the Tropic of Cancer (about 20° N.). Bound in dark green cloth.

NORTHERN HEMISPHERE EDITION, for Canada, Europe, and all countries in the Northern Hemisphere except United States of America. Bound in light green cloth.

Each Edition complete with wallet for proofs, etc., and pencil.

PHOTOGRAPHIC OUTFIT, No. 905

TRADE MARK **'TABLOID' BRAND**

A complete and compact chemical outfit for developing and fixing plates, films, bromide or gaslight papers, and for toning and fixing P.O.P.

Pharmaceutical preparations are U.S.P. unless otherwise stated

Photographic Outfit, 'Tabloid' Brand—continued**STANDARD CONTENTS :—**

'Tabloid' Metol-Quinol Developer, to make 44 ounces of solution; 'Tabloid' Pyro Developer, to make 40 ounces of solution; 'Tabloid' Combined Toner and Fixer, to make 30 ounces of solution; 'Tabloid' Hypo; and 'Tabloid' Potassium Bromide, gr. 1.

Measurements, $4 \times 4 \times 2\frac{1}{2}$ in. In rex red, royal blue or bright scarlet enamelled metal, or in black japanned metal.

'Pinol' (*Distilled Essence of the Pinus Pumilio*)
(Trade Mark)

A valuable stimulant, disinfectant and antiseptic in respiratory affections. The 'Tabloid' Pastille (*see page 121*) affords a pleasant means of securing prolonged continuous local action.

In $\frac{1}{2}$ oz. and 1 oz. bottles.

**SANITARY TOWELS, PLEATED COM-
PRESSED, ^{TRADE} 'TABLOID' BRAND**

'Tabloid' Pleated Compressed Sanitary Towels possess several points of superiority over ordinary commercial sanitary



'Tabloid' Pleated Sanitary
Towel (No. 4)
Half size

towels. They are made of materials of exceptional quality specially adapted for the purpose. Their highly absorbent properties are particularly noteworthy. The delicate texture of the surface of these towels ensures perfect freedom from the slightest sense of discomfort in

use. Owing to the extremely small space which they occupy, they are particularly convenient when travelling. Extreme compactness is secured by compression, and perfect cleanliness ensured by the method of packing.

Five sizes are issued, each size in packages of 12.

'Saxin,' gr. $\frac{1}{4}$, in bottles of 100, 200 and 500.
(Trade Mark)

Pharmacopœial preparations are U.S.P. unless otherwise stated

SERA, ^{TRADE MARK} 'WELLCOME' BRAND

The word 'WELLCOME' is a brand which designates fine products issued by Burroughs Wellcome & Co. To ensure the supply of these pure and reliable preparations, this brand should always be specified when ordering.

The high reputation which these sera have with the medical profession is constantly confirmed by the favourable reports received, and the accumulating evidence proves this high reputation to be deserved.

'Wellcome' Brand Sera are prepared under U.S.A. Government Licences, Nos. 18 and 20, in the Wellcome Physiological Research Laboratories, Brockwell Hall, London, England, under conditions which fulfil every requirement of modern science and under the immediate supervision of specialists of long and varied experience. The sera are not sent out until they have successfully passed rigorous sterility and toxicity tests; they are then issued in hermetically-sealed phials of convenient sizes.

Burroughs Wellcome & Co. act as distributing agents, and will endeavour to despatch orders for these sera immediately on receipt of letter or telegram.

'WELLCOME' BRAND—

„ Diphtheria Antitoxic Serum

Phials containing 1000, 2000, 3000 and 4000 (Ehrlich-Behring) units.

High Potency :

Phials containing 1000 (Ehrlich-Behring) units in	1	c.c.
„ 2000 „ „	2	c.c.
„ 3000 „ „	3	c.c.
„ 4000 „ „	4	c.c.
„ 5000 „ „	5	c.c.
„ 6000 „ „	6	c.c.
„ 8000 „ „	8	c.c.
„ 10,000 „ „	10	c.c.

„ Anti-streptococcus Serum, Polyvalent: from horses immunised against cultures of streptococci coming in all from 60 sources, in the following diseases:—

ERYSIPELAS, SCARLET FEVER, PUERPERAL FEVER,
RHEUMATIC FEVER, SEPTICÆMIA, ANGINA,
PNEUMONIA, ULCERATIVE ENDOCARDITIS.

Phials containing 10 c.c., 25 c.c. and 50 c.c.

Pharmacopœial preparations are U.S.P. unless otherwise stated

Sera, 'Wellcome' Brand—continued**'WELLCOME' BRAND—**

„ **Anti-streptococcus Serum, Erysipelas:** from horses immunised against cultures from typical cases of erysipelas :—

Phials containing 25 c.c. and 50 c.c.

„ **Anti-streptococcus Serum, Puerperal Fever:** from horses immunised against over 20 cultures of *Streptococcus* from cases of puerperal fever :—

Phials containing 25 c.c. and 50 c.c.

„ **Anti-streptococcus Serum, Rheumatic Fever:** from horses immunised against cultures from severe cases of acute rheumatism and of rheumatoid arthritis :—

Phials containing 25 c.c. and 50 c.c.

„ **Anti-streptococcus Serum, Scarlatina:** from horses immunised against cultures from 9 severe (some fatal) cases of scarlet fever :—

Phials containing 25 c.c. and 50 c.c.

„ **Anti-staphylococcus Serum, Polyvalent:** from horses immunised against various cultures of *Staphylococcus pyogenes aureus, albus, citreus* and *hemorrhagicus* :—

Phials containing 25 c.c. and 50 c.c.

Also various other Sera issued under the 'Wellcome' Brand

Serum Syringes (B. W. & Co.) (see page 110)**TRADE MARK 'SOLOID' BRAND PRODUCTS**

The word 'SOLOID' is a brand which designates fine products issued by Burroughs Wellcome & Co. To ensure the supply of these pure and reliable preparations, this brand should always be specified when ordering.

The series of 'Soloid' Brand products provides reliable antiseptics, astringents and anæsthetics; also convenient means of preparing stains for microscopic work, and test solutions for water, sewage, or urine analysis. Their portability, accuracy in dosage, uniform activity and ready solubility render them far preferable to stock solutions.



Pharmacopœial preparations are U.S.P. unless otherwise stated.

	STRENGTH	Issued in	
		bots. of	bots. of
'Soloid' Brand Products—continued			
'SOLOID' BRAND—			
„ Alum	gr. 10	—	100
„ Alum and Zinc Sulphate ...		25	—
℞ Aluminis	gr. 15		
Zinci Sulphatis	gr. 15		
„ Alum and Zinc Compound, Strong		25	—
℞ Aluminis	gr. 30		
Zinci Sulphatis	gr. 15		
„ Argyrol, tubes of 12	gr. 1	—	—
„ „ tubes of 6	gr. 5·45	—	—
„ Atropine Sulphate, tubes of 6	gr. 0·545	—	—
„ Atropine and Cocaine, tubes of 6		—	—
℞ Atropinæ Sulphatis	gr. 0·272		
Cocainæ Hydrochloridi	gr. 1·09		
„ Black Lotion, N. F.		25	—
One in 6 fluid drachms of distilled water yields a solution corre- sponding to Lotion Nigra, N. F.			
„ Boric Acid (<i>scented with Otto of Rose</i>)	gr. 6	25	—
„ Boric Acid (<i>unscented</i>)	gr. 15	50	—
„ Boric Acid and Zinc Sulphate (<i>scented with Otto of Rose</i>)		25	—
℞ Acidi Borici	gr. 6		
Zinci Sulphatis	gr. 1/2		
„ Carbolic Acid (Phenol), tubes of 25	gr. 5	—	—
„ „ „ „ 12	gr. 20	—	—
„ „ „ „ 6	gr. 60	—	—
„ Cocaine Hydrochloride, tubes of 25	gr. 1/2	—	100
„ Cocaine Hydrochloride	gr. 1	25	100
„ „ „ „	gr. 5	25	—
„ Cocaine and Eucaïne, of each	gr. 1/2	25	—
„ Copper Sulphate	gr. 1	—	100
„ Corrosive Sublimate (Hydrarg. Chlor. Corrosiv.) (<i>Ophthal- mic</i>), tubes of 25 (<i>see page 119</i>)	gr. 1/1000	—	—

'Soloid' Brand Products are also issued in bottles of 500,
with the exception of those put up in tubes only

Pharmacopœial preparations are U.S.P. unless otherwise stated

'Soloid' Brand Products—continued	STRENGTH	Issued in	
		bots. of	bots. of
'SOLOID' BRAND—			
„ Corrosive Sublimate (Hydrarg. Chlor. Corrosiv.) ...	gr. 1·75	—	100
„ Corrosive Sublimate (Hydrarg. Chlor. Corrosiv.) ...	gr. 7·3	25	100
One in 16 fluid ounces of water = 1 in 1000 solution.			
„ Corrosive Sublimate (Hydrarg. Chlor. Corrosiv.) ...	gr. 8·75	25	100
„ Corrosive Sublimate (Hydrarg. Chlor. Corrosiv.) ...	gr. 14·6	—	100
One in 32 fluid ounces of water = 1 in 1000 solution.			
„ Corrosive Sublimate (Hydrarg. Chlor. Corrosiv.) ...	gr. 17·5	—	100
„ Corrosive Sublimate (Hydrarg. Chlor. Corrosiv.) ...	0·5 gm.	25	100
„ Corrosive Sublimate (Hydrarg. Chlor. Corrosiv.), tubes of 10	1 gm.	25	—
„ Eucaine Hydrochloride ...	gr. 1	25	—
„ „ „ ...	gr. 5	25	—
„ Eucaine Lactate ...	gr. 1	25	—
„ „ „ ...	gr. 5	25	—
„ Homatropine and Cocaine, tubes of 6 ...		—	—
℞ Homatropinæ Hydrobromidi ...	gr. 0·545		
Cocainæ Hydrochloridi ...	gr. 1·09		
„ Homatropine Hydrobromide, tubes of 6 ...	gr. 0·545	—	—
„ Homatropine Methylbromide and Cocaine, tubes of 6 ...		—	—
℞ Homatropinæ Methylbromidi ...	gr. 0·545		
Cocainæ Hydrochloridi ..	gr. 1·09		
„ Lead and Opium ...		25	—
℞ Plumbi Acetatis ...	gr. 8		
Tinct. Opii ...	min. 15		
Each represents 1 ounce of the N.F. Lotio Plumbi et Opii.			

'Soloid' Brand Products are also issued in bottles of 500,
with the exception of those put up in tubes only

Pharmacopœial preparations are U.S.P. unless otherwise stated

'Soloid' Brand Products—continued

'SOLOID' BRAND—	STRENGTH	Issued in	
		bots. of	bots. of
„ Lead Subacetate	gr. 10	25	—
‘Soloid’ Lead Subacetate is prepared from basic lead acetate, and not from normal lead acetate.			
„ Lead Subacetate	gr. 11.5	25	—
One in 2½ oz. of distilled water yields a 1 per cent. solution, corresponding to Liquor Plumbi Subacetatis Dilutus.			
„ Mercuric Potassium Iodide (formerly known as Iodic- Hydrarg.), tubes of 25 ...	gr. 1.75	—	100
„ Mercuric Potassium Iodide ...	gr. 4.37	25	100
„ Mercuric Potassium Iodide ...	gr. 7.3	25	100
One in 16 fluid ounces of water = 1 in 1000 solution (frequently known as Mercury Biniodide Solution)			
„ Mercuric Potassium Iodide ...	gr. 8.75	25	100
„ Mercuric Potassium Iodide ...	0.5 gm.	25	—
One in 500 c.c. of water = 1 in 1000 solution.			
„ Nasal, Alkaline Compound ...		—	100
℞ Boracis	gr. 5		
Sodii Chloridi	gr. 5		
„ Nasal, Antiseptic and Alka- line Compound		—	100
℞ Sodii Bicarbonatis ...	gr. 5		
Acidi Carbolicis	gr. 1/2		
Boracis	gr. 5		
„ Nasal, ‘Eucalyptia’ Com- pound		—	100
℞ Sodii Bicarbonatis ...	gr. 8		
Boracis	gr. 8		
Sodii Benzoatis	gr. 1/3		
Sodii Salicylatis	gr. 1/3		
Eucalyptol	min. 1/6		
Thymol	gr. 1/6		
Menthol	gr. 1/12		
Ol. Gaultheriæ	min. 1/12		

‘Soloid’ Brand Products are also issued in bottles of 500,
with the exception of those put up in tubes only

Pharmacopœial preparations are U.S.P. unless otherwise stated

'Soloid' Brand Products—continued	STRENGTH	Issued in	
		bots. of	bots. of
'SOLOID' BRAND—			
„ Nasal, Phenol Compound ...		25	—
℞ Sodii Bicarbonatis ... gr. 12			
Acidi Carbolici ... gr. 1-1/2			
Sodii Chloridi ... gr. 2			
„ Nasal, Sodium Bicarbonate Compound ...		—	100
℞ Sodii Bicarbonatis ... gr. 5			
Boracis ... gr. 5			
Sodii Chloridi ... gr. 5			
„ Nasal, Sodium Bicarbonate Compound, Saccharated ...		—	100
℞ Sodii Bicarbonatis ... gr. 5			
Boracis ... gr. 5			
Sodii Chloridi ... gr. 5			
Sacchari Albi ... gr. 5			
„ Naso-Pharyngeal Compound		25	100
℞ Sodii Chloridi ... gr. 7			
Boracis ... gr. 2-1/2			
Acidi Borici ... gr. 3/4			
Sodii Benzoatis ... gr. 1/2			
Menthol ... gr. 1/50			
Thymol ... gr. 1/100			
Cocainæ Hydrochloridi			
gr. 1/6			
Ol. Gaultheriæ ... min. 1/20			
„ 'Nizin' (Trade Mark) ...	gr. 2	—	100
„ „ „ ...	gr. 20	25	—
„ „ „ ...	0.15 gm.	—	100
A zinc salt of sulphanilic acid			
„ Paraform ...	gr. 5	—	100
„ Potassium Permanganate ...	gr. 1	—	100
„ „ „ ...	gr. 5	25	100
„ Potassium Permanganate and Alum ...		—	100
℞ Potassii Permanganatis ... gr. 3			
Aluminis ... gr. 5			

'Soloid' Brand Products are also issued in bottles of 500,
with the exception of those put up in tubes only

Pharmacopœial preparations are U.S.P. unless otherwise stated

	STRENGTH	Issued in	
		bots. of	bots. of
'Soloid' Brand Products—continued			
'SOLOID BRAND—			
„ Saline Compound, tubes of 12		—	—
℞ Calcii Chloridi ...	0.05 gm.		
Potassii Chloridi ...	0.05 gm.		
Sodii Chloridi ...	2.25 gm.		
Sodii Bicarbonatis...	0.025 gm.		
Dextrosi ...	0.25 gm.		
One dissolved in 250 c.c. of boiled (sterile) water for intravenous injection at 100° F. (37.8° C.)			
„ Silver Nitrate ...	gr. 1	25	—
„ „ „ ...	gr. 5	25	—
„ Sodium Chloride, tubes of 12	gr. 25	—	—
Two dissolved in 16 fluid ounces of boiled (sterile) water, for intravenous injection at 100° F. (37.8° C.), give a solution containing 0.685 per cent. of sodium chloride.			
„ Sodium Chloride, tubes of 6	gr. 50	—	—
One in 16 fluid ounces of boiled (sterile) water, for intravenous injection at 100° F. (37.8° C.)			
„ Sodium Chloride, tubes of 12	0.17 gm.	—	—
One in 25 c.c. of boiled (sterile) water, forms a normal (0.68 per cent.) saline solution for intravenous injection.			
„ Sodium Chloride Compound, tubes of 12 ...		—	—
℞ Sodii Chloridi ...	gr. 21		
Sodii Sulphatis ...	gr. 1		
Sodii Carbonatis ...	gr. 1		
Sodii Phosphatis ...	gr. 1		
Potassii Chloridi ...	gr. 1-1/4		
Two in 16 fluid ounces of boiled (sterile) water, for intravenous injection at 100° F. (37.8° C.)			
„ Zinc Chloride ...	gr. 5	25	—
„ Zinc Permanganate ...	gr. 1/8	—	100
„ Zinc Sulphate ...	gr. 1	—	100
„ „ „ ...	gr. 10	—	100
„ „ „ ...	gr. 10	—	100
„ Zinc Sulphocarbolate...	gr. 2	—	100
„ „ „ ...	gr. 10	—	100

Also a wide range of other products issued under the Soloid Brand

'Soloid' Brand Products are also issued in bottles of 500, with the exception of those put up in tubes only

Pharmacopœial preparations are U.S.P. unless otherwise stated

**'SOLOID' BRAND PRODUCTS FOR
TESTING PURPOSES, etc.**

For Urine Analysis

'SOLOID' BRAND—	STRENGTH	Issued in tubes of
„ Citric Acid	gr. I	20
„ Fehling's Test, <i>for preparing Fehling's Solution</i> , cartons of 24		
„ Indigo Test for Sugar (Sodium Nitro- phenyl-propionate)	gr. 1/4	20
„ Picric Acid	gr. I	20
„ Potassium Ferrocyanide	gr. I	20
„ Salicyl-sulphonic Acid	gr. 2	16

For Water Analysis

'SOLOID' BRAND—	STRENGTH
„ Ammonium Chloride... ..	0.00016 gm.
„ Lead Acetate	0.0184 gm.
„ Meta-phenylenediamine Sulphate	0.01 gm.
„ Oxalic Acid	0.1 gm.
„ Potassium Chromate... ..	0.0065 gm.
„ Potassium Ferrocyanide	0.013 gm.
„ Potassium Nitrate	0.00144 gm.
„ Potassium Permanganate	0.00395 gm.
„ Silver Nitrate... ..	0.0097 gm.
„ Soap	
„ Sodium Acid Sulphate	0.324 gm.
„ Zinc Dust	0.13 gm.
„ Zinc Sulphide	0.25 gm.
<i>In packages of 25</i>	
„ Nessler's Solution, in hermetically-sealed glass capsules. Boxes of 30 capsules, each containing ...	0.5 c.c.
„ 24 „ „ „	2.0 c.c.

For Sewage Analysis

'SOLOID' BRAND—	STRENGTH
„ Oxalic Acid	0.0079 gm.
„ Pyrogalllic Acid	0.032 gm.
„ Sodium Hydroxide	0.13 gm.

In packages of 25

Pharmacopœial preparations are U.S.P. unless otherwise stated.

'Soloid' Brand Products for Testing purposes, etc.—*continued*

Test Indicators

'SOLOID' BRAND—	STRENGTH
„ *Indigo-Carmine	
„ *Lacmoid	
„ *Methyl-Orange	
„ *Phenolphthalein	
„ *Rosolic Acid	
„ Starch	0.5 gm.

* One dissolved in 10 c.c. of solvent forms the Test Indicator.

In tubes of 10

Microscopic Stains

'SOLOID' BRAND—	STRENGTH
„ Bismarck Brown, pure	0.1 gm.
„ Borax Methylene Blue	
„ Ehrlich Triple Stain	
„ Eosin-Azur (for Giemsa staining with one solution)	0.015 gm.
„ Eosin, pure	0.1 gm.
„ Eosin-methylene Blue (Louis Jenner's Stain)	0.05 gm.
„ Fuchsine (Basic), pure	0.1 gm.
„ Gentian Violet, pure	0.1 gm.
„ Gram's Iodine Solution	15 c.c.
„ Hæmatoxylin (Delafield)	
„ Hæmatoxylin, pure	0.1 gm.
„ Methylene Blue, pure	0.1 gm.
„ Methyl Violet, pure	0.1 gm.
„ Romanowsky Stain (Leishman's Powder) ...	0.015 gm.
„ Romanowsky Stain (Wright's Modification)	0.05 gm.
„ Sodium Carbonate	0.05 gm.
„ Thionin Blue, pure	0.1 gm.
„ Toison Blood Fluid	

In tubes of 6

Methyl Alcohol (pure), for use in microscopic staining; in hermetically-sealed glass phials, each containing 15 c.c.

Also a wide range of other products issued under the 'Soloid' Brand

Pharmaceutical preparations are U.S.P. unless otherwise stated

Strophanthus Tincture (B. W. & Co.)

(Physiologically standardised in the Wellcome Physiological Research Laboratories.)

Prepared in accordance with the United States Pharmacopœia (Eighth Revision), from carefully selected strophanthus seeds.

Strophanthus Tincture (B. W. & Co.)

(Physiologically standardised in the Wellcome Physiological Research Laboratories.)

Prepared in accordance with the British Pharmacopœia, 1898, from carefully selected strophanthus seeds.

Strophanthus Tincture, 'Tabloid' Brand *(see page 165)***Suppositories** *(see 'Enule' Rectal Suppositories, pages 106-108 ; and 'Hazeline' Suppositories, page 109)***Surgical Dressings, Pleated Compressed, 'Tabloid' Brand** *(see pages 103-105)***Syringes, Hypodermic and Serum** *(see page 110)***TRADE MARK 'TABLOID' BRAND PRODUCTS**

The word 'TABLOID' is a brand which designates fine products issued by Burroughs Wellcome & Co. To ensure the supply of these pure and reliable preparations, this brand should always be specified when ordering.

Under the 'Tabloid' Brand are issued an immense variety of drugs and their combinations, all prepared from the purest ingredients, and divided into accurate doses with due regard to their therapeutic uses. They require no weighing or measuring, accurate doses can be immediately administered, and they keep unchanged in any climate. Owing to their extreme portability, supplies may be comfortably carried in the waistcoat pocket, and doses taken regularly whilst following the usual routine of social, professional, or commercial life. 'Tabloid' Brand products of unpleasant drugs are coated with a thin film of white sugar, readily soluble in the stomach.

Accurate
dosage

Pharmacopœial preparations are U.S.P. unless otherwise stated.

'Tabloid' Brand Products—continued

while those intended to act after leaving the stomach are coated with keratin, soluble only in the alkaline secretions of the intestines.

'TABLOID' BRAND—	DOSE	Issued in	
		oval bts. of	bts. of
„ Acetanilide (<i>see</i> Antifebrin)			
„ Aconite Tincture, min 1/4 and min. 1	I frequently	100	—
„ „ „ min. 5	I to 3	36	100
„ Aloes and Iron	I to 2	—	100
Each product equals one of the U.S.P. pills.			
„ Aloes and Myrrh	I to 2	—	100
Each product equals one of the U.S.P. pills.			
„ Aloin, gr. 1/10	I frequently	100	—
„ „ gr. 1/2	I to 4	25	100
„ Aloin Compound	I to 2 after	50	100
⊕ Aloini	gr. 1/5 meals, or		
Strychninæ Sulpha- tis	gr. 1/60 I to 3 at		
Ext. Belladonnæ	gr. 1/8 bed-time		
Pulv. Ipecacuanhæ	gr. 1/16		
„ Ammoniated Quinine ... I		25	100
Each contains quinine sulphate and ammonium bicarbonate to correspond with one fluid drachm of the tincture.			
„ Ammonium Bromide, gr. 5 ...	I to 6	—	100
„ „ „ gr. 10	I to 3	—	100
„ „ „ 0.5 gm.	I or more	25	100
„ „ „ 1.0 gm.	I to 2	25	—
„ Ammonium Carbonate, gr. 3	I to 3	—	100
„ „ „ 0.25 gm.	I or more	—	100
„ Ammonium Chloride, gr. 3...	I to 6	25	100
„ „ „ gr. 5...	I to 4	—	100
„ „ „ gr. 10	I to 2	—	100
„ „ „ 0.25 gm.	I to 6	25	100
„ „ „ 0.5 gm.	I to 3	25	100
„ Ammonium Chloride and Borax	I as required	—	100

'Tabloid' Brand Products are also issued in bottles of 500, with the exception of those put up in tubes only

Pharmacopœial preparations are U.S.P. unless otherwise stated

' Tableid' Brand Products—continued	DOSE	Issued in	
		oval bts. of	bts. of
' TABLOID' BRAND—			
„ Ammonium Chloride and Liquorice I as required		25	100
℞ Ammonii Chloridi... gr. 3			
Ext. Glycyrrhizæ ... gr. 2			
„ Antifebrin (Acetanilide), gr. 2	I to 2	25	100
„ „ „ gr. 5	I (<i>in special cases</i>)	25	100
„ „ „ 0.25 gm.	I	25	100
„ Antifebrin Compound ... I		—	100
℞ Antifebrini (Acetanilidi) gr. 2			
Camphoræ Monobromatæ gr. 1			
Caffeinæ Citratis ... gr. 1			
„ Antipyrine (Phenazone), gr. 2-1/2	I to 4 or more	25	100
„ „ „ gr. 5	I to 4	25	100
„ „ „ 0.25 gm.	I to 4	25	100
„ „ „ 0.5 gm.	I to 2	25	100
„ Antipyrine Compound ... I to 4		25	100
℞ Antipyrini (Phenazoni) ... gr. 3			
Caffeinæ gr. 1			
„ 'Aol' (<i>Trade Mark</i>), a derivative of <i>Santalum album</i> , 0.3 gm. boxes of 50... .. 2 or more			
„ Apomorphine Compound ... I as required		25	100
℞ Apomorphinæ Hydrochloridi gr. 1/50			
Ammonii Chloridi gr. 3			
Ext. Glycyrrhizæ gr. 1-1/2			
„ Apomorphine Hydrochloride, gr. 1/50 I to 3 (<i>expectorant</i>)		50	—
„ Aromatic Chalk Powder with Opium, N.F., gr. 5 ... 2 to 4 or more		25	100
Each contains approximately:— Chalk, gr. 1; Opium, gr. 1/8, with aromatics.			

' *Tableid' Brand Products are also issued in bottles of 500, with the exception of those put up in tubes only*

Pharmacopœial preparations are U.S.P. unless otherwise stated

			Issued in	
			oval bts. of	bts. of
'Tabloid' Brand Products—continued				
'TABLOID'	BRAND—	DOSE		
„	Arsenical Compound...	I to 2	—	100
	℞ Acidi Arseniosi ... gr. 1/100			
	Ferri Sulphatis			
	Exsiccati gr. 1			
	Calcii Sulphidi ... gr. 1/4			
	Ext. Gentianæ ... gr. 2			
„	Arsenious Acid, gr. 1/100 ...	I to 6	100	—
„	„ „ „ gr. 1/50 ...	I to 3	100	—
„	„ „ „ gr. 1/20 ...	I	100	—
„	„ „ „ 0.001 gm. ...	I to 3	100	—
„	„ „ „ 0.0025 gm. ...	I to 2	100	—
„	„ „ „ 0.005 gm. ...	I	100	—
„	Arsenous Iodide and Mercuric Iodide ...			
	One represents min. 5 of Liq. Arsenii et Hydrargyri Iodidi, containing Arsenous and Mercuric Iodides, gr. 1/22.			
	(See 'Tabloid' Donovan Solution)			
„	Asafetida and Opium Compound ...	I to 2	—	100
	℞ Asafetidæ			
	Camphoræ			
	Pulv. Opii			
	Pulv. Piperis Nigri āā gr. 1			
„	'Aspirin,' gr. 5 ...	I to 5	25	100
„	„ „ 0.5 gm. ...	I to 3	25	100
„	Astringent Mixture ...	I to 2	—	100
	℞ Confectionis			
	Aromat. gr. 4-1/2			
	Pulv. Cretæ Comp. gr. 20			
	Ammon. Bicarb. ... gr. 1/2			
	Tinct. Gambir Co. min. 60			
	Tinct. Cardamomi			
	Comp. ... min. 4-1/2			
	Tinct. Opii ... min. 1			
	Olei Cinnamomi ... min. 1/8			
„	Atropine Sulphate, gr. 1/100	I	50	—
„	Belladonna Tincture, min. 1...	I frequently	100	—
„	„ „ „ min. 5...	I to 3	48	100
„	Benzoic Acid, gr. 5 ...	I to 3	—	100
„	Beta-Naphthol, gr. 3...	I to 3	—	100
„	„ „ „ 0.25 gm. ...	I to 2	—	100

'Tabloid' Brand Products are also issued in bottles of 500, with the exception of those put up in tubes only

Pharmacopœial preparations are U.S.P. unless otherwise stated

'TABLOID' BRAND—		DOSE	Issued in	
			oval botts. of	botts. of
„	Beta-Naphthol Compound ...	I to 4	25	100
℞	Beta-Naphthol ... gr. 1			
	Carbonis Ligni ... gr. 4			
	Ol. Menthae			
	Piperitæ ... min. 1/2			
„	Bismuth and Dover Powder...	I to 6	—	100
℞	Bismuthi			
	Subnitratiss ... gr. 2-1/2			
	Pulv. Ipecac. ċ			
	Opio ... gr. 2-1/2			
„	Bismuth and Soda ...	I to 4 or more	—	100
℞	Bismuthi			
	Subnitratiss... gr. 2-1/2			
	Sodii Bicarbonatis gr. 2-1/2			
„	Bismuth and Soda ...	I to 4 or more	25	100
℞	Bismuthi Subnitratiss 0.25 gm.			
	Sodii Bicarbonatis 0.25 gm.			
„	Bismuth, Rhubarb and Soda...	I to 4	25	100
℞	Bismuthi			
	Subnitratiss ... gr. 3			
	Pulv. Rhei ... gr. 1			
	Sodii Bicarbonatis gr. 2			
„	Bismuth Salicylate (<i>physio-</i> <i>logically pure</i>), gr. 5 ...	I to 4	—	100
„	Bismuth Salicylate (<i>physio-</i> <i>logically pure</i>), 0.5 gm. ...	I to 3	—	100
„	Bismuth Subcarbonate, gr. 5	I to 4	25	100
„	„ „ 0.5 gm.	I to 3	25	100
„	Bismuth Subgallate, gr. 5 ...	I to 4	25	100
„	Bismuth Subnitrate, gr. 5 ...	I to 4	25	100
„	„ „ gr. 10 ...	I to 2	—	100
„	„ „ 0.5 gm. ...	I or more	25	100
„	Blaud (Pil. Ferrugin.), gr. 5 ...	I to 3	—	100
„	„ „ gr. 8 ...	I to 2	—	100
„	„ „ 0.25 gm.	I or more	—	100
„	Blaud Pill and Aloin... ..	I to 4	—	100
℞	Pil. Ferrugin.			
	(Blaud) ... gr. 5			
	(= 20 % Ferri Carbonatis)			
	Aloini ... gr. 1/20			

'Tabloid' Brand Products are also issued in bottles of 500,
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Pharmacopœial preparations are U.S.P. unless otherwise stated.

'Tabloid' Brand Products—continued

		Issued in	
		oval bols. of	bols. of
'TABLOID' BRAND—			
	DOSE		
„	Blaud Pill and Aloin... I or more	—	100
	℞ Pil. Ferrugin. (Blaud)... 0.25 gm. (= 20 % Ferri Carbonatis)		
	Aloini ... 0.005 gm.		
„	Blaud Pill and Arsenic I to 4	—	100
	℞ Pil. Ferrugin. (Blaud) ... gr. 5 (= 20 % Ferri Carbonatis)		
	Acidi Arseniosi ... gr. 1/64		
„	Blaud Pill and Arsenic I to 4	—	100
	℞ Pil. Ferrugin. (Blaud) ... 0.25 gm. (= 20 % Ferri Carbonatis)		
	Acidi Arseniosi ... 0.001 gm.		
„	Blaud Pill and Cascara I increased to 4	—	100
	℞ Pil. Ferrugin. (Blaud)... gr. 5 (= 20 % Ferri Carbonatis)		
	Ext. Cascaræ Sagradæ ... gr. 1/2		
„	Blaud Pill and Cascara I to 4	—	100
	℞ Pil. Ferrugin. (Blaud)... 0.25 gm. (= 20 % Ferri Carbonatis)		
	Ext. Cascaræ Sagradæ ... 0.025 gm.		
„	Blaud Pill Compound ... I	—	100
	℞ Pil. Ferrugin. (Blaud)... gr. 10 (= 20 % Ferri Carbonatis)		
	Pulv. Capsici ... gr. 1/4		
	Aloini ... gr. 1/30		
	Strychninæ ... gr. 1/30		
	Acidi Arseniosi ... gr. 1/30		
„	Blaud Pill Compound ... I	—	100
	℞ Pil. Ferrugin. (Blaud)... 0.5 gm. (= 20 % Ferri Carbonatis)		
	Pulv. Capsici ... 0.015 gm.		
	Aloini ... 0.002 gm.		
	Strychninæ ... 0.002 gm.		
	Acidi Arseniosi ... 0.002 gm.		
„	Blaud Pill with Arsenic and Strychnine ... I to 4	—	100
	℞ Pil. Ferrugin. (Blaud)... gr. 5 (= 20 % Ferri Carbonatis)		
	Acidi Arseniosi ... gr. 1/100		
	Strychninæ ... gr. 1/100		

'Tabloid' Brand Products are also issued in bottles of 500,
with the exception of those put up in tubes only

Pharmacopœial preparations are U.S.P. unless otherwise stated

'Tabloid' Brand Products—continued		Issued in	
		oval bts. of	bts. of
'TABLOID' BRAND—			
	DOSE		
„	Blaud Pill with Arsenic and Strychnine... .. I to 4	—	100
	℞ Pil. Ferrugin. (Blaud)... 0.25 gm. (= 20 % Ferri Carbonatis)		
	Acidi Arseniosi ... 0.0005 gm.		
	Strychninæ ... 0.0005 gm.		
„	Blue Pill, gr. 4 I to 2	25	100
	Each contains gr. 1-1/3 of pure Metallic Mercury.		
„	Blue Pill and Rhubarb Com- pound I to 2	—	100
	℞ Pil. Hydrargyri ... gr. 2-1/2		
	Pil. Rhei Comp. ... gr. 2-1/2		
„	Blue Pill, Colocynth and Hyoscyamus I to 2	25	100
	℞ Pil. Hydrargyri ... gr. 2		
	Pil. Colocynthidis et Hyoscyami, N.F. ... gr. 4		
„	Bone Medulla, gr. 5, boxes of 50 I or more	—	—
„	Borax, gr. 5 I to 4 or more	25	100
„	Boric Acid, gr. 5 I to 3	—	100
„	Bromides Compound... .. I to 6	—	100
	℞ Sodii Bromidi ... gr. 2		
	Strontii Bromidi ... gr. 2		
	Ammonii Bromidi... gr. 1		
	Sodii Arsenatis Exsicc. gr. 1/60		
„	Butyl-Chloral Hydrate and Gelsemine I	—	100
	℞ Butyl-Chloral Hydratis... gr. 3		
	Gelseminæ Hydrochloridi ... gr. 1/200		
„	Caffeine Citrate, gr. 2 I to 3	—	100
„	„ „ 0.1 gm. I to 4	—	100
„	Calcium Carbonate Compound ℞ Calcii Carb. Præcip. gr. 3-1/2 Mag. Carb. Pond. gr. 2-1/2 Bismuthi Carbonatis gr. 2	25	100
	occasionally		
„	Calcium Iodo-ricinoleate, gr. 3, boxes of 50 I to 3	—	—

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Pharmacopœial preparations are U.S.P. unless otherwise stated

‘Tabloid’ Brand Products—continued			Issued in	
			oval bts. of	bts. of
‘TABLOID’ BRAND—	DOSE			
„ Calcium Lactate, gr. 5	... I to 3	25	100	
„ Calcium Sulphide, gr. 1/4	... I to 4	—	100	
„ „ „ gr. 1/2	... I to 2	—	100	
„ „ „ gr. 1	... I	—	100	
„ Calomel, gr. 1/10, gr. 1/6, gr. 1/4 and gr. 1/2	... I	100	—	
„ Calomel, gr. 1	... I to 5	—	100	
„ „ gr. 2	... I to 3	—	100	
„ „ gr. 3	... I to 2	—	100	
„ „ gr. 5	... I	—	100	
„ „ 0.005 gm.	... I or more	100	—	
„ „ 0.01 gm.	... I or more	100	—	
„ „ 0.1 gm.	... I to 3	100	—	
„ Calomel and Creosote	... I to 5	—	100	
℞ Hydrargyri Chloridi				
Mitis ... gr. 1/6				
Creosoti ... min. 1				
„ Calomel and Jalap, N. F.	... I to 4	—	100	
℞ Hydrargyri Chloridi				
Mitis ... gr. 1				
Pulv. Jalapæ ... gr. 2				
„ Calomel and Piperine, of each gr. 1/2	... I repeated	—	100	
„ Calomel, gr. 1/4, and Sodium Bicarbonate, gr. 1	... I or more	25	100	
„ Calomel, gr. 1/2, and Sodium Bicarbonate, gr. 2-1/2	... I or more	25	100	
„ Calomel, gr. 1, and Sodium Bicarbonate, gr. 5	... I or more	25	100	
„ Calomel Compound (<i>Plummer Pill</i>), gr. 4	... I to 2	25	100	
℞ Hydrargyri Chloridi				
Mitis gr. 1				
Antimonii Sulphurati gr. 1				
Guaiaci Resinæ ... gr. 2				
„ Camphorated Opium Tincture, (Paregoric), min. 2	I frequently	100	—	
„ „ „ min. 5	I frequently	48	100	
„ „ „ min. 15	I to 4	36	100	
„ Camphor Essence (Saturated)	2 to 3	25	100	

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'Tablet' Brand Products—continued		Issued in	
		oval bts. of	bts. of
'TABLET' BRAND—	DOSE		
,, Cannabis Indica Tincture,			
min. 5	I to 3	48	100
,, Capsicum Tincture, min. 1 ...	I frequently	100	—
,, " " min. 5 ...	I to 3 or more	—	100
,, Carbolic Acid, gr. 1, boxes of 24	I to 3	—	—
,, Carbolic Acid (Phenol), gr. 1/4 (for the throat)	I as required	25	100
,, Carbolic Acid (Phenol), gr. 1/2 (for the throat)	I as required	25	100
,, Carbolic Acid, gr. 1/2, with Slippery Elm, bottles of 25 ...	I occasionally	—	100
,, Carlsbad Salt. Effervescent, Artificial, N.F., tubes of 25	I or more as desired	—	—
,, Cascara Sagrada (Dry Extract),			
gr. 1	I or more	25	100
" " " " gr. 2	I to 4	25	100
" " " " gr. 3	I to 3	25	100
" " " " gr. 4	I to 2	25	100
" " " " gr. 5	I as required	25	100
" " " " 0.15 gm.	I to 4	25	100
" " " " 0.25 gm.	I to 2	25	100
,, Cascara and Gentian Compound	I to 3	25	100
℞ Ext. Cascarae			
Sagradae	gr. 2		
Ext. Nucis Vomicae	gr. 1/5		
Ext. Belladonnae	... gr. 1/10		
Ext. Gentianae	... gr. 1		
Capsicini	... gr. 1/10		
,, Cascara Compound	I to 4	25	100
℞ Ext. Cascarae			
Sagradae	gr. 1		
Ext. Euonymi Sicci	gr. 1/2		
Iridini	... gr. 1/2		
Ext. Nucis Vomicae	gr. 1/16		
Ext. Hyoscyami	... gr. 1/3		
,, Castor Oil, min. 5, boxes of 50	I or more	—	—
,, Cathartic Compound... ..	I to 2	25	100
Each product equals one of the U.S.P. pills.			

'Tablet' Brand Products are also issued in bottles of 500,
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Pharmacopœial preparations are U.S.P. unless otherwise stated

'Tabloid' Brand Products—continued			Issued in	
			oval bts. of	bts. of
'TABLOID' BRAND—	DOSE			
„ Cerebrin, gr. 5	1 or more	—	100	
„ Cerium Oxalate, gr. 5 ...	1 to 2	—	100	
„ Chalk. Aromatic Powder with Opium, N.F. gr. 5	2 to 4 or more	25	100	
Each contains approximately:— Chalk, gr. 1; Opium gr. 1/8, with aromatics.				
„ Charcoal (Pure Willow), gr. 5,	1 or more as required	—	100	
„ Charcoal (Pure Willow), 0.25 gm.	1 to 6	25	100	
„ Chloral Hydrate, gr. 5 ...	1 to 4	—	100	
„ „ „ gr. 10	1 to 2	—	100	
„ „ „ 0.25 gm.	1 to 5	25	100	
„ „ „ 1.0 gm.	1	25	—	
„ Cinchona Tincture, min. 30...	1 to 2	36	100	
„ Cinchona Compound Tincture, min. 30	1 to 2	25	100	
„ Citric Acid, gr. 5	1 to 4	—	100	
Cocaine Hydrochloride (<i>see</i> 'Soloid' Brand products)				
„ Cocaine Co. (<i>see</i> Voice, page 167)				
„ Codeine, gr. 1/4	1 to 4 or more	25	100	
„ „ gr. 1/2	1 to 4	25	100	
„ Codeine and Benzoic Acid Compound	1 as required	25	100	
℞ Acidi Benzoici	gr. 1/2			
Codeinæ	gr. 1/10			
Menthol	gr. 1/10			
Pulv. Ipecacuanhæ	gr. 1/10			
Cocainæ Hydrochloridi	gr. 1/40			
Ol. Menthæ Piperitæ min. 1/16				
Gummi Rubri	q.s.			
„ Codeine and Nux Vomica ...	1 to 2	25	—	
℞ Codeinæ Phosphatis gr. 1				
Ext. Nucis Vomicae gr. 1/4				

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Pharmacopœial preparations are U.S.P. unless otherwise stated

‘Tabloid’ Brand Products— <i>continued</i>			Issued in	
			oval bts. of	bts. of
‘TABLOID’ BRAND—				
	DOSE			
„ ‘Coffee-Mint’	... .. 1 to 4 or more	25	100	
℞ Sodii Bicarbonatis...	gr. 3			
Autonii				
Bicarbonatis	gr. 1/16			
Ext. Coffeæ	... gr. 1/2			
Cerii Oxalatis	... gr. 1/4			
Ol. Menthæ Piperitæ	<i>q.s.</i>			
„ Colchicum Compound	... 1 to 2	—	100	
℞ Ext. Colchici Cormi	gr. 1/2			
Acidi Salicylici	... gr. 3			
„ Colocynth and Hyoscyamus, N.F. ....	... .. 1 to 2	—	100	
Each product equals one of the N.F. pills.				
„ Colocynth Compound, N.F.	1 to 2	—	100	
Each product equals one of the N.F. pills.				
„ Cretæ Arom. c. Opio, Pulv., N.F., gr. 5	2 to 4 or more	25	100	
Each contains approximately:— Chalk, gr. 1; Opium, gr. 1/8, with aromatics.				
„ Cubeb and Belladonna, <i>Effervescent</i>	... .. 1 as required	—	100	
℞ Pulv. Cubebæ	... gr. 1/2			
Ext. Belladonnæ	... gr. 1/20			
„ Cubeb Compound	... .. 1 as required	25	100	
℞ Oleo-resinæ Cubebæ	gr. 1/4			
Ammonii Chloridi...	gr. 1/2			
Glycyrrhizini	... gr. 1/4			
„ Didymin (Testicular Sub- stance), gr. 5	1 increased to 4	—	100	
„ Digitalin (Amorphous), gr. 1/100	1 to 3	50	—	
„ Digitalis Tincture, min. 1 ...	1 frequently	100	—	
„ „ „ min. 5	1	48	100	
„ Donovan Solution, min. 5 ...	1 to 4	—	100	
One represents min. 5 of Liq. Arsenii et Hydrargyri Iodidi, containing arsenous and mer- curic iodides, of each, gr. 1/22.				
(See Tabloid Arsenous Iodide and Mercuric Iodide)				

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Pharmacopœial preparations are U.S.P. unless otherwise stated

			Issued in	
			oval botts. of	botts. of
'Tabloid' Brand Products—continued				
'TABLOID' BRAND—	DOSE			
„ Dover Powder (Ipecac. with Opium), gr. 1/4	I frequently	100	—	
Each contains Opium and Ipecacuanha, of each gr. 1/40				
„ Dover Powder (Ipecac. with Opium), gr. 5	I to 3	25	100	
Each contains Opium and Ipecacuanha, of each gr. 1/2				
„ Dover Powder (Ipecac. with Opium), 0.25 gm.	I to 4	25	100	
Each contains Opium and Ipecacuanha, of each 0.025 gm.				
„ Easton Syrup (Syrup of the Phosphates of Iron, Quinine and Strychnine), dr. 1/2 and 2 c.c.	I to 2	25	100	
„ Easton Syrup (Syrup of the Phosphates of Iron, Quinine and Strychnine), dr. 1 and 4 c.c.	I	25	100	
Presents, in a soluble condition, the amount of iron (ferric state), quinine and strychnine contained in corresponding doses of the official Syrup.				
(See 'Tabloid' Phosphates of Iron, Quinine and Strychnine)				
„ Effervescent Products, 'Tabloid' Brand (see under the name of each product)				
„ Elaterin, gr. 1/40	I to 4	25	—	
„ Ergotin (Ergot Extract), gr. 1	I to 4 or more	—	100	
„ „ „ „ gr. 2	I to 4	—	100	
„ „ „ „ gr. 3	I to 3	—	100	
„ „ „ „ 0.25 gm.	I to 2	—	100	
„ Ergotin and Strychnine B Ergotini (Ext. Ergotæ) gr. 3	I to 2	—	100	
Strychninæ Sulphatis gr. 1 30				
„ Erythrol Tetranitrate (Tetranitrin), gr. 1/4, tubes of 25...	I to 4	—	—	

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Pharmaceutical preparations are U.S.P. unless otherwise stated.

'Tabloid' Brand Products—continued		Issued in	
		oval bts. of	bts. of
'TABLOID' BRAND—			
	DOSE		
„ Erythrol Tetranitrate (Tetra- nitrin), gr. 1/2	I to 2	25	—
„ Erythrol Tetranitrate (Tetra- nitrin), gr. 1	I	12	—
„ Euonymin (Euonymus Dry Extract), gr. 1/8	I to 4 or more	50	—
„ Euonymin (Euonymus Dry Extract), gr. 1/2	I to 4	50	—
„ Exalgin, gr. 2	I to 2	—	100
„ Fellis Bovini Purificati, gr. 4	I to 4	—	100
„ Fellis Porcini Purificati, gr. 4	I to 4	—	100
„ Ferric Chloride, min. 10 ...	I	—	100
One represents the amount of Ferric Chloride in min. 10 of Tincture Ferri Chloridi. It contains a small quantity of ammonium chloride as a vehicle.			
„ Ferric Chloride and Arsenic... I		—	100
℞ Ferri Chloridi ... gr. 1-1/4 Acidi Arseniosi ... gr. 1/30			
„ Ferruginous (<i>see</i> Blaud)			
„ Ferrum (<i>see</i> Iron)			
„ 'Forced March' (<i>see</i> 'Tabloid' Kola Compound)			
„ Galbanum Comp. (Asafetida Compound)	I to 2	—	100
℞ Asafetida, Galbani, Myrrhæ, āā gr. 1-1/7			
„ Gelsemium Tincture, min. 5	I to 3	48	100
„ 'Gingāment' (<i>Trade Mark</i>), (Neutralising Compound), <i>originated by</i> B. W. & Co....	I or more	25	100
℞ Sodii Bicarbonatis ... gr. 5 Ammonii Bicarbonatis gr. 1/12 Gingerini, Saccharini, Ol. Menthæ Piperitæ, āā q.s.			
„ Ginger (Soluble), N.F. min. 5	I to 4	48	100
„ „ „ „ min. 10	I to 2	—	100

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with the exception of those put up in tubes only

Pharmacopœial preparations are U.S.P. unless otherwise stated

	DOSE	Issued in	
		oval bts. of	bts. of
'Tabloid' Brand Products—continued			
'TABLOID' BRAND—			
„ Glycerophosphates Compound, dr. 1/2	I to 8	25	100
Each contains calcium, sodium, potassium, magnesium and iron glycerophosphates, kola, pepsin and diastase, with gr. 1/800 of strychnine glycerophosphate, and is equivalent to 1/2 fluid drachm of syrup of glycerophosphates.			
„ Glycerophosphates Compound 2 c.c.	I to 4	25	100
Each contains calcium, sodium, potassium, magnesium and iron glycerophosphates, pepsin, diastase and kola, with 0.0009 gm. of strychnine glycerophosphate, and is equivalent to 2 c.c. of syrup of glycerophosphates.			
„ Granulated Opium (<i>see</i> Opium Tincture)			
„ Gregory Powder (Rhubarb Comp. Powder), gr. 5 ...	I to 4 or more	25	100
Each contains: — Rhubarb, gr. 1-1/4; Magnesium Oxide, gr. 3-1/4; and Ginger, gr. 1/2			
„ Grey Powder, gr. 1/4, gr. 1/3 and gr. 1/2	I repeated	100	—
„ „ „ gr. 1	I to 5	100	—
„ „ „ gr. 2	I to 3	—	100
„ „ „ gr. 3	I to 2	—	100
„ „ „ gr. 5	I	—	100
„ „ „ 0.05 gm.	I or more	100	—
„ „ „ 0.15 gm.	I to 3	—	100
The 'Tabloid' products contain 38 per cent. of pure metallic mercury.			
„ Grey Powder and Dover Powder, of each gr. 1/2 ...	I to 5 or more	—	100
Each contains: — Mercury, gr. 1/5; Opium and Ipecacuanha, of each gr. 1/20.			

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Pharmacopæial preparations are U.S.P. unless otherwise stated

'TABLOID' BRAND—	DOSE	Issued in	
		oval bts. of	bts. of
„ Grey Powder and Dover Powder, of each gr. 1 ...	I to 5	—	100
Each contains: — Mercury, gr. 2/5; Opium and Ipecacu- anha, of each gr. 1/10.			
„ Grey Powder and Opium ...	I to 5	—	100
℞ Hydrarg. c. Cretâ... gr. 1 Pulv. Opii ... gr. 1/6			
„ Grey Powder, gr. 1/2, and Sodium Bicarbonate, gr. 2-1/2	I repeated	—	100
„ Grey Powder, gr. 1, and Sodium Bicarbonate, gr. 5	I to 5	25	100
„ Grey Powder, Opium and Quinine	I to 3	—	100
℞ Hydrargyri cum Cretâ gr. 1-1/2 Extracti Opii ... gr. 1/6 Quininæ Sulphatis gr. 1-1/2			
„ Guaiacol Camphorate, gr. 5	I to 2 increased	25	100
„ Guaiacol Carbonate, gr. 5 ...	I to 2	25	100
„ „ „ 0.3 gm.	I to 2	25	100
„ Guaiacum and Quinine Com- pound	I to 4	—	100
℞ Guaiaci Resinæ ... gr. 2 Sulphuris ... gr. 2 Quininæ Salicylatis gr. 1/2			
„ Guaiacum and Sulphur ...	I to 4	25	100
℞ Guaiaci Resinæ ... gr. 3 Sulphuris Præcipitati gr. 3			
„ Guaiacum Resin, gr. 5 ...	I to 3	25	100
„ Hæmoglobin, gr. 5	I or more	—	100
„ Hydrarg. c. Cretâ. (<i>see</i> Grey Powder)			
„ Hydrarg. Iodid. Flav., gr. 1/8	I to 4	25	100
„ „ „ „ 0.025 gm.	I	100	—
„ Hydrarg. Iodid. Rubr., gr. 1/20	I	50	—
„ „ „ „ gr. 1/16	I	50	—
„ „ „ „ 0.01 gm.	I	100	—

'Tabloid' Brand Products are also issued in bottles of 500,
with the exception of those put up in tubes only

Pharmacopœial preparations are U.S.P. unless otherwise stated

'Tabloid' Brand Products—continued		Issued in	
		oval bts. of	bts. of
'TABLOID' BRAND—	DOSE		
„ Hydrarg. Iodid. Virid., gr. 1/8	I to 4 increased	50	—
„ Hydrargyri Chloridi Corrosivi (Mercuric Chloride), gr. 1/100	I to 4 or more	100	—
„ Hydrargyri Chloridi Corrosivi (Mercuric Chloride), gr. 1/16	I	100	—
„ Hydrargyri Chloridi Corrosivi (Mercuric Chloride), 0.01 gm.	I	100	—
„ Hydrarg. Chlor. Corrosiv., gr. 1/32, et Potass. Iodid., gr. 2-1/2	I to 2	—	100
„ Hydrarg. Chlor. Corrosiv., gr. 1/16 et Potass. Iodid. gr. 5	I	—	100
„ Hydrarg. Subchlor. (<i>see</i> Calomel)			
„ Hydrarg. Chlor. Mit. Comp. (Plummer Pill), gr. 4	I to 2	25	100
℞ Hydrargyri Chloridi Mitis ... gr. 1 Antimonii Sulphurati gr. 1 Guaiaci Resinæ ... gr. 2			
„ Hydrastine Compound ...	I to 3	25	100
℞ Hydrastinæ Hydrochloridi gr. 1/4 Ext. Ergotæ (Ergotini) gr. 1/2 Cannabinæ Tannatis gr. 1/2	repeated		
„ Hydrastine Compound and Cotarnine Hydrochloride ...	I to 3	25	100
℞ Hydrastinæ Hydrochloridi gr. 1/4 Ext. Ergotæ (Ergotini) gr. 1/2 Cannabinæ Tannatis gr. 1/2 Cotarninæ Hydrochloridi gr. 1/4	repeated		

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'Tablet' Brand Products—continued		Issued in	
		oval bts. of	bts. of
'TABLET' BRAND—	DOSE		
„ Hydrastine Hydrochloride, gr. 1/4	I to 4 repeated	—	100
„ Hyoscyamus Tincture, min. 10	I to 4 or more	36	100
„ Hypodermic Products (see page 110)			
„ Hypophosphites Compound, gr. 1½	I to 2	25	100
Containing gr. 1-1/2 of the combined hypophosphites of calcium, potassium, sodium, manganese, iron and quinine, with gr. 1/128 of strychnine hypophos- phite.			
„ Hypophosphites Compound, gr. 3	I	25	100
Containing gr. 1/64 of strychnine hypophosphite.			
„ Hypophosphites Compound, 0.1 gm.	I to 2	25	100
Each contains calcium, po- tassium, sodium, manga- nese, iron and quinine hypophosphites, with 0.0005 gm. of strychnine hypo- phosphite.			
„ Hypophosphites Compound, 0.2 gm.	I	25	100
Containing 0.001 gm. of strychnine hypophosphite.			
„ Ichthyol, gr. 2½	I to 4	25	100
„ „ 0.1 gm.	I to 4	25	100
„ Indian Cannabis Extract (see Cannabis Indica Tincture)			
„ Ipecacuanha Powder, gr. 1/10	I frequently	100	—
„ „ „ gr. 5 ...	I every hour	—	100
„ „ „ 0.25 gm.	I to 8	—	100
„ Ipecacuanha Powder deprived of its Emetic Principles, gr. 5	I to 4 or more	—	100
„ Ipecacuanha and Tartarated Antimony, of each gr. 1/100	I frequently	—	100

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'Tabloid' Brand Products—continued	DOSE	Issued in	
		oval bts. of	bts. of
'TABLOID' BRAND—			
„ Ipecacuanha Wine, min. 5 ...	I to 3	50	100
„ Ipecacuanha with Opium (<i>see</i> Dover Powder)			
„ pecacuanha with Squill ...	I to 2	—	100
℞ Pulv. Ipecacuanhæ cum Opio gr. 2			
Pulv. Scillæ gr. 2/3			
Pulv. Ammoniaci gr. 2/3			
„ Iridin Compound	I to 2	25	100
℞ Iridini gr. 2			
Ext. Hyoscyami gr. 1/2			
Pil. Rhei Comp. gr. 1-1/2			
„ Iron and Arsenic Compound	I to 3	—	100
℞ Ferri Hypophosphitis gr. 2			
Quininae Bisulphatis gr. 1			
Acidi Arseniosi ... gr. 1/50			
Strychninae Sulphatis gr. 1/50			
Saccharini gr. 1/150			
„ Iron and Quinine Citrate, gr. 3	I to 3	25	100
Each contains Quinine, approxi- mately gr. 1/3			
„ Iron and Strychnine Phos- phates	I	25	100
℞ Ferri Phosphatis Strychninae Solubilis gr. 1			
Phosphatis gr. 1/32			
„ Iron, Arsenic and Digitalin ...	I to 3	25	100
℞ Ferri Phosphatis Solubilis gr. 3			
Acidi Arseniosi ... gr. 1/100			
Digitalini (Amorph.) gr. 1/100			
„ Iron Carbonate Saccharated, gr. 5	I to 6	—	100
„ Iron Glycerophosphate, gr. 3	I to 2	25	100
„ Iron Phosphate with Quinine and Strychnine (<i>see</i> 'Tabloid' Easton Syrup)			
„ Iron Pill (<i>see</i> Blaud)			
„ Iron, Reduced (<i>see</i> Reduced Iron)			
„ Iron Sulphate, Dried, gr. 3... I		—	100

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		Issued in	
		oval bts. of	bts. of
'Tabloid' Brand Products—continued			
'TABLOID' BRAND—		DOSE	
,,	Iron Valerianate, gr. 1 ...	I or more	— 100
,,	Jalap, gr. 5 ...	I to 4	— 100
,,	Juniper Oil, min. 3, boxes of 50 ...	I	— —
,,	Kino Compound Powder, N.F., gr. 5 ...	I to 4	— 100
	Each contains: Kino, gr. 3-3/4; Opium, gr. 1/4; and Cinnamon, gr. 1.		
,,	Kissingen Salt, N.F., <i>Effer- vescent</i> , Artificial, tubes of 25	I or more as required	— —
,,	Kola Compound (<i>formerly known as 'Tabloid', 'Forced March'</i>), bottles of 25 ...	I every hour, if required	— 100
	Containing the combined active principles of Kola Nut and Coca Leaves.		
,,	Krameria and Cocaine ...	I occasionally	25 100
	℞ Ext. Krameria ... gr. 1 Cocainæ Hydrochloridi gr. 1/20		
,,	Laxative Vegetable ...	I to 3	25 100
	℞ Ext. Colocynthis Comp. ... gr. 1 Ext. Jalapæ ... gr. 1/2 Resinæ Podophylli gr. 1/4 Leptandri... gr. 1/2 Ext. Hyoscyami ... gr. 1/4 Ext. Taraxaci ... gr. 1/4 Ol. Menthæ Piperitæ <i>q.s.</i>		
,,	Lead with Opium, gr. 2 ...	I	— 100
	Each product equals one of the N.F. Pills.		
,,	Lime Water, bottles of 25		
	One product, powdered and dis- solved in one fluid ounce of distilled or boiled water, forms a solution equivalent to Liquor Calcis, U.S.P.		
,,	Lithium Benzoate Compound	I to 4 or more	— 100
	℞ Lithii Benzoatis ... gr. 3 Sulphuris Præcipitati gr. 2 Quininæ Salicylatis gr. 1/3		

'Tabloid' Brand Products are also issued in bottles of 500,
with the exception of those put up in tubes only

Pharmacopœial preparations are U.S.P. unless otherwise stated

		Issued in	
		oval	bots. of
'TABLOID' BRAND—	DOSE	bots. of	bots. of
„ Lithium Carbonate, gr. 2	I to 3	—	100
„ „ „ 0.15 gm.	I to 3	—	100
„ Lithium Citrate, gr. 5, <i>Effervescent</i>	I to 2	25	100
„ Lithium Citrate, 0.25 gm., <i>Effervescent</i>	I to 2	25	100
„ Lithium Citrate and Sodium Sulphate, <i>Effervescent</i> , tubes of 25	I to 2	—	—
℞ Lithii Citratis gr. 5			
Sodii Sulphatis gr. 30			
„ Lithium Citrate and Urotropine, <i>Effervescent</i> , tubes of 25	I or more	—	—
℞ Lithii Citratis gr. 5			
Urotropinæ gr. 3			
Salis Effervescentis <i>q.s.</i>			
„ Lithium Citrate Effervescent, gr. 60, tubes of 25	I to 2	—	—
Each contains about gr. 3 of Lithium Citrate.			
„ Livingstone Rouser (<i>see</i> 'Tabloid' Quinine and Rhubarb Compound)			
„ Magnesium Carbonate Compound	I to 4	25	100
℞ Magnesii Carb. gr. 2			
Sodii Bicarbonatis gr. 2			
Potass. Bicarbonatis gr. 2			
Sodii Chloridi gr. 3			
„ Magnesium Citrate (<i>True</i>), Effervescent, gr. 60, tubes of 25	I to 3	—	—
„ Magnesium Sulphate Effervescent, gr. 60, tubes of 25	I to 4	—	—
Each represents gr. 30 of Magnesium Sulphate.			
„ Magnesium Sulphate Compound, Effervescent, tubes of 25	I to 4	—	—
℞ Magnesii Sulphatis gr. 15			
Sodii Sulphatis gr. 15			
Magnesii Carbonatis gr. 5			
Liq. Zingiberis, N.F. min. 3½			

'Tabloid' Brand Products are also issued in bottles of 500, with the exception of those put up in tubes only

Pharmacopœial preparations are U.S.P. unless otherwise stated

	DOSE	Issued in	
		oval bts. of	bts. of
'Tabloid' Brand Products—continued			
'TABLOID' BRAND—			
„ Magnesium Sulphite, gr. 5 ...	I frequently	—	100
„ 'Mamos' (<i>Trade Mark</i>) (<i>formerly known as 'Tabloid' Mammary Gland</i>), gr. 5 ...	I increased	—	100
„ Manganese and Iron Citrate (<i>soluble</i>), gr. 3	I to 3	25	100
„ Manganese and Iron Citrate (<i>soluble</i>), gr. 5	I to 2	25	100
„ Manganese and Iron Citrate with Quinine (<i>soluble</i>), gr. 3	I to 3	25	—
Each contains Quinine, approximately gr. 1/2.			
„ Manganese and Iron Citrate with Quinine (<i>soluble</i>), gr. 5	I to 2	25	—
Each contains Quinine, gr. 3/4.			
„ Manganese and Iron Citrate with Strychnine (<i>soluble</i>), gr. 1	I to 3	25	100
Each contains Strychnine, gr. 1/100.			
„ Manganese and Iron Phosphate (<i>soluble</i>), gr. 3 ...	I to 3	25	100
„ Manganese and Iron Phosphate (<i>soluble</i>), gr. 5 ...	I to 2	25	100
„ Manganese Citrate (<i>soluble</i>), gr. 3	I to 3	25	—
„ Manganese Citrate (<i>soluble</i>), gr. 5	I to 2	25	—
„ Manganese Dioxide, gr. 2 ...	I to 5	25	100
„ Menthol, gr. 1/4, bottles of 40	I repeated	—	100
„ Menthol Compound	I to 4	—	100
R Menthol gr. 1/2			
Sodii Bicarbonatis... gr. 3			
Saccharini gr. 1/6			
„ Mercuric Potassium Iodide, gr. 1/6	I	—	100
„ Mercury Green Iodide (<i>see Hydrarg. Iod. Vir.</i>)			

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Pharmacopœial preparations are U.S.P. unless otherwise stated

		Issued in	
		oval botts. of	botts. of
'Tabloid' Brand Products—continued			
'TABLOID' BRAND—	DOSE		
„ Mercury Perchloride (<i>see</i> Hydrarg. Chlor. Corrosiv.)			
„ Mercury Red Iodide (<i>see</i> Hydrarg. Iod. Rubr.)			
„ Mercury Subchloride (<i>see</i> Calomel)			
„ Mercury with Chalk, and combinations (<i>see</i> Grey Powder and combinations)			
„ Mercury Yellow Iodide (<i>see</i> Hydrarg. Iod. Flav.)			
„ Methylene Blue, gr. 2 ...	I to 2	—	100
„ Milk Sugar, gr. 3 ...		—	100
„ Mineral Water Salts, Effervescent (<i>see</i> Carlsbad, Kissingen, Seltzer and Vichy) ...			
„ Mistura Alba ...	I to 8	—	100
℞ Magnesii Carb. Pond. gr. 2-1/2			
Magnesii Sulphatis gr. 15			
Ol. Menthæ Pip. min. 1/32			
„ Morphine and Emetine, bottles of 50 ...	I	—	—
℞ Morphinæ Sulphatis gr. 1/40			
Emetinæ			
Hydrobromidi gr. 1/80			
„ Morphine, Strychnine and Belladonna ...	I as required	25	100
℞ Morphinæ Sulphatis gr. 1/12			
Strychninæ Sulphatis gr. 1/60			
Ext. Belladonnæ ... gr. 1/20			
„ Morphine Sulphate, gr. 1/20	I to 4 or more	50	—
„ „ „ gr. 1/8	I to 4	50	—
„ „ „ gr. 1/4	I to 2	50	—
„ „ „ 0.005 gm.	I to 4	100	—
„ „ „ 0.01 gm.	I to 2	100	—
„ Mucin Compound ...	2 or more	25	100
℞ Mucini ... gr. 5			
Sodii Bicarbonatis gr. 5			

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'Tabloid' Brand Products— <i>continued</i>	DOSE	Issued in	
		oval botts. of	botts. of
'TABLOID' BRAND— Nasal (<i>see</i> 'Soloid' Brand Products)			
„ Nitroglycerin (<i>see</i> Trinitrin)			
„ Nux Vomica Compound ...	I to 3	25	100
℞ Ext. Nucis Vomicae			
Aloini			
Ferri Sulphatis			
Pulv. Myrrhae			
Pulv. Saponis	ää gr. 1/2		
„ Nux Vomica Tincture, min. 1	I frequently	100	—
„ „ „ „ min. 5	I to 3	48	100
„ „ „ „ min. 10	I	36	100
„ Ophthalmic Products (<i>see</i> <i>page 118</i>)			
„ Opium, gr. ½ ...	I to 4	—	100
„ „ gr. 1 ...	I to 2	—	100
„ Opium Tincture (Laudanum), min. 2 ...	I or more	48	100
„ Opium Tincture (Laudanum), min. 5 ...	I to 6	48	100
„ Opium Tincture (Laudanum), min. 10 ...	I to 3	36	100
„ Ovarian Substance (<i>see</i> 'Varium')			
„ Ox Bile, Purified, gr. 4 ...	I to 4	—	100
„ Papain, gr. 2 ...	I to 4	25	100
„ Paregoric (Tinct. Opii Camphorata), min. 2	I frequently	100	—
„ „ „ „ min. 5	I frequently	48	100
„ „ „ „ min. 15	I to 4	36	100
„ Pastilles (<i>see page 120</i>)			
„ Pelletierine Tannate, gr. 2 ...	I to 4	25	—
„ 'Pepana' (<i>Trade Mark</i>) ...	I to 3	25	100
(Gastro-enteric digestive)			
℞ Pepsini ...	gr. 1		
Pancreatini ...	gr. 1		
Calcii			
Lactophosphatis	gr. 1		

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'Tabloid' Brand Products— <i>continued</i>	DOSE	Issued in	
		oval bts. of	bts. of
'TABLOID' BRAND—			
„ Pepsin and Strychnine ...	I to 3	25	100
℞ Pepsini gr. 2			
Strychninæ			
Sulphatis gr. 1/100			
„ Pepsin, Bismuth and Charcoal	I to 3	25	100
℞ Pepsini gr. 2			
Bismuthi			
Subcarbonatis gr. 2			
Carbonis Ligni ... gr. 2			
„ Pepsin, Bismuth and Strych- nine	I to 3	25	100
℞ Pepsini gr. 2			
Bismuthi			
Subcarbonatis gr. 3			
Strychninæ			
Sulphatis gr. 1/100			
„ Pepsin, Saccharated, gr. 5 ...	I to 4 or more	—	100
„ Phenazone (<i>see</i> Antipyrine)			
„ Phenol and Menthol Com- pound, boxes of 25... ..	I as required	—	—
℞ Phenol gr. 1/4			
Menthol gr. 1/2			
Ol. Cajuputi ... min. 1			
„ Phosphates of Iron, Quinine and Strychnine (Syrup of the Phosphates of Iron, Quinine and Strychnine), dr. 1/2	I to 2	25	100
(<i>See</i> 'Tabloid' Easton Syrup)			
„ Phosphates of Iron, Quinine and Strychnine (Syrup of the Phosphates of Iron, Quinine and Strychnine), dr. 1	I	25	100
(<i>See</i> 'Tabloid' Easton Syrup)			
Presents, in a soluble condition, the amount of iron (ferric state), quinine and strychnine contained in corresponding doses of the official syrup.			
„ Photographic (<i>see pages</i> 121-124)			

'Tabloid' Brand Products are also issued in bottles of 500,
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Pharmacopœial preparations are U.S.P. unless otherwise stated

'Tablet' Brand Products—continued

'TABLET' BRAND—	DOSE	Issued in	
		oval botts. of	botts. of
.. Pig Bile, Purified, gr. 4 ...	I to 4	—	100
.. Pilocarpine Nitrate, gr. 1/10	I to 5	25	—
.. " " " gr. 1/4 ...	I to 2	25	—
.. Piperazine, gr. 5, bottles of 25	I to 2	—	—
.. Piperazine, gr. 5, <i>Effervescent</i> , tubes of 12 ...	I to 2	—	—
.. Pituitary Gland, gr. 2 ...	I to 3	—	100
.. Plummer Pill (<i>see</i> Calomel)			
.. Podophyllin, gr. 1/4 ...	I to 4	100	—
.. Podophyllin and Euonymin ...	I to 2	—	100
℞ Resinæ Podophylli gr. 1/4 Ext. Euonymi Sicc. gr. 1			
.. Podophyllin Compound ...	I to 3	—	100
℞ Resinæ Podophylli gr. 1/6 Pil. Rhei Comp. ... gr. 2-1/2 Ext. Hyoscyami ... gr. 1-1/4			
.. Potassium Bicarbonate, gr. 5	I to 6	40	100
.. " " " 0.3 gm.	I to 6	25	100
.. Potassium Bromide, gr. 5 ...	I to 6	—	100
.. " " " gr. 10 ...	I to 3	—	100
.. " " " 0.5 gm.	I to 4	25	100
.. " " " 1.0 gm.	I to 2	25	—
.. Potassium Chlorate, gr. 5 ...	I as required	40	100
Also in white-metal boxes containing 40 and 100			
.. Potassium Chlorate, 0.25 gm.	I as required	25	100
.. Potassium Chlorate and Borax	I as required	40	100
Also in white-metal boxes containing 40 and 100			
.. Potassium Chlorate, Borax and Cocaine Co. (<i>see</i> Voice)			
.. Potassium Iodide, gr. 1 ...	I frequently (<i>expectorant</i>)	—	100
.. " " " gr. 3 ...	I to 6	—	100
.. " " " gr. 5 ...	I to 4	—	100
.. " " " 0.1 gm. ...	I or more	—	100
.. " " " 0.5 gm. ...	I to 2 or more	—	100

'Tablet' Brand Products are also issued in bottles of 500,
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Pharmaceutical preparations are U.S.P. unless otherwise stated

'Tabloid' Brand Products— <i>continued</i>		Issued in	
'TABLOID' BRAND—	DOSE	oval bts. of	bts. of
„ Potassium Nitrate (Sal Pru- nella), gr. 5... ..	I to 4	—	100
„ Potassium Permanganate, gr. 1	I to 3	—	100
„ „ „ gr. 2	I	—	100
„ Prostate Gland, gr. 2-1/2 ...	I to 2	--	100
„ Quinine, Ammoniated (<i>see</i> Ammoniated Quinine)			
„ Quinine, Arsenic and Strych- nine	I	—	100
℞ Quininæ Bisulphatis gr. 1			
Acidi Arseniosi ... gr. 1/20			
Strychninæ ... gr. 1/30			
„ Quinine and Camphor ...	I every hour	25	100
℞ Quininæ Bisulphatis gr. 1			
Camphoræ ... gr. 1/5			
„ Quinine and Rhubarb Com- pound (<i>well known for many</i> <i>years as 'Tabloid' Living-</i> <i>stone Rouser</i>)	I to 3	25	100
℞ Pulv. Jalapæ ... gr. 1-1/2			
Hydrargyri			
Chloridi Mitis gr. 1			
Pulv. Rhei ... gr. 1-1/2			
Quininæ Bisulphatis gr. 1			
„ Quinine and Strychnine ...	I to 3	25	100
℞ Quininæ Bisulphatis gr. 1			
Strychninæ Sulphatis gr. 1/60			
„ Quinine, Belladonna and Cam- phor	I to 4	25	100
℞ Quininæ Sulphatis gr. 1/4			
Ext. Belladonnæ ... gr. 1/8			
Camphoræ ... gr. 1/4			
„ Quinine Bihydrochloride, gr. 5	I to 2	25	100
„ „ „ gr. 10	I	25	100
„ Quinine Bisulphate, gr. ½ ...	I or more	50	100
„ „ „ gr. 1 ...	I or more	36	100
„ „ „ gr. 2 ...	I to 5	25	100
„ „ „ gr. 3 ...	I to 3	25	100
„ „ „ gr. 4 ...	I to 2	25	100
„ „ „ gr. 5 ...	I to 2	25	100

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'Tabloid' Brand Products— <i>continued</i>		Issued in	
		oval botts. of	botts. of
'TABLOID' BRAND—	DOSE		
„ Quinine Bisulphate, gr. 10 ...	I	25	100
„ „ „ 0.1 gm.	I or more	25	100
„ „ „ 0.25 gm.	I to 3	25	100
„ „ „ 0.5 gm.	I to 2	25	100
„ Quinine Bisulphate and Potassium Citrate, <i>Effervescent</i> , tubes of 25 ...	... I to 2, repeated as necessary	—	—
℞ Quininae Bisulphatis Potassii Citratis ...	gr. 1 gr. 15		
„ Quinine, Camphor and Aconite	I every hour	25	100
℞ Quininae Bisulphatis Camphoræ ... Tinct. Aconiti ...	gr. 1/4 gr. 1/4 min. 1		
„ Quinine Compound ...	I every hour	25	100
℞ Cinchonæ Alkaloidorum Acetanilidi ... Camphoræ Monobromatæ Pulv. Ipecacuanhæ Ext. Cascaræ Sagradæ	gr. 1 gr. 1-1/5 gr. 1/5 gr. 1/8 gr. 1/4		
„ Quinine Hydrobromide, gr. 3	I to 3	25	100
„ „ „ gr. 5	I to 2	25	100
„ „ „ 0.1 gm.	I or more	25	100
„ „ „ 0.25 gm.	I to 3	25	100
„ Quinine Hydrochloride, gr. 1	I or more	25	100
„ „ „ gr. 2	I to 5	25	100
„ „ „ gr. 3	I to 3	25	100
„ „ „ gr. 4	I to 2	25	100
„ „ „ gr. 5	I to 2	25	100
„ „ „ 0.1 gm.	I to 6	25	100
„ „ „ 0.25 gm.	I to 3	25	100
„ „ „ 0.5 gm.	I to 2	25	100
„ Quinine Salicylate (<i>physiologically pure</i>), gr. 1 ...	I to 6	25	100
„ Quinine Salicylate (<i>physiologically pure</i>), gr. 3 ...	I to 2	25	100

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Pharmaceutical preparations are U.S.P. unless otherwise stated

'Tablet' Brand Products—continued		Issued in	
		oval bts. of	bts. of
'TABLET' BRAND—	DOSE		
„ Soda-Mint (<i>Neutralising</i>) ...	I to 4 or more	30	100
℞ Sodii Bicarbonatis... gr. 4			
Ammon. Bicarb. ... gr. 1/12			
Ol. Menthae			
Piperitæ <i>q.s.</i>			
Possesses the advantage over the N.F. product in being made with Oil of Peppermint in place of Oil of Spearmint.			
„ Sodium Bicarbonate, gr. 5 ...	I to 6	40	100
„ „ „ gr. 10 ...	I to 3	40	100
„ „ „ 0.5 gm. ...	I to 4	25	100
„ Sodium Bromide, gr. 5 ...	I to 6	—	100
„ „ „ gr. 10 ...	I to 3	—	100
„ Sodium Citrate, gr. 2 ...	for milk modification	—	100
„ Sodium Salicylate (<i>natural</i>),			
gr. 3	I to 6 or more	25	—
„ „ „ gr. 5	I to 6	25	—
„ Sodium Salicylate (<i>physio-</i>			
<i>logically pure</i>), gr. 3 ...	I to 6 or more	25	100
„ Sodium Salicylate (<i>physio-</i>			
<i>logically pure</i>), gr. 5 ...	I to 6	25	100
„ Sodium Salicylate (<i>physio-</i>			
<i>logically pure</i>), 0.5 gm. ...	I to 4	25	100
„ Sodium Salicylate (<i>physio-</i>			
<i>logically pure</i>), gr. 5, <i>Effer-</i>			
<i>vescent</i> , tubes of 25 ...	I or more	—	—
„ Sodium Salicylate and Potas-			
sium Bicarbonate, of each			
gr. 5 ...	I to 6	25	100
„ Sodium Sulphate Compound,			
Effervescent, tubes of 20 ...	I to 2	—	—
℞ Sodii Sulphatis			
Exsiccati, gr. 30			
Potassii Bitartratis gr. 10			
Potassii Bicarb. gr. 2-1/2			
Ess. Zingiberis ... <i>q.s.</i>			
Salis Effervescentis, <i>q.s.</i>			
„ Sodium Sulphate Effervescent,			
gr. 60, tubes of 25 ...	I or more	—	—
Each represents gr. 30 of			
Sodium Sulphate			

'Tablet' Brand Products are also issued in bottles of 500,
with the exception of those put up in tubes only

Pharmaceutical preparations are U.S.P. unless otherwise stated

'Tablet' Brand Products—continued

'TABLET' BRAND—	DOSE	Issued in	
		oval bts. of	bts. of
„ Sparteine Sulphate, gr. 1, bottles of 25	I	—	—
„ Spinal Cord Substance, gr. 2-1/2	I or more	—	100
„ Spleen Substance, gr. 5	I or more	—	100
„ Strontium Bromide, gr. 5	I to 6	—	100
„ Strophanthus Tincture, min. 5 as necessary	I repeated as necessary	50	100
„ Strophanthus Tincture, 0·1 gm. Each represents Strophanthus Seed, 0·01 gm.	I to 2	25	100
„ Strychnine Sulphate, gr. 1/60	I to 4	50	—
„ „ „ gr. 1/30	I to 2	50	—
„ „ „ gr. 1/20	I	50	—
„ „ „ gr. 1/15	I	50	—
„ „ „ 0·001 gm.	I to 4	100	—
„ Sugar of Milk, gr. 3 ... ..	...	—	100
„ Sulphur Compound	I to 4 or more	25	100
℞ Sulphuris Præcipitati, gr. 5 Potassii Bitartratis, gr. 1	...	...	...
„ Supra-renal Gland, gr. 5	I to 3	—	100
„ „ „ 0·3 gm.	I increased to 3	—	100
„ Tannin, gr. 2-1/2	I to 2	—	100
„ Tar, gr. 1	I frequently	50	100
„ Tar and Codeine	I to 4	25	100
℞ Picis Liquidæ ... gr. 1 Codeinæ ... gr. 1/8	...	...	...
„ Tea (<i>see page 168</i>)	...	...	...
„ Terebene, min. 5, boxes of 50	I to 3	—	—
„ Tetranitrin (<i>see Erythrol Tetranitrate</i>)	...	...	...
„ Thirst Quencher	I to 2 or more, as desired	25	100
Containing Tartaric Acid and Sodium Bicarbonate, flavoured with Lemon and 'Saxin.'	...	...	...
„ Three Bromides Effervescent, tubes of 25	I to 2	—	—
℞ Potassii Bromidi ... 0·4 gm. Sodii Bromidi ... 0·4 gm. Ammonii Bromidi ... 0·2 gm. Salis Effervescentis ... <i>q.s.</i>	...	...	...

'Tablet' Brand Products are also issued in bottles of 500,
with the exception of those put up in tubes only

Pharmaceutical preparations are U.S.P. unless otherwise stated

'**Tabloid**' **Brand Tea** provides the most convenient, portable and effective means of quickly preparing tea of uniform strength. It is the most suitable tea for travellers, sportsmen, cyclists, pleasure parties, etc. A tin of 'Tabloid' Tea and a bottle of 'Saxin' for sweetening the infusion may be conveniently carried in the waistcoat pocket.

In handsome tins containing 100 and 200.

'**Tabloid**' **Brand Tea, Special Blend**, exceptional quality—

In enamelled tins containing 100 and 200.

Terebene, Pure (B. W. & Co.)— DOSE

I, 2 and 16 fl. oz. bottles 5 to 15 min.

Test Cases, 'Soloid' Brand (*see* Analysis Cases, page 95)

TRADE MARK 'VALOID' BRAND PRODUCTS

The word 'VALOID' is a brand which designates fine products issued by Burroughs Wellcome & Co. To ensure the supply of these pure and reliable preparations, this brand should always be specified when ordering.

'VALOID' BRAND— DOSE

., Aromatic Cascara Sagrada, 4 fl. oz. bottles 10 to 60 min.

., Ergot, 4 fl. oz. bottles 10 to 30 min.

The strength of each 'Valoid' preparation is indicated on the label

Various other products are also issued under this brand

TRADE MARK 'VALULE' BRAND PRODUCTS

The word 'VALULE' is a brand which designates fine products issued by Burroughs Wellcome & Co. To ensure the supply of these pure and reliable preparations, this brand should always be specified when ordering.

'VALULE' BRAND— DOSE

., Bone Medulla, gr. 5, bottles of 100 ... 1 or more

(*See also* 'Tabloid' Bone Medulla)

Various other products are also issued under this brand

Pharmacopœial preparations are U.S.P. unless otherwise stated

'VANA' (Trade Mark) Tonic Wine—

In bottles of 16 fl. oz.

TRADE MARK 'VAPOROLE' BRAND PRODUCTS

The word 'VAPOROLE' is a brand which designates fine products issued by Burroughs Wellcome & Co. To ensure the supply of these pure and reliable preparations, this brand should always be specified when ordering.

'VAPOROLE' BRAND—

	DOSE
,, Amyl Nitrite, min. 3 or min. 5 (glass capsules), boxes of 12	1 (by inhalation)
,, Iron and Arsenic Solution, Sterilised, for hypodermic injection, boxes of 12 phials	1 to 3
℞ Ferri Citratis Viridis ...	0.05 gm.
Sodii Arsenatis Exsicc. ...	0.002 gm.
Aquam ad	1.0 c.c.

Various other products are also issued under this brand

'Vereker' Ammonium Chloride Inhaler

Delivers neutral fumes of ammonium chloride.

Water Analysis, A Simple Method of,

By J. C. THRESH, M.D., D.Sc., etc.

This standard text-book affords all the information necessary to enable those with only a small knowledge of analysis to perform a chemical examination of a sample of drinking-water by means of 'Soloid' Brand Water Analysis Cases. A chapter on the examination of sewage effluents is included.

Water Analysis Case (see page 96)**'Wellcome' Brand Products (see page 171)**

Verbal Instructions are not safe. To prevent fraud, it is best to write prescriptions for original bottles . .

Pharmaceutical preparations are U.S.P. unless otherwise stated

'Wellcome' Brand Products—continued

'WELLCOME' BRAND—

,, Aconitine, U.S.P.

The pure crystallised alkaloid from *Aconitum Napellus*, free from pseudoaconitine and japaconitine, and from the non-toxic aconine and benzaconine. As aconitine is such a powerful poison, it should be prescribed and dispensed with the utmost caution.

Dose—gr. 1/640 to gr. 1/400 (0.0001 gm. to 0.00015 gm.)

U.S.P. AVERAGE DOSE—0.00015 gm. (gr. 1/400)

Issued in tubes of gr. 5 (0.3 gm.)

,, Aconitine Hydrobromide

The most suitable salt of aconitine for therapeutic use, being readily soluble in water, perfectly stable, and of uniform composition. The remarks as to purity and dosage of the alkaloid apply to this salt also.

Dose—gr. 1/640 to gr. 1/400 (0.0001 gm. to 0.00015 gm.)

Issued in tubes of gr. 5 (0.3 gm.)

,, Bismuth and Iron Citrate (*Soluble*)

This salt is in the form of yellowish-green scales, readily soluble in water. The Bismuth and Iron Citrates are combined in this preparation so as to represent as nearly as possible equal parts by weight of their respective anhydrous salts.

Dose—gr. 5 to gr. 10 (0.3 gm. to 0.65 gm.)

Issued in bottles of oz. 1 (28.3 gm.), oz. 4 (113 gm.) and oz. 8 (227 gm.)

,, Bismuth and Lithium Citrate (*Soluble*)

This new combination is in the form of handsome, colourless scales, readily soluble in water, and can be used when the therapeutic effects of lithium in conjunction with those of bismuth are desired. It contains in combination an amount of lithium corresponding to 25–30 per cent. of its weight of anhydrous Lithium Citrate.

Dose—gr. 2 to gr. 5 (0.13 gm. to 0.3 gm.)

Issued in bottles of oz. 1 (28.3 gm.), oz. 4 (113 gm.) and oz. 8 (227 gm.)

For prices, see separate list

'Wellcome' Brand Products—continued

'WELLCOME' BRAND—

,, Bismuth Citrate

This salt is free from the very common contamination of nitrate, and affords a clear solution with Ammonia. By the official test it yields 56 to 58 per cent. of bismuth oxide.

DOSE—gr. 2 to gr. 5 (0.13 gm. to 0.3 gm.)

U.S.P. AVERAGE DOSE—0.125 gm. (gr. 2)

Issued in bottles of oz. 4 (113 gm.) and oz. 8 (227 gm.)

,, Bismuth Citrate (*Soluble*)

This is a stable and soluble scale salt, which is very freely soluble in water, and yields a bright solution. It possesses the great advantage over the usual forms of Bismuth and Ammonium Citrate in being stable. It does not become insoluble on keeping. It is incompatible with acid liquids.

DOSE—gr. 2 to gr. 5 (0.13 gm. to 0.3 gm.)

Issued in bottles of oz. 4 (113 gm.) and oz. 8 (227 gm.)

,, Chloroform, U.S.P.

Prepared specially for anæsthesia, and marking an important advance in its unvarying reliability. The result of the most recent researches is embodied in this product, which provides an anæsthetic of the highest quality, free from irritating products of decomposition.

DOSE—min. 1 to min. 5 (gtt. 1 to gtt. 5)

U.S.P. AVERAGE DOSE—0.3 c.c. (min. 5)

Issued in bottles of oz. 2 (57 gm.), 1/4 lb. (113 gm.), 1/2 lb. (227 gm.) and 1 lb. (454 gm.); 100 gm., 500 gm., and 1000 gm.; and in hermetically-sealed tubes of 1/4 lb., 30 c.c. (approx. 1 fl. oz.) and 60 c.c. (approx. 2 fl. oz.)

,, Emetine (*Pure Alkaloid*)

This is the essential alkaloid of ipecacuanha, and not the mixture of alkaloids formerly known as Emetine.

DOSE—As an expectorant, gr. 1/200 to gr. 1/50 (0.0003 gm. to 0.0013 gm.)

As an emetic, gr. 1/6 to gr. 1/3 (0.01 gm. to 0.02 gm.)

Issued in tubes of gr. 15 (1 gm.) and bottles of gr. 60 (3.9 gm.)

For prices, see separate list

'Wellcome' Brand Products—continued

'WELLCOME' BRAND—

,, Emetine Hydrobromide

The most suitable salt of emetine for therapeutic use.

DOSE—As an expectorant, gr. 1/200 to gr. 1/50 (0.0003 gm. to 0.0013 gm.)

As an emetic, gr. 1/6 to gr. 1/3 (0.01 gm. to 0.02 gm.)

Issued in tubes of gr. 15 (1 gm.) and bottles of gr. 60 (3.9 gm.)

,, Gelsemine Hydrochloride (Gelseminum Hydrochloricum Cryst. Ger.)

A salt of the crystallisable alkaloid of *Gelsemium nitidum*.

DOSE—gr. 1/120 to gr. 1/30 (0.0005 gm. to 0.002 gm.)

Issued in tubes of gr. 5 (0.3 gm.) and gr. 15 (1 gm.)

,, Homatropine Hydrobromide, U.S.P.

Recent research on the synthetic tropeines in the Wellcome Chemical Research Laboratories has enabled this salt of homatropine (mandelyltropeine) to be presented in an exceptionally pure form. The importance of this high degree of purity is best realised when the use of the minute dose of the drug as a mydriatic is considered.

DOSE—gr. 1/80 to gr. 1/20 (0.0008 gm. to 0.003 gm.)

U.S.P. AVERAGE DOSE—0.0005 gm. (gr. 1/128)

Issued in tubes of gr. 5 (0.3 gm.)

,, Homatropine, Pure

Issued in tubes of gr. 5 (0.3 gm.)

,, Hydrastine (Pure Alkaloid), U.S.P.

The crystallised white alkaloid from *Hydrastis canadensis*.

DOSE—gr. 1/4 to gr. 1 (0.015 gm. to 0.06 gm.)

U.S.P. AVERAGE DOSE—0.010 gm. (gr. 1/5)

Issued in tubes of gr. 15 (1 gm.) and bottles of oz. 1 (28.3 gm.)

For prices, see separate list

'Wellcome' Brand Products—continued

'WELLCOME' BRAND—

,, Hydrastine Hydrochloride

This salt of the pure white alkaloid is readily soluble in water.

DOSE—gr. 1/4 to gr. 1 (0.015 gm. to 0.06 gm.)

Issued in tubes of gr. 15 (1 gm.) and bottles of oz. 1 (28.3 gm.)

,, Hydrastinine Hydrochloride, U.S.P.

This substance is an oxidation product of the alkaloid hydrastine, and is free from those other bases which are generally associated with it in its production.

DOSE—gr. 1/4 to gr. 1/2 (0.015 gm. to 0.03 gm.)

U.S.P. AVERAGE DOSE—0.030 gm. (gr. 1/2)

Issued in tubes of gr. 5 (0.3 gm.) and 1 gramme

,, Iron Arsenate (*Soluble*)

This product is in handsome green scales, and contains 13 per cent. of arsenic in the form of arsenate, equivalent to 34–35 per cent. of anhydrous ferric arsenate. It may conveniently be used for the preparation of a solution similar to the Syrup of Arsenate of Iron of the National Formulary.

DOSE—gr. 1/16 to gr. 1/4 (0.004 gm. to 0.015 gm.)

Issued in bottles of oz. 1 (28.3 gm.)

,, Manganese and Iron Citrate (*Soluble*)

This is a scale salt, readily soluble in water. It contains about 7 per cent. of manganese and 14 per cent. of iron in organic combination.

DOSE—gr. 3 to gr. 10 (0.2 gm. to 0.65 gm.)

Issued in bottles of oz. 1 (28.3 gm.), oz. 4 (113 gm.), oz. 8 (227 gm.) and oz. 16 (454 gm.)

,, Manganese and Iron Citrate with Arsenic (*Soluble*)

This preparation contains 0.5 per cent. of arsenious anhydride, but is otherwise identical with Manganese and Iron Citrate (*Soluble*).

DOSE—gr. 3 to gr. 10 (0.2 gm. to 0.65 gm.)

Issued in bottles of oz. 1 (28.3 gm.) and oz. 4 (113 gm.)

For prices, see separate list.

'Wellcome' Brand Products—continued

'WELLCOME' BRAND—

,, Manganese and Iron Citrate with Quinine (*Soluble*)

This preparation contains 15 per cent. of quinine, but is otherwise identical with Manganese and Iron Citrate (*Soluble*).

Dose—gr. 3 to gr. 10 (0.2 gm. to 0.65 gm.)

Issued in bottles of oz. 1 (28.3 gm.) and oz. 4 (113 gm.)

,, Manganese and Iron Citrate with Strychnine (*Soluble*)

This preparation contains 1 per cent. of strychnine, but is otherwise identical with Manganese and Iron Citrate (*Soluble*).

Dose—gr. 1 to gr. 3 (0.06 gm. to 0.2 gm.)

Issued in bottles of oz. 1 (28.3 gm.) and oz. 4 (113 gm.)

,, Manganese and Iron Phosphate (*Soluble*)

This scale salt dissolves readily in warm water. It contains about 7 per cent. of manganese and 14 per cent. of iron.

Dose—gr. 3 to gr. 10 (0.2 gm. to 0.65 gm.)

Issued in bottles of oz. 1 (28.3 gm.), oz. 4 (113 gm.), oz. 8 (227 gm.) and oz. 16 (454 gm.)

,, Manganese Citrate (*Soluble*)

This preparation is in the form of handsome, nearly colourless scales, which are readily soluble in water. It contains about 12 per cent. of manganese in organic combination.

Dose—gr. 3 to gr. 10 (0.2 gm. to 0.65 gm.)

Issued in bottles of oz. 1 (28.3 gm.) and oz. 4 (113 gm.)

,, Physostigmine Hydrobromide (Eserine Hydrobromide)

Dose—gr. 1/60 to gr. 1/20 (0.001 gm. to 0.003 gm.)

Issued in tubes of gr. 5 (0.3 gm.) and gr. 15 (1 gm.)

For prices, see separate list

'Wellcome' Brand Products—continued**'WELLCOME' BRAND—**

,, Quinine Bihydrochloride (Acid Quinine Hydrochloride)

DOSE—gr. 1 to gr. 10 (0.06 gm. to 0.65 gm.)

Issued in bottles of oz. 1 (28.3 gm.)

,, Quinine Bisulphate, U.S.P.

This salt, being readily soluble in water (1 in 10), is more convenient for many purposes than the insoluble official sulphate.

DOSE—gr. 1 to gr. 10 (0.06 gm. to 0.65 gm.)

U.S.P. AVERAGE DOSE—0.250 gm. (gr. 4)

Issued in bottles of oz. 1 (28.3 gm.) and oz. 4 (113 gm.)

,, Quinine Hydrobromide, U.S.P.

DOSE—gr. 1 to gr. 10 (0.06 gm. to 0.65 gm.)

U.S.P. AVERAGE DOSE—0.250 gm. (gr. 4)

Issued in bottles of oz. 1 (28.3 gm.) and oz. 4 (113 gm.)

,, Quinine Hydrochloride, U.S.P.

DOSE—gr. 1 to gr. 10 (0.06 gm. to 0.65 gm.)

U.S.P. AVERAGE DOSE—0.250 gm. (gr. 4)

Issued in bottles of oz. 1 (28.3 gm.) and oz. 4 (113 gm.)

,, Quinine Hypophosphite

DOSE—gr. 1 to gr. 3 (0.06 gm. 0.2 gm.)

Issued in bottles of oz. 1 (28.3 gm.)

,, Quinine Phosphate

DOSE—gr. 1 to gr. 10 (0.06 gm. to 0.65 gm.)

Issued in bottles of oz. 1 (28.3 gm.)

,, Quinine Salicylate, U.S.P.

Prepared from physiologically pure salicylic acid.

DOSE—gr. 2 to gr. 6 (0.13 gm. to 0.4 gm.)

U.S.P. AVERAGE DOSE—0.250 gm. (gr. 4)

*Issued in bottles of oz. 1 (28.3 gm.) and oz. 4 (113 gm.)***For prices, see separate list**

'Wellcome' Brand Products—continued**'WELLCOME' BRAND—**

,, Quinine Sulphate

This salt is presented in a more compact form of crystals than that usually supplied, but is identical in composition with the official salt. It is believed that its diminished bulk will render it more convenient for storage and dispensing.

When ordering Quinine Sulphate, please indicate whether "compact" or "large flake" is required.

Dose—gr. 1 to gr. 10 (0.06 gm. to 0.65 gm.)

U.S.P. AVERAGE DOSE—0.250 gm. (gr. 4)

Issued in bottles of oz. 1 (28.3 gm.) and oz. 4 (113 gm.); also in tins of oz. 25 (709 gm.) and oz. 100 (2835 gm.)

,, Quinine Sulphate (*Large Flake*), U.S.P.

This is the official salt in the usual bulky form of light feathery crystals. We recommend in preference the compact crystals, which occupy one-third the space, as being more portable and convenient.

When ordering Quinine Sulphate, please indicate whether "compact" or "large flake" is required.

Dose—gr. 1 to gr. 10 (0.06 gm. to 0.65 gm.)

U.S.P. AVERAGE DOSE—0.250 gm. (gr. 4)

Issued in bottles of oz. 1/4 (7 gm.), oz. 1/2 (14 gm.) and oz. 1 (28.3 gm.); and in tins of oz. 4 (113 gm.); also in tins of oz. 25 (709 gm.) and oz. 100 (2835 gm.)

For prices, see separate list

**'WELLCOME' BRAND CHEMICALS**

were awarded

A GRAND PRIZE

at each of the following International Exhibitions

ST. LOUIS, 1904

LIÉGE, 1905

MILAN, 1906

TRADE MARK 'WELLCOME' BRAND CHLOROFORM

The variability of the results obtained in the administration of chloroform as an anæsthetic, is in many cases ascribed to the materials used or to the methods adopted in manufacture.

'WELLCOME' Brand CHLOROFORM has been introduced to overcome this variability. It

is constant in composition
and uniform in results. Its

use removes the source of many accidents which have hitherto been regarded as grave objections to the employment of chloroform as an anæsthetic.

'Wellcome' Brand Chloroform is also particularly characterised by containing that amount, small yet definite, of ethyl chloride which recent demonstrations have proved to be so beneficial in the initial stages of the induction of chloroform anæsthesia (Wade and Finnemore, *Journal of the Chemical Society* [Eng.], 1904, 85, 938 ; Wade, *Transactions of the Society of Anæsthetists* [Eng.], Feb., 1905).

In the production of 'WELLCOME' Brand CHLOROFORM the greatest care is taken to ensure the highest attainable degree of purity and perfect freedom from irritating products of decomposition.



'Wellcome' Brand Chloroform in $\frac{1}{4}$ -lb. dropping-bottle. Height of bottle, 5 in.

'WELLCOME' Brand CHLOROFORM tubes have now been fitted with a specially-designed dropping apparatus.

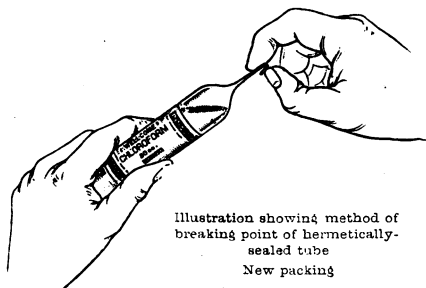


Illustration showing method of breaking point of hermetically-sealed tube
New packing

This consists of a glass tube, drawn out to a capillary hermetically-sealed point, bent

over, and so constructed that it can be broken off

by exerting the slightest pressure of the thumb-nail placed under the bent point (*see illustration*). The tubes, after fracture, can then be used as

drop-bottles. The orifice can be effectually closed and protected, after use, by placing over it a cork or some such protective covering.

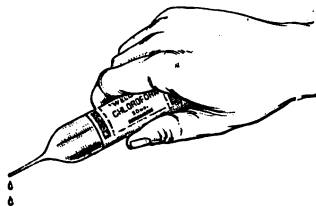
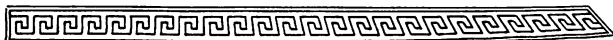
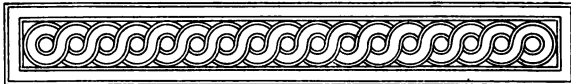


Illustration showing tube in use in place of a dropping bottle

'Wellcome' Brand Chloroform conforms to the requirements of the United States Pharmacopœia.

(See also page 173 and 'Wellcome' Chemicals Price List)





TRADE MARK 'WELLCOME' BRAND QUININE SULPHATE

'WELLCOME' Brand QUININE SULPHATE presents the drug in an exceptionally pure condition. It is issued in two forms—"large flake" and "compact crystals." The former is

Exceptional purity

the official U.S.P. salt in the ordinary form of bulky crystals, which in this brand are exceptionally large and white. It is supplied in $\frac{1}{4}$ oz., $\frac{1}{2}$ oz. and 1 oz. bottles, also in 4 oz., 25 oz. and 100 oz. tins. The "compact crystals," which occupy one-third of the space of the "large flake," conform to the same high standard of

Convenient form

purity as the official salt, and are identical in composition. They are recommended in preference as being more convenient for storage and dispensing. The "compact crystals" are issued in 1 oz. and 4 oz. bottles and in 25 oz. and 100 oz. tins.

When ordering Quinine Sulphate, please indicate whether "compact" or "large flake" is required.

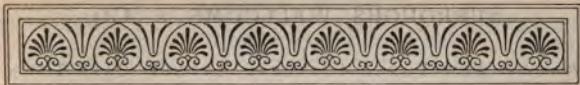
(See also page 179)

For further particulars and prices, see 'Wellcome' Chemicals Price List



'Wellcome' Brand Quinine Sulphate "Large Flake"
Height of 1 oz. bottle $4\frac{1}{4}$ in.





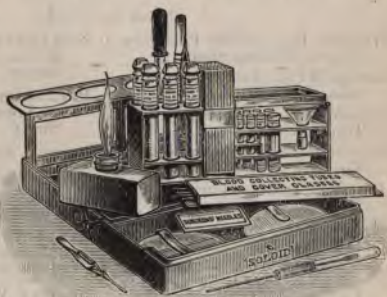
TRADE MARK 'SOLOID' BRAND
BACTERIOLOGICAL CASE, No. 505

This aseptic polished-metal case provides the necessary equipment for bacteriological examinations by the most recent scientific methods.

By its aid, investigations, which are by most practitioners referred to laboratory workers, can be undertaken with ease and convenience in the surgery.

A scientific
equipment

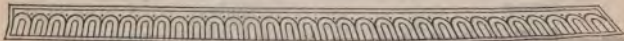
It keeps together, in a compact form, the essentials for such work. Its small size and light weight permit of it being carried in the pocket,



No. 505. 'Soloid' Brand Bacteriological Case
Measurements. 5 x 3½ x 1½ in.

and the physician can utilise it at the patient's bedside to obtain a blood sample or a throat swab. The outfit includes needles and collecting pipettes for taking blood samples, diluting fluid and special stains for blood examination, 'Soloid' Microscopic Stains, spirit-lamp, and the necessary equipment for preparing, fixing and mounting specimens for microscopic work.

(See also page 97)



BURROUGHS WELLCOME & CO.
LONDON (ENG.)

Branches: NEW YORK MONTREAL SYDNEY CAPE TOWN

o o o

United States Offices and Warehouse:

45, LAFAYETTE STREET, NEW YORK CITY

Cables & Marconigrams—"TABLOID, NEW YORK"

Telephone No.—"1350 FRANKLIN"

A B C and LIEBER'S Telegraphic Codes used

o o o

Canadian Office:

101-104, CORISTINE BUILDING

ST. NICHOLAS & ST. PAUL STS., MONTREAL

Cable Address—"TABLOID, MONTREAL"

G.P.O. Box—"73" Telephone No.—"MAIN 93"

o o o

Depots in U.S.A.:

ATLANTA, GA.—Jacobs' Pharmacy Co., 10, Marietta Street	NEW ORLEANS, LA.—Finlay, Dicks & Co., Magazine and Common Streets
BOSTON, MASS.—Eastern Drug Co., 8-20, Fulton Street	PHILADELPHIA, PA.—Smith, Kline & French Co., 429-435, Arch Street
DALLAS, TEXAS—J. W. Crowds Drug Co.	PHOENIX, ARIZ.—N. M. Miller
DULUTH, MINN.—Leithhead Drug Co.	PORTLAND, OREGON—The Clarke Woodward Drug Co., Ninth and Hoyt Streets
HOUSTON, TEXAS—Houston Drug Co., 102, Travis Street	SAN FRANCISCO, CAL.—Langley Michaels & Co., Second and Park Streets
KANSAS CITY, MO.—Faxon & Gallagher	SEATTLE, WASH.—Stewart Holmes Drug Co., 209, Third Street
LOS ANGELES, CAL.—Brunswig Drug Co. (late F. W. Braun & Co.), 501, N. Main Street	ST. LOUIS, MO.—Meyer Bros. Drug Co., Fourth and Clark Streets
LOUISVILLE, KY.—Robinson-Pettet Co., 528-532, West Main Street	TUCSON, ARIZ.—F. Fleishman
MINNEAPOLIS, MINN.—Kennedy, Andrews Drug Co.	

Wholesale Depot in Chicago:

E. H. BUELHER, 134, Lake Street

Retail Depots in Chicago:

CENTRAL DRUG CO., 100, State Street	B. S. COOBAN & Co., 559, W. 63rd Street
SARGENT'S DRUG STORE, 32, Washington Street	R. E. RHOOE, 504, N. Clark Street
DINTE & DELFOSSE, Columbus Mem. Building	M. C. SNUCKER, 942, W. Madison
ECONOMICAL DRUG CO., 84, State Street	R. H. HANKE, 1373, N. Clark Street
W. K. FORSYTH, 3108, State Street	J. A. BUTTS, 271, N. Clark Street
O. J. FREEMAN, 1127, Sheffield Avenue	E. F. BLETTNER, 1914, Evanston Avenue
	J. C. BEHNKE, 1249, N. Clark Street
	A. SCHERER, 383, N. State Street

B. W. & Co. Products may be obtained of all Pharmacists

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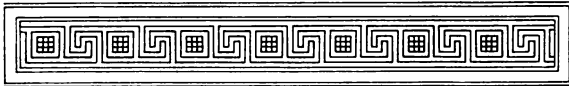
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MEMORANDA

MEMORANDA



TRADE MARK 'TABLOID' BRAND FIRST-AID

For Automobiles, Airships, Yachts, Caravans, etc.

These equipments provide outfits of bandages and first-aid accessories, etc., and are especially suitable for patients to carry when travelling.

No. 702. 'TABLOID' FIRST-AID

Measurements, $7 \times 5\frac{1}{4} \times 2\frac{3}{4}$ in. Contains eight tubes of 'Tabloid' and 'Soloid' Brand products, 'Borofax,' 'Hazeline' Cream, Sal Volatile, Carron Oil, 'Tabloid' Bandages and Dressings, pins, scissors, etc. In Rex Red, Royal Blue or Brewster Green Enamelled Leather.

No. 703. 'TABLOID' FIRST-AID

Measurements, $8 \times 6 \times 3$ in. In Enamelled Leather, and with contents similar to No. 702 Case.

No. 707. 'TABLOID' FIRST-AID



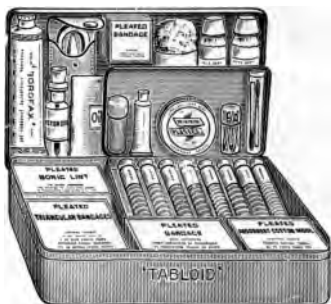
No. 707. 'Tabloid' First-Aid
Measurements. $6\frac{1}{4} \times 3\frac{1}{4} \times 2$ in.

Contains six tubes of 'Tabloid' and 'Soloid' Brand products, 'Borofax,' Carron Oil, 'Tabloid' Bandages and Dressings, pins, etc. In Rex Red, Royal Blue or Brewster Green Enamelled Metal, or in Aluminised Metal.

No. 712. 'TABLOID' FIRST-AID

Measurements, $6\frac{1}{2} \times 4\frac{1}{4} \times 2$ in. In Enamelled Metal, etc., and with contents similar to No. 707 Case.

No. 715. 'TABLOID' FIRST-AID
(Formerly known as No. 259 'TABLOID' MEDICINE CASE)



No. 715. 'Tabloid' First-Aid
Measurements, $7\frac{1}{2} \times 4\frac{1}{4} \times 2$ in.

Contains eight tubes of 'Tabloid' and 'Soloid' Brand products, 'Borofax,' Sal Volatile, Carron Oil, 'Tabloid' Bandages and Dressings, plaster, protective skin, pins, scissors, etc. In Rex Red, Royal Blue or

Brewster Green Enamelled Metal, or in Aluminised or Black Japped Metal.

No. 722. 'TABLOID' FIRST-AID

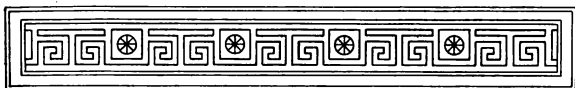
Measurements, $6\frac{3}{4} \times 4\frac{3}{4} \times 2\frac{1}{4}$ in. Contains **eight** tubes of 'Tabloid' and 'Soloid' Brand products, 'Borofax,' 'Hazeline' Cream, Sal Volatile, Carron Oil, 'Tabloid' Bandages and Dressings, pins, scissors, etc. In Rex Red, Royal Blue or Brewster Green Enamelled Metal, or in Aluminised Metal.

No. 723. 'TABLOID' FIRST-AID

Measurements, $8 \times 5\frac{1}{2} \times 2\frac{1}{4}$ in. Contents similar to No. 722 Case. In Rex Red, Royal Blue or Brewster Green Enamelled Metal, or in Aluminised Metal.

(See also page 98)





TRADE MARK 'SOLOID' BRAND
URINE TEST CASE, No. 510

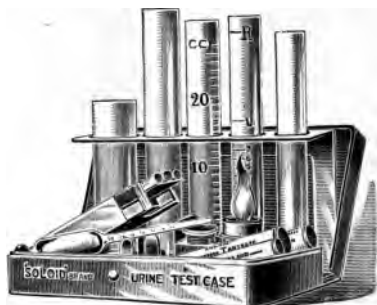
This compact aseptic pocket-case is made of polished nickel-plated metal, and provides in a most compact and convenient form all the requirements for making an examination of urine at the bedside. It contains the

Compact and convenient

necessary apparatus and reagents for the quantitative and qualitative

analysis of urine, as follows:

—Urino-meter, Esbach's albuminometer, graduated measure, pipette, test-tubes and stand, spirit lamp, test papers, 'Soloid'



No. 510. 'Soloid' Brand Urine Test Case
Measurements, $5\frac{1}{2} \times 2\frac{1}{2} \times 1\frac{1}{4}$ in.

Brand products of Fehling's Test, Indigo Test, Picric Acid, Potassium Ferrocyanide and Citric Acid. The 'Soloid' Brand Chemicals admit of the prompt preparation of the requisite solutions. A chart showing the application of the tests accompanies each case. Complete in doeskin cover.

(See also page 95)





TRADE MARK 'TABLOID' BRAND 'GINGAMĒNT'
(Trade Mark)

Neutralising Compound

(Originated by B. W. & Co.)

'TABLOID' 'GINGAMĒNT' is a valuable antacid and stomachic. It is employed for the relief of dyspepsia, nausea, heartburn and flatulence.

'Tabloid' 'GingamĒnt' affords an agreeable, convenient and effective means of preventing and

relieving the symptoms
In dyspepsia, of gastric disorders in
nausea, patients troubled with
heartburn, acidity of the stomach.
flatulence

It is used in cases of excessive secretion of hydrochloric acid and in lactic acid fermentation to check the sense of fullness and relieve the nausea and depression often associated with such conditions. One or more, swallowed with a little water, or one dissolved slowly in the mouth from time to time, arrests the nauseating effects of fermentation in the stomach, and is beneficial in liver troubles; it relieves the palpitation and sleeplessness often accompanying these ailments, and, in addition, produces the pleasing effects of a diffusible stimulant.

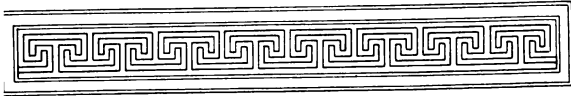


Slightly reduced

'Tabloid' 'GingamĒnt' is supplied in bottles of 25, 100 and 500

(See also page 147)





TRADE 'ALAXA' MARK

Aromatic Liqueur of Cascara Sagrada

'ALAXA' aromatic liqueur presents a *fluid* cascara of the same high therapeutic standard as 'Tabloid' Cascara. It is the result of specialised study and research, and embodies the nearest approach to the isolation of the pure active principle of cascara sagrada yet obtained.

Its tonic laxative action is supplemented by stomachic and carminative constituents.

'ALAXA' aromatic liqueur reinforces digestion, ensures normal activity, and renders unnecessary the use of after-dinner pills or digestive aids.

Its palatability and gentle laxative action render it ideal in the treatment of the constipation of pregnancy, and commend it in cases where the digestive system lacks tone, and especially for administration to the aged and feeble.

'ALAXA' aromatic liqueur is perfectly stable, and neither ferments nor deposits on keeping.



Greatly reduced

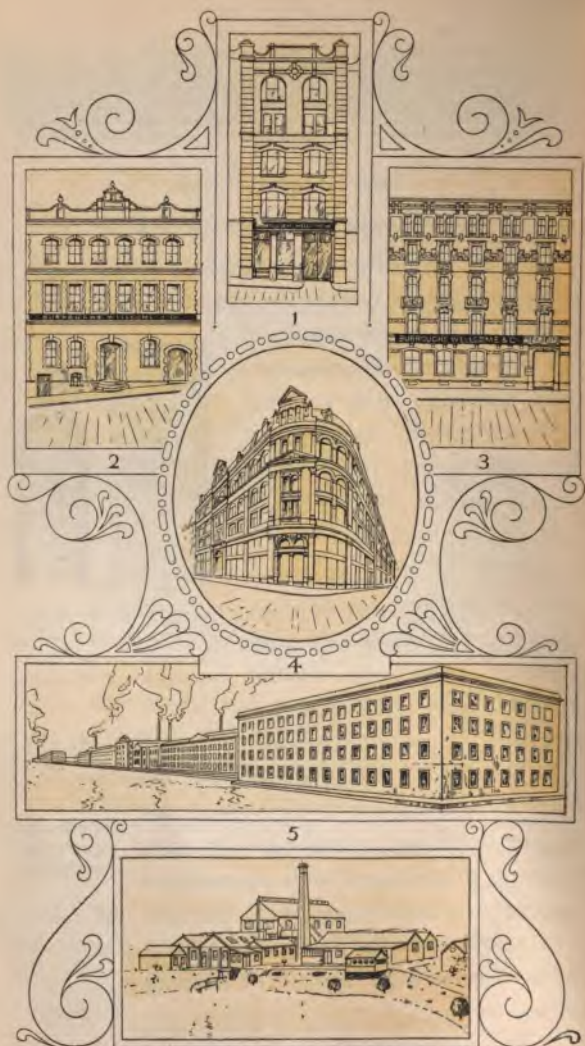
One fluid drachm contains the equivalent of twenty-four minims of Fluidextract of Cascara Sagrada, U.S.P.

In constipation during pregnancy

Supplied in bottles of 4 fluid ounces

(See also page 101)





**BURROUGHS WELLCOME & CO.'S OFFICES, WAREHOUSES
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SOUTH AFRICA AND ITALY**

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5—Wellcome's Chemical Works, near London, England
6—Australian Works, Sydney

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AND

THREE GOLD MEDALS

AT THE

INTERNATIONAL EXHIBITION AT LIÈGE, 1905

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AND

ONE GOLD MEDAL

AT THE

INTERNATIONAL EXHIBITION AT MILAN, 1906

Making in all more than 200 Highest Awards



THREE GRAND PRIZES
ST. LOUIS

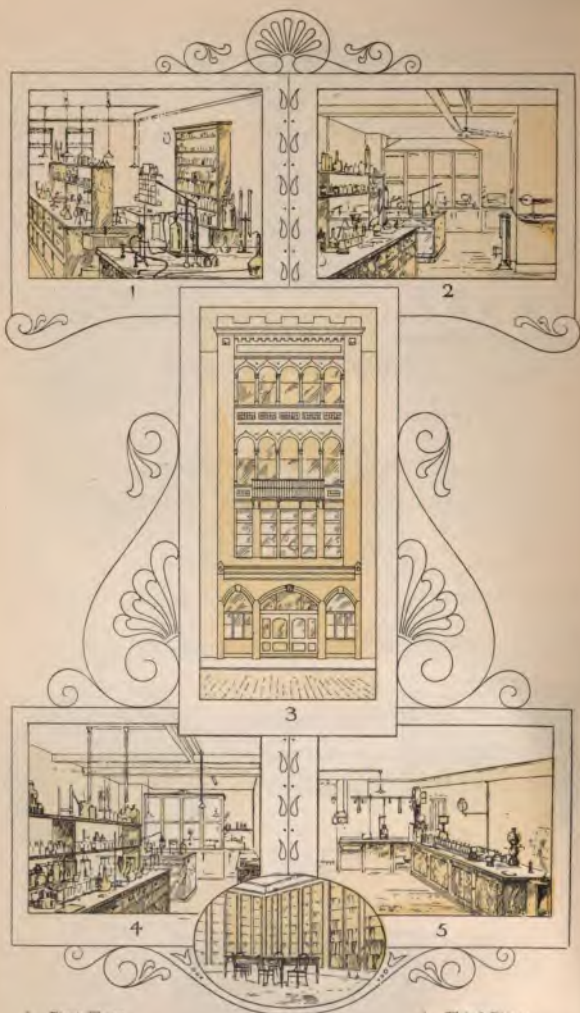
conferred upon the
firm for the scientific
excellence of their
products at the great
Exhibitions of the
World



SIX GRAND PRIZES
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THREE GRAND PRIZES-MILAN



1—First Floor
2—Second Floor
3—Exterior

4—Third Floor
5—Combustion Room
6—Library

WELLCOME CHEMICAL RESEARCH LABORATORIES
KING STREET, LONDON (ENGLAND)

This PRIVATE INSTITUTION is absolutely separate from the business of BURROUGHS WELLCOME & CO., and is under separate and distinct direction, although in this Institution a large amount of important scientific work is carried *firm.*

THE
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ONE GRAND PRIZE
ONE DIPLOMA OF HONOUR
AND
TWO GOLD MEDALS

AT THE
INTERNATIONAL EXHIBITION AT LIÈGE, 1905

ONE GRAND PRIZE
AT THE
INTERNATIONAL EXHIBITION AT MILAN, 1906



GRAND PRIZE
ST. LOUIS

for Chemical and
Pharmacognostical
Research,
etc., etc.



GRAND PRIZE
LIÈGE



GRAND PRIZE-MILAN



1—Bacteriological and Pathological Laboratories 2—Laboratory for Physiological and Bacteriological Chemistry 3—One of the Stables 4—General View 5—Physiological Laboratory 6—Laboratory for preparing nutrient media 7—Secretary's Office 8—Serum Laboratory

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WELLCOME PHYSIOLOGICAL RESEARCH LABORATORIES

WERE AWARDED

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AND

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AT THE

INTERNATIONAL EXPOSITION AT ST. LOUIS, 1904

ONE GRAND PRIZE

AND

TWO GOLD MEDALS

AT THE

INTERNATIONAL EXHIBITION AT LIÉGE, 1905

ONE GRAND PRIZE

AT THE

INTERNATIONAL EXHIBITION AT MILAN, 1906



GRAND PRIZE
ST. LOUIS

for Physiological
Research and
Preparations.
etc., etc.



GRAND PRIZE
LIÉGE



GRAND PRIZE - MILAN

“The strong thing
is the just thing”

Carlyle



‘Tabloid’ marks the work
of Burroughs Wellcome &
Company.

The use of the word is to
enable the physician, chemist
and patient to get the right
thing with one short word, in-
stead of the firm’s long name.

If another maker apply the
word to his product, the act is
unlawful. ‘Tabloid’ is our
trade-mark.

If a vendor disregard it, in
dispensing or selling, the act is
unlawful—for the same reason.

We prosecute both offenders
rigorously, in the interest of
physicians, chemists, patients
and ourselves.

Please inform us of any
instance of either offence.

BURROUGHS WELLCOME AND Co.

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